

THE HORSE IN NEW KINGDOM EGYPT: ITS INTRODUCTION, NATURE, ROLE AND IMPACT



TEXT VOLUME

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For

CAROLINE and DAVID

and

ARKI

who taught me so much about horses.

ABSTRACT

THE HORSE IN NEW KINGDOM EGYPT:

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This Thesis has not been submitted for a higher degree to any other university or institution.

*“his horses are like falcons when they sight small birds..
roaring like a lion, stirred up and raging”*

Edgerton.W.F. & Wilson. J (1936) *Historical Records of Ramses III. The Texts in Medinet Habu.*
University of Chicago Press, Chicago, 24.

ABSTRACT

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To date much scholarly attention has been paid to the development of the light spoke-wheeled chariot, its spread throughout the Near East, its design and uses. There has also been much concentration on the domestication of the horse and its proliferation through the ‘horse cultures’ in those regions. Apart from the work of Rommelaere¹ in the early 1990’s, interest in the Egyptian horse has been limited to short articles or sections of other works dealing mainly with chariots, where mention of the driving force behind the chariot – the horse has been brief.

This work addresses this omission by reviewing the faunal, iconographic, textual and archaeological evidence for the horse in New Kingdom Egypt. A brief examination of the origins of this animal and its proliferation throughout the Near East provides the introduction to a study of its arrival in Egypt and the means by which that occurred. The faunal remains will be examined in order to establish the physiological nature of the Egyptian horse and then these will be used in concert with the extant iconographic, textual and archaeological material to determine the role that the horse played in the New Kingdom, how that role changed over time and what impact the acquisition and use of the horse had on Egypt.

¹ C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels.

ABBREVIATIONS

AJA	American Journal of Archaeology. Baltimore.
ASAE	Annales du Service des Antiquités de l'Égypte. Cairo.
BASOR	Bulletin of the American Schools of Oriental Research. Boston.
BMMA	Bulletin of the Metropolitan Museum of Art. New York.
FIFAO	Fouilles de l'Institut français d'archéologie orientale du Cairo.
GM	Göttinger Miszellen. Göttingen.
JAS	Journal of Archaeological Science. Massachusetts.
JEA	Journal of Egyptian Archaeology. London.
JIES	Journal of Indo-European Studies.
JNES	Journal of Near Eastern Studies. Chicago.
JARCE	Journal of the American Research Centre in Egypt. Boston.
JSSEA	Journal of the Society for the Study of Egyptian Antiquities. Toronto.
LÄ	Lexikon der Ägyptologie, Weisbaden.
MÄS	Münchener Ägyptologische Studien. Berlin.
MDAIK	Mitteilungen des Deutschen Archäologischen Instituts: Abteilung Kairo. Wiesbaden.

ABBREVIATIONS

PM	B. Porter & R. Moss (1927-51) <i>Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings</i> , 7 vols. (revisions edited by J. Malek, 1960-) Oxford.
TMP	Theban Mapping Project.
ZÄS	Zeitschrift für Ägyptische Sprache und Altertumskunde. Leipzig.

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Bang/ Banging	A fringe or section of hair cut straight across - the forelock or the tail.
Barrel	The midsection of a horse, between the forelegs and the loins.
Bars	The space along the gums in the horse's mouth between the front incisors and the molars. Sometimes called the "interdental space."
Bay	A body colour ranging from dark to light brown, always with a black mane and tail and usually black markings on the lower legs.
Bit	The bit is the means by which a rider steers. It lies on the bars of the horse's mouth, that is, the part of the lower gums where there are no teeth.
Black	A body colour of true black, without any light areas, except possibly white markings on the face and legs, the mane and tail are also black.
Blaze	A wide white marking that covers the whole of the forehead and extends down the front of the face to the muzzle.
Breed	There is not a single definition for the term "breed" "A breed that exists today can be seen as an expression of a history of genetic selection and genetic drift. Its genotype will include genes and gene combinations coding for particular characteristics and it will have lost from its genotype, due to random genetic processes which accompany restricted mating, many of the genes which are present in other breeds."

D.S. Mills & S.M. McDonnell (2003) *The Domestic Horse. The Origins, Development and Management of its Behaviour*. Cambridge, 26.

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The word “breed” is used to designate those physical types which mankind has created by selecting mates on behalf of the animals.

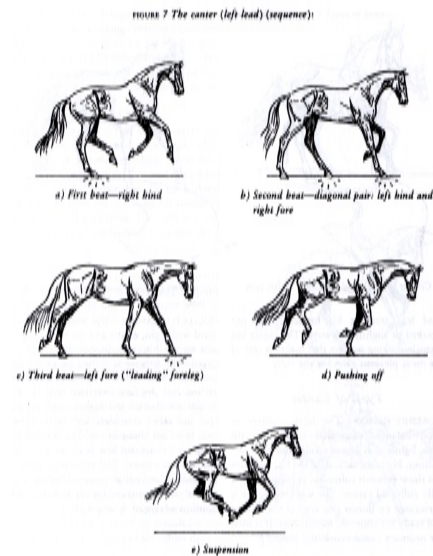
Bridle The bridle ensures that the bit remains correctly positioned in the horse’s mouth. It consists of a number of straps that are fastened around the horse’s head.

Caballine Adjective: for finds associated with *Equus caballus*.

Canine teeth Four small diameter, long sharp teeth in the interdental space of male horses, occasionally smaller versions are found in female horses.

Cannon bone The cannon bone forms part of the knee joint at its top and part of the fetlock joint at its bottom. Its normal position is vertical. The cannon is the large (third) metacarpal.

Canter The horse’s three beat gait, a slow or collected gallop. The canter is a three beat gait with suspension performed in a three-time rhythm. It is a series of “jumps” or bounds, with suspension between strides. It is regular, light and active with an elastic back and good balance. It is more collected than the gallop. The horse moves strait with his hind legs tracking his forelegs.



Harris.S.E. (1993) *Horse Gaits, Balance and Movement*. New Jersey.

Carriage	How a horse carries itself, especially the head, neck and tail.
Check Rowels	A thin rod running from the horse's cheek area to the yoke saddle with a revolving, spiked disk near its centre.
Cheek Pieces	The metal rings or shanks that attach the bridle and the reins to the mouthpiece of a snaffle bit.
Chestnut	A dark brown or brownish-red coat, mane and tail.
Collection	The horse gathers himself for action by engaging his hindquarters, shifting his balance backward and lightening his forehand. His back rounds and his neck arches and rises, especially at the base. His head is carried high and he flexes at the poll.
Collected Gait	To put a horse into a more compact frame usually done to create greater impulsion.
Collected Walk	An energetic elastic marching gait with a regular four beat rhythm. The horse remains on the bit with neck raised and arched, head near the vertical, hindquarters well-engaged and

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	shorter higher active steps. Because the steps are shorter he does not overstep.
Collected Trot	A shorter, elastic and energetic trot with the horse's balance shifted backward. The horse moves with well-engaged hindquarters, shorter higher steps and a founded back, with his neck raised and arched and his face near the vertical.
Colour	The colour of a horse is decided by the colour of the points - the muzzle, tips of the ears, mane and tail and the lower part of the legs.
Colt	An uncastrated male horse up to four years old.
Conformation	The formation of the skeletal frame and its accompanying structures when viewed in terms of the symmetrical proportion of the individual parts comprising the whole. It is the perfection of each component and their proportionate relationships that contributes to the perfection of the overall form. In the well - made horse, whatever the breed, no one feature disturbs the symmetry.
Croup	The highest point of the rump.
Dish-faced	A facial profile featuring concavity below the eyes, an Arabian characteristic.
Dock	The upper part of the tail at the tail head.
Domestic horse	Scientific Classification of the Domestic Horse: Kingdom Animalia Phylum Chordata Subphylum Vertebrata Class Mammalia

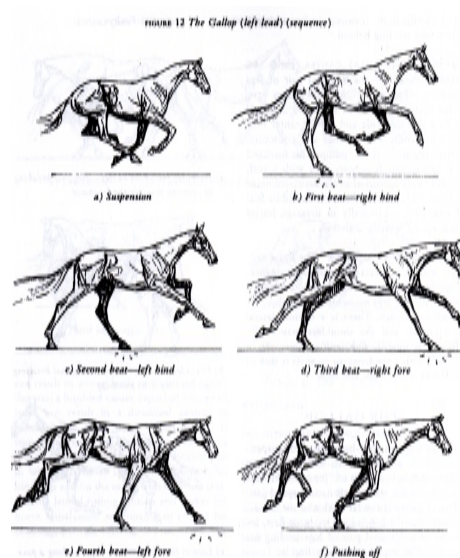
	Order	Perissodactyla
	Suborder	Hippomorpha
	Family	Equidae
	Subfamily	Equinae
	Tribe	Equini
	Genus	<i>Equus</i>
	Species	<i>Equus caballus</i>
Dun	A coat colour that comprises a yellowish or gold body with black or brown legs and tail.	
Eneolithic	Transitional period between the Neolithic and the Bronze Age during which the earliest metallic (copper) artefacts appeared, hence, it is also known as the Copper Age (2500-2000BC.)	
Equine	Any of the species of the family Equidae and genus <i>Equus</i> , including <i>Equus caballus</i> (horse), <i>Equus Asinus</i> (ass), as well as hybrids such as the mule or hinny.	
<i>Equidae</i>	The family of the horse.	
<i>Equus</i>	A genus of the family <i>Equidae</i> that comprises the horses, asses, zebras and related recent and extinct mammals.	
<i>Equus asinus</i>	The donkey.	
<i>Equus caballus</i>	The domestic horse.	
<i>Equus ferus</i>	Modern domestic horses are probably descended primarily from a wild ancestral population that roamed the Eurasian grasslands about 5000-4000BCE, often referred to as <i>Equus ferus</i> , or the wild European horse.	
<i>Equus przewalski</i>	The wild Asiatic horse.	

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Extended Trot	A gait in which the horse covers as much ground as possible with each stride. The horse pushes off the ground with great impulsion, allowing for the greatest possible reach.
Extended Walk	A walk in which the horse covers as much ground as possible at each stride without quickening his tempo or losing his clear, regular four beat rhythm. He reaches well forward from the hips and shoulders, and his head and neck extend forward. His hind feet overstep well beyond the prints of the front feet.
Feathering	An abundance of hair on the lower legs of an equine.
Fetlock	The fetlock is the joint formed by the bottom of the cannon bone and the top of the long pastern bone.
Filly	A female horse under the age of four that has not had a foal.
Flea-bitten grey	A grey coat with tiny dark flecks or spots.
Foal	A colt, gelding or filly, up to a year old.
Foreleg	Front leg.
Free Walk	A walk of relaxation, in which the horse reaches forward with long strides and a relaxed back and lowered neck.
Forelock	The portion of the mane between the ears and over the forehead.
Gait	Sequence of foot movements.

Gallop

The horse's natural running gait.



Harris.S.E. (1993) *Horse Gaits, Balance and Movement*. New Jersey.

Gaskin

The part of the hind leg between the stifle and the hock.

Gelding

A castrated male horse.

Girth

The area of the body behind the elbow, the circumference of the body measured around the barrel at this area.

Hand

The unit of measurement used to describe the height of horses. One hand equals 10 cm (4 ins). Most ponies are 12-14 hands high and most horses from 15-17 hands.

High action

The horse lifts his legs high at each step, which reduces the length of the stride.

Hindquarters

The rear end of the horse including croup, rump and hind legs.

Hinney

The offspring of a horse and a female ass.

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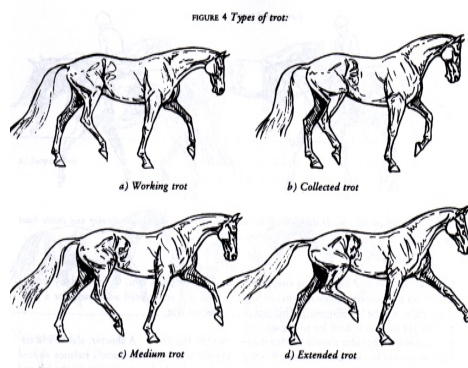
Hock	The joint of the hind leg between the gaskin and the cannon bones. The hock is the source of a horse's "rear engine" impulsion.
Hogging	(US: Roaching) Complete removal of the mane; this is done if the mane is ragged, to facilitate the treatment of dermatitis under the mane or to keep the mane out of the way. It takes 6-8 months for the mane to cease being upright and lay over on the neck. The mane can be trimmed to stay upright if required.
Holocene	The second and most recent epoch of the Quaternary Period which began 10,000BCE at the end of the Pleistocene.
Interdental space	The space between the incisors and the cheek teeth.
Mane	The long coarse hair that grows from the crest of the neck.
Mare	A female horse over four years old.
Medium Trot	A big trot performed with a round outline, with great impulsion from the hindquarters and moderately extended steps.
Mule	The offspring of a jackass and a mare.
Neolithic	The cultural period that lasted in SW Asia from about 9000-6000 BCE and in Europe from about 4000-2400 BCE and was characterized by primitive crop growing and stock rearing and the use of polished stone and flint tools and weapons.
Onager	An Asian species of wild ass.
Palaeolithic	The period of the emergence of primitive man and the manufacture of unpolished chipped stone tools, about 2.5 million to 3 million years ago until about 12,000 BCE.
Pastern	The pastern is the area between the fetlock and the coronet. The underlying bones are the long and short pastern bones (first and

second phalanges). These bones are both slightly tilted in their normal standing position, at a 47°-54° angle with the ground.

Piebald	A Pinto or Paint coat consisting of patches of black and white.
Poll	The bony protrusion at the top of the skull between the ears.
Pony	A horse of any breed that measures no higher than 14.2 hands at maturity.
Pulling	To shorten a mane or a tail by pulling out the longest hairs until the mane or tail reaches the desired length. Pulling manes and tails gives them a more natural look than trimming the ends of the hair.
Race	A group of animals having common characteristics that distinguish them from other members of the same species, usually forming a geographically isolated group; subspecies.
Rearing	The action of a horse taking the front legs off the ground and standing on straight hind legs.
Roaching	(US) see Hogging.
Roan	A horse with intermixed white and coloured hairs of any colour.
Rump	The area between the croup and the tail head.
Sexual Dimorphism	Difference in body size dependent on gender.
Skewbald	A horse exhibiting large patches of white coat colour on another base colour often brown.
Species	A species is composed of a group of animals, within which any mating between two individuals will produce fertile offspring.
Stifle	The joint between the thigh and the gaskin, the equivalent of the human knee joint.
Stallion	A male horse, four years old or over, that has not been castrated.

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Strawberry Roan	A nickname for a red roan. A true or classic roan on a chestnut base.
Subspecies	A subspecies is composed of some, but not all the members of a species. The members of a subspecies all live in, and are especially well adapted to, conditions prevailing in a particular geographic region. These adaptations usually consist of physical features that can readily be observed or measured eg. overall body build. The word “subspecies” is used to refer to wild animals - populations whose choices of mate, and thus, whose physical characteristics, have never been determined by mankind.
Swayback	A distinctly concave backbone, especially behind the withers. A swayback is often, but not always, a sign of age.
Taxonomy	The branch of biology concerned with the classification of organisms into groups based on similarities of structure, origin etc.
Trot	The two-beat gait in which the horse’s feet move in diagonal pairs.

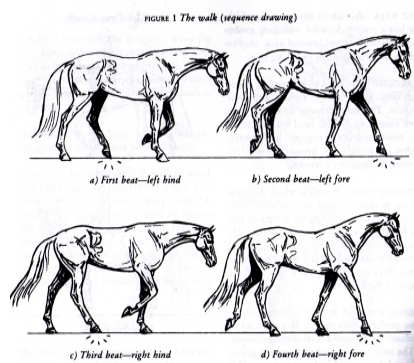


Harris.S.E. (1993) *Horse Gaits, Balance and Movement*. New Jersey.

Type Classification of different kinds of horses. Horses having characteristics that contribute to their usefulness for a specific purpose, e.g. a racing horse, a draft horse or a dressage horse.

Upper Palaeolithic The latest of the three periods of the Palaeolithic, beginning about 40,000BCE and ending in Europe, about 12,000BCE, characterized by the emergence of modern man, *Homo sapiens*.

Walk The slowest of the natural gaits.



Harris.S.E. (1993) *Horse Gaits, Balance and Movement*. New Jersey.

Withers The highest point over the shoulders, the bony projection of the backbone between the neck and the back.

Working Trot A gait in which the average horse is properly balanced and goes forward with elasticity. The hind feet step into the tracks left by the front feet. The working trot is slightly collected.

Zooarchaeology The analysis and interpretation of animal remains found at archaeological sites.

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“And God took a handful of southerly wind, blew his breath over it and created the horse.” (Bedouin Saying)²

In the Introduction to the catalogue from a recent exhibition at the British Museum, “The Horse from Arabia to Royal Ascot,”³ the authors acknowledge the role of the horse throughout history:

“The horse has played a hugely important part in human history. From its domestication around five thousand years ago, somewhere in the grassy steppe lands that stretch from the Danube to the Altai Mountains, up until modern times, the horse has been an essential element in many of the world’s major cultures.”

Although the scope and orientation of that work is specific to the Arabian Near East, rather than Egypt, the text does acknowledge the presence of the horse there and it includes two Egyptian images⁴ and textual references⁵ as do so many other works concerning the Near East in general and Egypt in particular.

However, this type of brief acknowledgement is as far as scholarship has gone in the examination of the existence of the horse in ancient Egypt.

There has been detailed and particular scrutiny of the evolution, physiology, behaviour, management, training and cultural aspects of the horse throughout history in many contexts and within many disciplines. Yet Egyptological scholarship has only looked at the horse in a relational sense: in its affiliation with other things such as chariots,

² Y. Grant (ed.) (2012) *The Little Red Book of Horse Wisdom*, New York, 57.

³ J. Curtis & N. Tallis (2012) *The Horse, From Arabia to Royal Ascot*, London, 10.

⁴ J. Curtis & N. Tallis (2012) *The Horse, From Arabia to Royal Ascot*, London, for an image from the tomb of Nebamun (lost tomb), fig. 1/ 4 and Catalogue, fig. 12 for an image from the tomb of Sobekhotep (TT 63).

⁵ J. Curtis & N. Tallis (2012) *The Horse, From Arabia to Royal Ascot*, London, for Babylonian and Mittanian cuneiform letters to Egyptian kings regarding horses, Catalogue, figs. 13, 14, 15.

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harnesses, warfare, technology, biology and philology. It has acknowledged the presence of the horse in tomb and temple reports, in the study of artefacts and the history of Egypt, but its examination of the horse specifically has been superficial. The contribution made by the horse to ancient Egypt was enormous and it deserves more than just a footnote in the studies of that great civilization.

The present study is the first holistic and comprehensive treatment of the Egyptian horse incorporating a variety of areas of investigation, combining evidence from earlier works and using the information from the latest excavations. Through detailed examination of zooarchaeological, iconographic and selected textual sources pertaining to the horse, the following questions will be explored: What was the origin of the Egyptian horse and the means by which it reached Egypt? What was it like physically at the time of its arrival and what changes did it undergo over time? What role did it play in Egypt in the New Kingdom and how did its acquisition and use impact Egypt domestically and internationally in its relations with neighbouring peoples?

Based on iconographic evidence found in tombs, temples and on artefacts, Catherine Rommelaere's⁶ 1991 study of New Kingdom horses took a more focused approach to the horses illustrated in Egyptian iconography and was the only substantive treatment of the horse in Egypt to date. She postulated the existence of two types of ancient Egyptian horses: the "Breviligne" and the "Longiligne."⁷ She reviewed material regarding the origins of the Egyptian horse, including the hypothesis that it was "indigenous" to Egypt. She mentioned its osteological remains and compared various "styles of depiction" in the corpus. A consistent theme of the work was similar to the British Museum exhibition of 2012 in that it associated material in its discussion of the Egyptian horse with the question of the origin of the Arabian breed. It did, however, define a new topic for comprehensive examination: the ancient Egyptian horse as a central figure in the development of Egyptian history. This thesis will provide that examination.

⁶ C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels.

⁷ C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, 34-36.

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1.1 ANCIENT SOURCES: THE HORSE IN EGYPT

The corpus of material relating to this investigation is extremely large and varied but can be separated into three basic types: zooarchaeological, iconographic and textual.

1.1.1 ZOOARCHAEOLOGICAL SOURCES

The horse was not indigenous to Egypt. Indeed, its origins stretch back in time and reach far from that land to the northern shores of the Black Sea where it appears to have been domesticated in the early 3rd millennium BCE. The absence of early written evidence and the dearth of figurative or iconographic sources forces a concentration on faunal remains for information concerning the progress of the horse through the cultures of the Black Sea and the Transcaucasus. The earliest evidence of horses in Egypt is osteological and is extremely limited and once again a concentration on this is enforced by the absence of other material. However, it is possible to gain a picture of the morphology of the Egyptian horse and the physical changes it went through from almost its earliest appearance there to well beyond the time frame of the current study. This osteological focus continues, assisted to a degree by some textual references and artefacts, as the use of the horse permeated the Near East. An intensive review of the results of the excavations of horse remains was undertaken in order to trace the infiltration of the horse and its use into the Near East and the Levant.

1.1.2 ICONOGRAPHIC SOURCES

Iconographic material depicting the horse can be traced in Egypt to the later 17th and early 18th Dynasties where again it is limited. However, as the use of the horse spread, there is a concomitant increase in the iconographic evidence for it. This has its place in the Egyptian artistic context and must be considered within that rather than in isolation.

A broad range of essentially artistic primary sources including tomb and temple reliefs and paintings and a sample of artefacts and fragments⁸ depicting horses can be added to the evidence of the faunal remains and compared to them, resulting in a deepening

⁸ The use made of a variety of artefacts and fragments in this study has had to be limited, not only because of word limit constraints but also because of the difficulties of interpretation caused by distortions of the images of horses enforced by three dimensional representations especially in relation to the understanding of horse morphology.

understanding of not only the appearance of the horse but also shedding light on the manner in which it was used and maintained and indicating the place that it occupied in the culture.

1.1.3 TEXTUAL SOURCES

There is extensive extant textual material associated with various aspects of the arrival and use of the horse in Egypt. For the current study, however, on account of length restrictions only some examples of 18th and 19th Dynasty textual material from a mixture of sources including literary and historical writings could be included in this thesis. The examples chosen are those that illustrate the variety of relevant texts and provide a general overview of the theme of the horse in the available material. They span a period from the early recordings of horses acquired as booty from the campaigns of Ahmose I, Thutmose I and Thutmose III to the establishment of horses as suitable items of tribute as demonstrated in the Amarna Letters and the “Marriage Stele” of Ramesses II to those showing the relationships of the kings with their teams as revealed in the Battle Poem of Ramesses II and the Medinet Habu inscriptions of Ramesses III. The amalgamation of the various sources then enabled an analysis to be undertaken in order to provide answers to the basic research questions in this thesis.

There remains considerable material for detailed investigation including such areas as the naming of chariot teams⁹, the role of the horse in the written record, the activities of those in charge of horses and more¹⁰ however, the detailed analysis of a more comprehensive textual corpus must be relegated to a future study.

1.2 LITERATURE REVIEW

Literature relating to horses in ancient Egypt has a long history. Much of this material has been mixed in its nature, blending historical, artistic, biological and social themes.

⁹ A. Eshmawy (2007) “Names of Horses in Ancient Egypt,” in J-C. Goyon & C. Cardin (eds.) (2007) *Proceedings of the 9th International Congress of Egyptologists (2004)* Grenoble, 665-676.

¹⁰ Sources such as the Annals of Thutmose III, the Amarna Letters and the Ramesside inscriptions are only a few examples of sources of written material. Many tombs such as that of Paheri contain inscriptions that relate in some way to horses.

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In this review these different themes have been divided into categories for examination, however, it is understood that the reality is a corpus of material that remains mixed, developed over time and reflects changing emphases in scholarship.

One of the first to suggest an origin for Egyptian horses was Plutarch who stated that horses had existed in Egypt from “mythological times”¹¹ and Manetho described the invasion of Egypt by the “shepherd kings,”¹² whose victory Petrie later attributed to their possession of the horse and chariot.¹³ Early literature focussed more on the nature and use of the chariot as it was limited by the paucity of physical evidence for horses and concentrated on speculation concerning the identity and activities of the “shepherd kings.”

One of the oldest studies referring to the horse in ancient Egypt was by Gabriel Fabricy in 1764, suggesting that the association of the horse and man stretched back as far as “dès la naissance de l’homme même.”¹⁴ Fabricy’s work was based mostly on studies of the Bible and centred mainly on the use of the chariot. This was in keeping with his period’s beliefs in the literal veracity of the Bible, specifically the Book of Genesis and a lack of evidence that could suggest other origins.

In 1873 Chabas¹⁵ held that the horse was indigenous to Egypt even though it was not, he noted, actually depicted on Egyptian monuments until the 18th Dynasty.

These ideas initiated a general polarization of further academic discussion along the lines of “indigenous” origin theories, which were to last well into the 20th century. As

¹¹ J. G. Griffiths (1970) *Plutarch’s De Iside et Osiride*, Cambridge, 146-147, 345-347.

¹² Manetho *Aegyptiaca*, Fragment 42, in *Manetho* (1940) transl. W.G.Waddell, Loeb Classical Library. Cambridge, Mass., 76-91.

¹³ W. M. F. Petrie (1906) *Hyksos and Israelite Cities*, with chapters by J.G. Duncan, British School of Archaeology in Egypt, and Egyptian Research Account, Twelfth Year, London, 70.

¹⁴ G. Fabricy (1764) *Recherches sur l’époque de l’équitation et de l’usage des chars équestres chez les anciens*, Marseille, 12.

¹⁵ F. Chabas (1873) *Études sur l’antiquité historique d’après les sources égyptiennes et les monuments réputés préhistoriques*, 2nd edition, Paris, 408-452. It has not been possible to obtain access to this text in this work, so references to its contents arise from C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels.

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late as 1938 Capart¹⁶ agreed with Chabas concluding that the horse's image had been avoided because of a "taboo" it acquired through its association with Seth.

The rise of modern scientific method had a profound effect on Egyptology in general and studies relating to horses in particular. Over time science itself underwent considerable change and development, new methodologies were created and the "indigenous-origin" theory seemed to have been vindicated when Gaillard, in 1934, identified a few fragments of bone found at Kom Ombo as *Equus caballus* in what appeared to be a Palaeolithic context.¹⁷ However, the remains have since been found to be intrusive.¹⁸ This determination in itself illustrates clearly the consistent development of the detail and accuracy of empirical data gathering and the changing understandings that have been gained from it. The discovery of new evidence and the development of science itself brought about the demise of the "indigenous" theory though permutations of it extended even into the 1960s.¹⁹

The "non-indigenous" origin theory was initially represented by the work of C.A. Piétrement²⁰ who in 1883 devoted only a fifty-page chapter of a very wide ranging, five-hundred page text to Egyptian horses, identifying the Hyksos "invasion" as the means by which the horse entered Egypt.²¹ He noted the first epigraphic evidence of the horse as occurring at El Kab²² and stated that the animal was the "Mongolian" type of horse that was often labelled as the "Dongola" or Nubian type.²³

¹⁶ J. Capart (1938) "le cheval et dieu Seth," *Mémoire de l'Institut Français d' Archéologie Orientale* 66, 227-231.

¹⁷ C. Gaillard (1934) *Contribution à l'étude de la faune préhistorique de l'Égypte*. Archives du Musée d'Histoire Naturelle de Lyon, pl. 11, fig. 2.

¹⁸ C. S. Churcher (1972) *Late Pleistocene Vertebrates from Archaeological Sites in the Plain of Kom Ombo, Upper Egypt*, Toronto, 82: 48-51. See Chapter 2.

¹⁹ In 1964 Mauvy, in efforts to trace the origin of the purebred Arab horse suggested (along with Dr Perron and Lady Wentworth who were professional Arab horse breeders from the late 19th and early 20th centuries) that the predecessor of the modern Arab had always existed in the wild in the central part of central Arabia. R. Mauvy (1964) *Le cheval de pur-sang arabe. Le cheval barbe*. Paris.

²⁰ C. A. Piétrement (1883) *Les chevaux dans les temps préhistoriques et historiques*. Paris.

²¹ C. A. Piétrement (1883) *Les chevaux dans les temps préhistoriques et historiques*, Paris, 489.

²² C. A. Piétrement (1883) *Les chevaux dans les temps préhistoriques et historique*, Paris, 478, in the tomb of Ahmose son of Ibana.

²³ C. A. Piétrement (1883) *Les chevaux dans les temps préhistoriques et historique*, Paris, 485.

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Piétrement criticised the “indigenous” theory expressed by Chabas²⁴ on the basis that he had used much later Greek reports as evidence, “il serait téméraire de tenir compte de ‘légendes égyptiennes habillées à la grecque, à une époque aussi récente que celle de Plutarque,’ pour avancer l’hypothèse d’une très ancienne présence chevaline en Égypte.”²⁵

Piétrement’s work together with subsequent increasing numbers of excavations, broadening areas of investigations and the development of science itself, led to an accumulation of information about Egyptian horses. Nonetheless, the material written concerning them remained limited, much of it devoted not to the horse but rather to its accompanying chariot, harness and the development of this technological innovation especially with regard to war. Again the studies reflected their context. Historians and archaeologists of the 18th and 19th centuries were primarily interested in the actions of kings and nation/states which used the chariot as a weapon in the conduct of their wars not in the fine level of detail of the driving force behind the chariot, the horse. After all, it was just a horse. This “meta-narrative”²⁶ was the main focus of historiography up to the end of the 19th century but following World Wars 1 and II different ideas about subjects that were considered appropriate for historical and archaeological research developed. The “meta-narrative” was complimented by new and broader and more detailed investigations into the contributions of class, economics, gender and a myriad of other factors. This new subject matter mixed with gigantic strides in technological development fundamentally altered the directions, breadth, depth and methodologies of modern research.

Egyptological research itself became more broadly based, concerned with revealing Egyptian social and cultural, military, artistic, architectural and linguistic aspects to name just a few areas, in far more detail and as it did more information about Egyptian

²⁴ F. Chabas (1873) *Études sur l’antiquité historique d’après les sources égyptiennes et les monuments réputés préhistoriques*, 2nd edition, Paris, 408-452. It has not been possible to obtain access to this text in this work, so references to its contents arise from C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Bruxelles.

²⁵ C. A. Piétrement (1883) *Les chevaux dans les temps préhistoriques et historique*, Paris, 491.

²⁶ Meta-narrative or grand narrative is a term developed by J-F. Lyotard to mean a theory that tries to give a totalizing comprehensive account to various historical events, experiences and social, cultural phenomena based on the appeal to universal truth or values. www.newworldencyclopedia.org/entry/Metanarrative

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horses was revealed. The origin of the Egyptian horse still remained a focus of research but so did its archaeological remains, its usages and depictions and these can be observed in the broad variety of themes in the literature reviewed here.

Zooarchaeological / Archaeological		Iconographic/ Art		Historical		Cultural		General	
1992	J. Clutton-Brock	1957	R. Schulman	1978	W. Helck	1960	J. Leclant	1982	W. Helck
1993	S. Bokonyi	1967	H. Liebowitz	1984	F. Braunstein-Silvestre	1996	P. Houlihan	2001	D. Redford
1997	P. Wapnish	1988	J. K. Hoffmeier	1994	W. Decker	2003	D. Meeks		
2005	L. Mallory-Greenough	1991	C. Rommelaere	1997	L. Heidorn				
		2002	P. Houlihan	2001	M. Bibby				
				2009	P. Raulwing & J. Clutton-Brock				

Table.1.1. General Categories of Modern Scholarship Relating to Horses in Egypt

Much of the material examined contains brief mentions of the Egyptian horse - though again usually in the context of more extensive examinations of the chariot and its use. However, several studies have more substantial discussions and are reviewed here because of their valuable contribution to the discussion to date.

1.2.1 ZOOARCHAEOLOGICAL / ARCHAEOLOGICAL STUDIES

* J. Clutton-Brock (1992) *Horse Power, A History of the Horse and the Donkey in Human Societies*, Cambridge.

This is a general study of the horse and donkey from the last Ice Age to the modern era and although its concentration on Egyptian horses comprises only six²⁷ of almost two hundred pages it is useful as it provides a general introduction to the biology, evolution and domestication of the horse. Clutton-Brock, who is a zooarchaeologist, discusses the extant remains of the Egyptian horse with a concentration on its morphology, giving an

²⁷ J. Clutton-Brock (1992) *Horse Power, A History of the Horse and the Donkey in Human Societies*, Cambridge, 80-86.

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indication of the appearance of the horses of Buhen,²⁸ Soleb and Thebes - some of which, with five lumbar vertebrae, possessed characteristics said to be associated with the modern Arab breed. Also useful are the discussions of riding and chariot warfare, the peculiar custom of “nose slitting”²⁹ and the issues associated with hybrids. This work is a general overview that places the Egyptian horse securely within its historical and biological context over time.

* S. Bökönyi (1993) “Two Horse Skeletons from the Cemetery of Kurru, Northern Sudan,” in *Acta Archaeologica Academiae Scientiarum Hungaricae*, 45, (1993) 301-316.

This is a detailed, if short, re-examination of two horse skeletons found in 1919 in the royal cemeteries of Kush at Kurru. Bökönyi published the results almost ten years after his original examination. He provides specific measurements of the bones of the individuals as well as photographs and useful measurements of various bones. This research also offers corrections to the findings of Dunham³⁰ regarding the positioning of the horses and the condition of their skulls.³¹ Both animals were adult and their most significant feature was their large size.³² There follows a short comparison with the horses of Saqqara, Thebes, Buhen and Soleb pointing out that the Kurru horses were bigger than any of those mentioned. This he attributes to the importation of eastern horses initially by the Hyksos and later through a process of deliberate breeding for purpose.

²⁸ Clutton-Brock was responsible for the initial examinations of the remains of the Buhen horse. See J. Clutton-Brock (1974) “The Buhen Horse,” in *Journal of Archaeological Science* 1, (1974) 89-100 and in “The Buhen Horse,” in W. B. Emery, H. S. Smith & A. Millard (1979) *The Fortress of Buhen: The Archaeological Report*, Egypt Exploration Society, Excavation Memoirs 49, London, 191-195.

²⁹ J. Clutton-Brock (1992) *Horse Power, A History of the Horse and the Donkey in Human Societies*, Cambridge, 77.

³⁰ D. Dunham (1950) *The Royal Cemeteries of Kush, el-Kurru*, Boston, 111. Dunham reported that the horses were buried standing and that they had been decapitated. Bökönyi found that they had been buried lying on their bellies and that the skulls had been reduced to fragments most probably by grave robbers. S. Bökönyi (1993) “Two Horse Skeletons from the Cemetery of Kurru, Northern Sudan,” in *Acta Archaeologica Academiae Scientiarum Hungaricae* 45 (1993) 302.

³¹ S. Bökönyi (1993) “Two Horse Skeletons from the Cemetery of Kurru, Northern Sudan,” in *Acta Archaeologica Academiae Scientiarum Hungaricae* 45 (1993) 302.

³² S. Bökönyi (1993) “Two Horse Skeletons from the Cemetery of Kurru, Northern Sudan,” in *Acta Archaeologica Academiae Scientiarum Hungaricae* 45 (1993) 305.

Bökönyi is critical of Nibbi's³³ belief that horses were a royal monopoly and were rarely traded. She pointed out that horses, like everything else, belonged to the king but that did not prevent them from being traded specifically to the Assyrians who imported them from Nubia.³⁴ Bökönyi concludes very definitely that the horses of Egypt originated from the Eastern group.

Bökönyi is a qualified zooarchaeologist providing a modern criteria-based assessment of the Kurru horses - enabling them to be seen as part of the continuum in which the horses studied in this work can be placed.

* P. Wapnish (1997) "Middle Bronze Equid Burials at Tell Jemmeh and Re-examination of a Purportedly 'Hyksos' Practice," in E. Oren (ed.) (1997) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, 335-369.

This article is contained within a compilation of material specifically concerning the Hyksos and it concentrates on equid burials which Wapnish states was a "region-wide phenomena" and which cannot be attributed to the Hyksos alone.³⁵ This appears to present difficulties for the theory of the Hyksos origin for the Egyptian horses, suggesting that peoples other than the Hyksos may have been responsible for their introduction to Egypt. On the contrary, it provides a much broader background of the tradition regarding equids and supports the fact that many people exploited the horse. Thus, it is not unlikely that the Hyksos did so too and that they (or others at the time) brought it to Egypt.

The usefulness of this article arises from its treatment of various types of equids and their remains including several identified as horses, especially those found in Syria-Palestine. The article gives a technical overview of these equids and is broad ranging,

³³ A. Nibbi (1979) "Some Remarks on Ass and Horse in Ancient Egypt and the Absence of the Mule," in *Zeitschrift für Ägyptische Sprache und Altertumskunde*, Band 106/2, Berlin, 162. J. Clutton-Brock (1992) *Horse Power, A History of the Horse and the Donkey in Human Societies*, Cambridge, 86, identifies them as "hinny's." A hinny is a cross between a female donkey and a male horse. She notes that the bottom team has been interpreted in the past as onagers or asses. What is significant is that they are not horses.

³⁴ S. Bökönyi (1993) "Two Horse Skeletons from the Cemetery of Kurru, Northern Sudan," in *Acta Archaeologica Academiae Scientiarum Hungaricae* 45 (1993) 311.

³⁵ P. Wapnish (1997) "Middle Bronze Equid Burials at Tell Jemmeh and Re-examination of a purportedly "Hyksos Practice," in E. Oren (ed.) (1997) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, 360.

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comparing Egyptian finds with those from Mesopotamia and Greece. Her re-examination of the Tell el-Ajjul equids provides no new insights into the accuracy of Petrie's identification of some of them as horses as she points out that the remaining evidence of photographs and very limited bone remains is too difficult to interpret unequivocally and she only cites J. Clutton-Brock's identification of the presence of *Equus caballus*. The strength of the work is in its close reliance on primary evidence, the faunal remains and their technical detail.

* L. Mallory-Greenough (2005) "Horse Burials of Nubia," in *Journal of the Society for the Study of Egyptian Antiquities* 32 (2005) 106-119.

The subject of this brief article is beyond the main focus of the present work, yet it is included because it helps to place the 18th and 19th Dynasty horses into context. Mallory-Greenough discusses the Napatan, Meriotic and Post-Meriotic horse burials and the lack of direct connection to the burials of the Buhen and Soleb horses. Deliberate killing and burial of horses together with their trappings in the tombs of kings may have begun as late as the horses of Kurru. Meriotic deposits are discussed and the difficulties arising from earlier less meticulous excavations are considered. The Post-Meriotic sites of Ballana, Firka, Gammai and Qustul provide evidence of very deliberate, elaborate burials. The author analyses sex distribution in the Meriotic and Post-Meriotic burials using the evidence gained from teeth and pelvic remains. There seems to be a tendency for stallions to be buried in this way, but the poor preservation of the remains makes unequivocal results impossible. Mallory-Greenough includes a short but informative section on the tack and trappings that accompanied these horse burials.

1.2.2 ICONOGRAPHIC STUDIES

* A.R. Schulman. (1957) "Egyptian Representations of Horsemen and Riding in the New Kingdom," in the *Journal of Near Eastern Studies* 16/4 (1957) 263-271.

The theme of the article is the riding of horses in the New Kingdom. Schulman shows that riding was known and performed by the Egyptians, in contrast to an idea with some

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currency at the time of his writing, that horses were not ridden. He cites Winlock³⁶ and Faulkner³⁷ who state that the horse was not ridden by mainstream army personnel, but disagrees with them because “the horse should have had no trouble carrying him (the Egyptian).”³⁸ He admits scenes of riding are rare, but argues that instead of seeing riders as representations of grooms and orderlies,³⁹ they are in fact images of mounted scouts, “a small but important branch of the Egyptian army in the New Kingdom.”⁴⁰

He points to the 12th Dynasty as a time when riding was known in the Sinai and to the first example of a rider on horseback dating from the reign of Thutmose III. He discusses the images of riders on eight artefacts, in detail, and in general a variety of other primary sources from the 18th and 19th Dynasties. He discusses the “saddle-cloth” discovered on the back of the horse from Thebes.⁴¹ On the basis of the fact that the majority of the primary sources he cites are of a military nature, he concludes that though riders are relatively few in number, they probably indicate “the earliest known examples of cavalry.”⁴² He includes photographic examples of the sources he used including axes, statues and ostraca. Schulman also points out the various images of the goddess Astarte riding on horseback.⁴³ The brief mention of a “religious” dimension to the use of horses at this point in the current study indicates a possible direction for further examination of this aspect. (For other works relating to this theme see J. Leclant

³⁶ H. Winlock (1947) *The Rise and Fall of the Middle Kingdom in Thebes*, New York, 153-155.

³⁷ R. Faulkner (1953) “Egyptian Military Organization,” in the *Journal of Egyptian Archaeology* 39 (1953) 43. “Cavalry was as yet unknown, probably, as Winlock remarks, because the contemporary breed of horses was too weak in the back for the hard work of military riding.”

³⁸ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” in the *Journal of Near Eastern Studies* 16/4 (1957) 263, Note 4.

³⁹ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” in the *Journal of Near Eastern Studies* 16/4 (1957) 263.

⁴⁰ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” in the *Journal of Near Eastern Studies* 16/4 (1957) 263.

⁴¹ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” in the *Journal of Near Eastern Studies* 16/4 (1957) 270. Here he quotes H. Winlock (1937 “The Egyptian Expedition 1935-1936” in *Bulletin of the Metropolitan Museum of Art*, 23/2 (1937) 10-14 and figs. 14-17. The burial of the horse was excavated by A. Lansing & W. Hayes (1937) “The Egyptian Expedition 1935-1936, The Museum’s Excavations at Thebes,” in the *Bulletin of the Metropolitan Museum of Art*, 32. No 1. Part 2. “On its back among the wrappings was what may be considered the first saddle known to us (fig. 14). It is more like a saddle cloth, to be sure, being merely a rectangular piece of linen and leather with a projection toward the rear.” 10.

⁴² A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” in the *Journal of Near Eastern Studies* 16/4 (1957) 271.

⁴³ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” in the *Journal of Near Eastern Studies* 16/4 (1957) 269.

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(1960) “Astarté a cheval d’après les représentations égyptiennes,” *Syria* 37 (1960) 1-67, and D. Meeks (2005) “L’introduction du cheval en Égypte et son insertion dans les croyances religieuses,” in A. Gardeisen (ed.) (2003) *Les Équidés dans le monde Méditerranéen antique: Actes du colloque organisé par l’École française d’Athènes, le Centre Camille Jullian et l’UMR 5140 du CNRS Athènes, 26-28 Novembre 2003*, Centre National de la Recherche Scientifique et de l’École française d’Athènes, Lattes, 51-59.)

Given modern expectations - that horses are used mainly for riding rather than traction animals - Schulman provides a useful view of the Egyptian usage of the horse based on the iconographic and archaeological evidence available.

* H. A. Liebowitz (1967) “Horses in New Kingdom Art and the Date of an Ivory from Megiddo,” in the *Journal of the American Research Centre in Egypt* 6, (1967) 129-134.

Liebowitz attempts to date an ivory plaque discovered at Megiddo using a methodology based on the depiction of the legs of the horses. This article represents the only known attempt to use the images of horses as dating criteria.

He examines the horses shown in a number of 18th and 19th Dynasty tombs and temples and identifies, in detail, three separate styles: the 18th Dynasty or Pre-Amarna Phase, the Amarna Phase and the Ramesside Phase. Similarity in the style of the horses’ legs in the ivory and those in Egyptian images would, he believes enable him to make a dating comparison.

The earliest images of horses known at the time he was writing date to the reign of Thutmose I. Earlier examples (found subsequent to his time) were unavailable and this affected his sample. His use of the images from the tomb of Khaemhat (TT 57)⁴⁴ is problematic as the image shown in fig. 3, illustrating the Pre-Amarna Phase, is from the lower register and depicts onagers not horses.⁴⁵ Careful comparison between the teams in the upper and lower registers makes it very clear that these are not the same type of equid.

⁴⁴ B. Porter & R. Moss (1994) (2nd ed.) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings, Part I. The Theban Necropolis*. Oxford, I, 116 (13).

⁴⁵ W. Wreszinski (reprint 1988) *Atlas zur altaegyptischen Kulturegeschichte*, Slatkine, Geneva 1, pl. 189 identifies them as mules, and C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, 190 as onagers.

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Liebowitz lists eight tombs and one artefact in his sample of the Pre-Amarna Phase, but points out that there are exceptions to his theory. There are, in fact, five of them. In the Amarna Phase he lists six examples with four variations and introduces a “transitional phase” with instances of images similar (in one case) to the Amarna Phase and three to the Pre-Amarna Phase leading up to the Ramesside Period. He also cites three exceptions to the Ramesside Phase. He dates the ivory plaque to the Ramesside period based on this system.

For the purpose of using representations of horses as dating criteria, however, the sample of tombs is very small and there are too many exceptions to the various “Phases” for unequivocal results to be gained. This work, however, encourages further investigation into using horse depictions as dating criteria.

* J. K. Hoffmeier (1988) “The Chariot Scenes,” in D. B. Redford (1988) *The Akhenaten Temple Project. Vol. 2. Rwd-Mnw and Inscriptions*, Aegypti Texta Propositae 1, Toronto, 35-45.

This study gives an extensive description of the chariot scenes that have been able to be reconstructed from the remaining talatat from the destroyed Akhenaten Temple. Hoffmeier describes nine scenes and examines them for information pertaining to chariots and horses and their trappings. Using the preserved and reconstructed images he discusses traditional images and any innovations that appear. Some of the innovations that he points to are the inclusion of *mnit* beads in the trappings, the first appearance of a queen in a king’s chariot, the first appearance of a queen driving a chariot on her own, the first appearance of a team name, ribbons on the horses and princesses in chariots as well as the first appearance of a procession. He also makes a connection between the use of plumes and martial deities and the protective powers of the god Bes. These are important observations though regarding the horses themselves caution must be exercised owing to the high level of reconstruction of the images.

* C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels.

This is the only substantive text given over almost exclusively to the study of horses in Egypt and has been frequently cited since its publication. Two thirds of the text is concerned with the origins and types of horses and one third to harnesses and trappings.

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It contains a very useful glossary and an extensive and thoroughly referenced catalogue of horse images in reliefs and on artefacts.

The treatment of the origins of horses is short and general, confined to only two selected groups: the Tarpan and the Przewalsky. Rommelaere traces the domestication and spread of the horse on the basis of archaeological, figurative and philological evidence and discusses the earlier held theses that the horse was either indigenous to Africa or non-indigenous - that it originated in the Arabian Peninsula.

She attributes the existence of the Buhen horse to “gifting” by the Hyksos to an ally. She postulates the existence of two types of horse in Egypt the “Longiligne” and the “Breviligne,” and she identifies them in specific tombs and compares them to Arabs, Persians, Caspians, Dongolas and Akhal Tekes (most of which are modern horses). She recognises a change in horse depictions at around the time of Thutmose III and Amenhotep II but admits that the skeletal remains available to her do not confirm the existence of two species. One caution regarding her work is the diversity of her terminology regarding these two “types” - she uses the terms, “race,” “type,” “breed” and “species” interchangeably, without regard to their specific technical definitions resulting in some confusion regarding meaning.

She includes some discussion of the Amarna and Ramesside periods and seems influenced by Liebowitz’ three phase theory. There is also a brief examination of the symbolism of coat colours, the bearing and gaits of the horses, as well as the depictions of harnesses, trappings, riders and the horse’s relationships with divinities such as Astarte.

Rommelaere included a useful bibliography and an excellent catalogue of images with the line drawings being very clear. See Appendix 4 for a more detailed discussion of this work.

* P. Houlihan (2002) “Animals in Egyptian Art and Hieroglyphs,” in B. J. Collins (ed.) (2002) *A History of the Animal World in the Ancient Near East*, Leiden, 97-135.

Houlihan’s comments concerning horses are contained within the wider context of an overview of animals in Egyptian art and one of the benefits of this work is that horses are placed in the context of the iconographic tradition. He makes clear statements about

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the centrality of animals in Egyptian art and life. The depiction of animals played a part in conveying complex concepts of kingship, religion and social activity as well as demonstrating artistic skill, with the accurate rendering of the morphology of a huge variety of beasts. Images of domestic and wild animals as well as activities that included animals, such as hunting scenes, existed from the very earliest Egyptian periods and the hieroglyphic script was based to a great extent on the animals that filled the Egyptian world. He stresses their pivotal placement in tomb decoration and the significance of this to the maintenance of the deceased in the afterlife, using the tomb of Mereruka as an example.

There is a very brief discussion of the introduction of the horse, its growth in popularity as a subject for illustration, its part in the use of the chariot and later as it became more common and part of the iconography of the king and the elite. The importance of this article, which mentions horses so briefly, is to place them into the context of animals in Egyptian art and culture.

1.2.3 HISTORICAL STUDIES

* W. Helck (1978) "Ein indirekter Beleg für die Benutzung des leichten Streitwagens in Ägypten zu Ende der 13. Dynastie," in *Journal of Near Eastern Studies* 37/4 (1978) 337-340.

This short article cites early references to the Hyksos origins of the horse in Egypt. Of most interest (and the reason for its inclusion in this discussion) is Helck's mentioning of the evidence of gloves. He gives examples of the existence of gloves firstly in the tomb of Ay⁴⁶ and argues that they are connected with the chariotry, given that Ay was an overseer of horse and secondly on a 17th Dynasty stele,⁴⁷ of Khonsuemwaset which shows the gloves under the stele owner's chair and he concludes that this indicates that

⁴⁶ N. de Garis Davies (1908) *The Rock Tombs of El-Amarna, Part 6 The Tombs of Parennefer, Tutu and Ay*, London, pl. 30.

⁴⁷ M. Barsanti (1908) "Stèle inédite, au nom du roi Radadouhotep Doudoumes," *Annales du Service des Antiquités de l'Égypte* 9 (1908) 1-3.

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he was a charioteer. However there is evidence that horse ownership occurred earlier as they are represented in Old Kingdom tomb scenes in the tomb of Hesi.⁴⁸

* F. Braunstein-Silvestre (1984) “Quand le cheval arrive-t-il en Egypte?” in L. Krzyżaniak & M. Kobusiewicz (eds.) (1984) *Origin and Early Development of Food-Producing Cultures in North-Eastern Africa*, Poznań, 271-275.

In this short article concerning the arrival of the horse in Egypt, Emery’s dating of the Buhen horse based on the stratigraphy of the remains is challenged. Braunstein-Silvestre also points out that a re-examination of the material found at Kom Ombo was not secured stratigraphically and that, although the Tell el-Daba teeth are indicative that horses were present earlier in a Hyksos site, there is no unequivocal proof of horses having been in Egypt before Thutmose I.

* W. Decker (1994) “Pferd und Wagen im Alten Ägypten,” in B. Hänsel & S. Zimmer (eds.) *Die Indogermanen und das Pferd. Akten des Internationalen interdisziplinären Kolloquiums Freie Universität Berlin 1-3 Juli, (1992)* Archaeolingua, Main Series 3, Budapest, 259-270.

A small section, only pages 260 to 261 are actually devoted to a discussion of horses per se, as most of the article concentrates on the horse and chariot as a unit. Nonetheless, it puts the horse into a useful context.

Decker attributes the arrival of the horse to the Hyksos and its basic function as pulling a chariot. He notes the Buhen horse, looks at the linguistic origins for the word “horse” in Egyptian and cites the other main sites where horse remains have been identified. He is influenced by Rommelaere’s work in that he mentions two types of horse existing from the time of Thutmose III, types he says lived contemporaneously.

Decker is one of the first researchers to articulate both the high regard in which the horse was thought to be held and the fact that after the battle of Meggido, the numbers of horses in Egypt were boosted. He also suggests that trade was a possible means by which horse numbers were increased. In his most important contribution, Decker is first

⁴⁸ N. Kanawati & M. Abder-Raziq (1999) *The Teti Cemetery at Saqqara. Vol. V, The Tomb of Hesi*, ACE Reports 13, Warminster, pls 53 & 54.

to comment on the acquisition of the horse as a social catalyst for modernisation and innovation in Egypt itself.

* L. Heidorn (1997) “The Horses of Kush,” in *Journal of Near Eastern Studies* 56/2 (1997) 105-114.

Whilst this article stands outside the scope of this thesis, it provides a much needed context for this study. Heidorn gives a brief overview of the horse remains found to 1997, paying special attention to the Buhen remains and the comments regarding horses made by King Piye. She examines the later treatment of horses in Egypt (and in Kush particularly) and the sending of Egyptian horses to Assyria, emphasising the large size of these animals and how successfully horses were bred in Kush.

* M. Bibby (2001) “The Arrival of the Horse in Egypt: New Approaches and a Hypothesis,” in R. Ives (et al) (eds.) (2001) *Current Research in Egyptology III, December 2001, Third Symposium for Current Research in Egyptology, University of Birmingham*, BAR International Series 1192, Oxford, 13-18.

Bibby provides a general overview, discussing the technical innovation of the chariot and the early use of hybrid equids in Mesopotamia as well as the first references to the horse in the Ur texts and the areas of its domestication. She cites “*Equids in the Ancient World*,” the proceedings of the 1980 Tübingen conference,⁴⁹ which is used extensively in this work to give a very general overview of the spread of the use of the horse mainly by means of trade.

She discusses the idea that the Hyksos brought the horse to Egypt and counters the “invasion” theory of the Hyksos arrival. Bibby questions the reliability of the Tell el-Ajjul remains, yet she gives credence to the Tell el-Kebir finds that appear now to be misidentified (See Appendix 2). Whilst she is not convinced that the Hyksos introduced the horse, she does not suggest an alternative other than trade and status “gifting.”

⁴⁹ R. Meadow & H. P. Uerpmann (1986) *Equids in the Ancient World I*, Wiesbaden: R. Meadow & H. P. Uerpmann (1991) *Equids in the Ancient World 2*, Wiesbaden.

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* P. Raulwing & J. Clutton-Brock (2009) "The Buhen Horse: Fifty Years After Its Discovery," *Journal of Egyptian History* 2, 1-2 (2009) 1-106.

This long article is a re-examination of the material concerning the Buhen horse. Reviewing its discovery and dating by Emery, Clutton-Brock, an experienced zooarchaeologist who examined the horse originally explains, "the goal of this study is to give an overview on the history of research fifty years after the unexpected finding of the Buhen horse in the autumn of 1958, and to scrutinise the zooarchaeological, archaeological, historical and linguistic evidence and lines of argument in the accounts."⁵⁰ The article does this exhaustively.

Raulwing and Clutton-Brock explain what happened to the bones and reinforce the dating that was assigned by Emery on the basis of his notes concerning the stratigraphy and her examination of the skeleton carried out at the time. They address many of the contrary opinions regarding the reliability of the dating and counter each one. They carry out a broad examination of the other existing faunal remains to the late period and support Bibby's suggestions regarding the contributions of trade and "gifting." There is an extensive discussion of the linguistic evidence that also supports the dating of the horse. This is the most thorough treatment of this specimen available and it makes a considerable contribution, not only to this study, but also to the overall discussion of the ancient Egyptian horse.

1.2.4 CULTURAL STUDIES

* J. Leclant (1960) "Astarté a cheval d'après les représentations égyptiennes," *Syria* 37 (1960) 1-67.

This is an extensive article concerning the association between the goddess Astarte and the horse. Leclant introduces the discussion with an overview of the Ugaritic background of the goddess and her introduction to the Egyptian pantheon. He then conducts an intensive examination of all the available extant examples of the images of

⁵⁰ P. Raulwing & J. Clutton-Brock (2009) "The Buhen Horse: Fifty years after its discovery," *Journal of Egyptian History* 2,1-2 (2009) 6.

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the two together and compares the Egyptian representations with the Asiatic ones. He concludes that the Hyksos were responsible for the introduction of the horse and this was a means by which Astarte came to infiltrate Egypt. Whilst the emphasis of the article is religious in nature, it provides significant information relative to the contexts that the horse occupied in Egypt and other countries.

* P. Houlihan (1996) *Animal World of the Pharaohs*, London.

Only a small part of this work (33-38) is devoted to a discussion concerning horses however, it is helpful as a general overview and places horses into the broader context of animals in the Egyptian world. Given its length, it is quite complex in that it cites the Hyksos as the means by which the horse reached Egypt and then discusses many horse-related topics such as: the history of the horse; the riding of horses; its place in relation to religion; the Ramesside battle reliefs; the uses for the chariot and horse; Senenmut's Theban horse; the battle of Meggido; and the breeding and exporting of horses. The discussion extends to the reign of Piye. Houlihan makes the only mention of the names of royal horses, the possibility of the existence of a "track" at Malkata and stables at Amarna and the instances of horses in love poetry!⁵¹ Houlihan makes mention of the Tell e-Kebir equid remains as awaiting confirmation that they are those of horses.

* D. Meeks (2005) "L'introduction du cheval en Égypte et son insertion dans les croyances religieuses," in A. Gardeisen (ed.) (2003) *Les Équidés dans le monde Méditerranéen antique: Actes du colloque organisé par l'École française d'Athènes, le Centre Camille Jullian et l'UMR 5140, du CNRS Athènes, 26-28 Novembre 2003*, Centre National de la Recherche Scientifique et de l'École française d'Athènes, *Lattes*, 51-59.

This short article focuses on religious aspects. However, it provides a useful overview of the horse's Hyksos origins, the extant remains, and the association of the horse with royal iconography. It also explores some linguistic matters. It extends to the Saite period and points out that in all cases the horse itself is not sacred, but rather, it is in its associations and symbolism that it is seen in support of divinities. He discusses the

⁵¹ M. Lichtheim (1976) *Ancient Egyptian Literature, II: The New Kingdom*, Berkeley, 186-187 from the Papyrus Chester Beatty I.

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goddesses Astarte and Hathor and their affiliation with war and victory and their connections with these from about the time of Thutmose III.

1.2.5 GENERAL OVERVIEWS IN REFERENCE WORKS

* S. Redford (2001) "Equines," in D. Redford (ed.) (2001) *The Oxford Encyclopedia of Ancient Egypt*, Oxford University Press.

<http://www.oxfordreference.com.simsrad.net.ocs.mq.edu.au/view/10.1093/acref/9789780195102345-e-0222> Accessed 15/04/14.

This contains a brief general discussion of the *equine* species used in ancient Egypt, the horse and the donkey covering a period from the sixteenth century to the time of Piye. Redford cites Buhen as the first faunal evidence of horses existing in Egypt. She makes reference to the influx of horses under Thutmose III, their use in hunting and the devotion of several kings for their horses as well as referring to their association with the Syrian goddess Astarte.

* W. Helck (1982) "Pferd," *Lexikon der Ägyptologie*, IV, Wiesbaden, 1009-1013.

This general overview of material relating to the horse is a useful guide to a multitude of sources in ancient Egypt. Helck cites the first physical evidence as the teeth discovered in Tell el-Daba and indirect evidence as gloves represented on a stele from Tell Edfu. He then follows a brief chronological outline of the presence of the horse from early Hyksos times through to the Meriotic period. He discusses its use, the classes who owned it, its training and maintenance. Most useful of all are the numerous references to a variety of scholarly material concerning Egypt's long relationship with the horse.

1.2.6 SUMMARY AND CONCLUSIONS

The literature discussed above comprises the most important and extensive works that reflect the development and major approaches taken in the study of the Egyptian horse over time and are indicative of trends that have developed to date. Obviously, there is an overlap inherent in these works and, whilst this is acknowledged, their division into

the various categories has been made in order to concentrate on the areas that they have primarily examined.

Still central to the study of the Egyptian horse is the question of its origins, the discussion of which as mentioned above, formed the focus of attention in the 18th, 19th and early 20th centuries. Conclusions were based on evidence gleaned from Biblical and other ancient texts and some preliminary archaeological findings; this led to theories that ascribed “indigenous” or “non-indigenous” origins to the horse. As excavations proceeded and the faunal record failed to provide evidence for the existence of the Egyptian horse that predated the Middle Kingdom, the question of origins was put aside until fresh material could be uncovered. In the first half of the 20th century there were some “distractions,” that were associated with the question of origins not of the Egyptian horse but of the Arab breed that some authors identified as the progenitor of the horse of Egypt.⁵²

These centuries experienced elemental changes in approaches to archaeological investigations with the rise of modern science, changes to methodologies and the technologies available and paradigm shifts in the subjects considered suitable for investigation. Work in the 20th century (especially the latter half) and early 21st by scholars such as Petrie, Emery, Bokonyi, Wapnish, Heidorn, Mallory-Greenough, Raulwing, Clutton-Brock and Ikram has irrevocably consigned the “indigenous” theory to obsolescence and using new methods and understandings it laid the foundations not only of a new interpretation of origins but a clearer understanding of the spread of the horse throughout Egypt. The question of origins reappeared briefly again with Braunstein-Silvestre (1984) Bibby (2001) and Meeks (2003). However, these works

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The origin of the Egyptian horse has been entangled in theories relating to the origin of the Arab breed of horse. These can be traced at least as far back as H. F. Link (1837) *Le monde primitive et l'antiquité expliquée par l'étude de la nature*, 2, Paris. He stated, “si nous voulons trouver la patrie du cheval, il faut la chercher dans le pays où cet animal se trouve le plus parfait.” This he identified as the plateau of the Negev desert. His ideas survived into the 20th century through the publications of Lady Wentworth, such as J. A. Blunt-Lytton (Lady Wentworth) (1938) *Thoroughbred Racing Stock and Its Ancestors: the Authentic Origin of Pure-Blood*, London. Lady Wentworth was a famous breeder of Arab horses who contended that Arab horses had lived in the Negev since time immemorial. This theory was echoed more recently by R. Mauvy (1964) *Le cheval de pur-sang arabe. Le cheval barbe*, Paris, 11. The connection between the Arab and the Egyptian horse was based solely on the morphological similarities between the two. The “Arab” theory has led to much misunderstanding of the origins of the Egyptian horse in the general community.

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concentrated mainly on material remains that were found within the boundaries of Egypt and their conclusions often rested on only a limited number of faunal deposits.

Liebowitz attempted, with little success, to use the appearance of horses as a dating criterion in the late 1960s and Leclant (1960) and Meeks (2003) sought to point out the significance of the horse in studies of Asiatic contributions to Egyptian religious beliefs⁵³.

As more information became available, by the 1980s and 1990s attempts were made to draw it together and to fit the horse into Egyptian history through a series of overviews, with the two most significant works being Rommelaere's *Les chevaux du Nouvel Empire égyptien* (1991) and Clutton-Brock's *Horse Power* (1992).

A new direction appeared in the 1990s: the study of Egyptian animals that was partnered with a development in the recognition of Egyptian art as an increasingly important field of study and Houlihan's work combines these two developments. But the most extensive work done that included horses was still that concerning the chariot and its use in warfare though more modern methodologies were used. Scholars such as Schulman, Decker, Hoffmeier, Littauer & Crouwel, Moorey, Spalinger and others⁵⁴ have contributed a vast body of valuable work in this field examining the construction

⁵³ J. Leclant (1960) "Astarté à cheval d'après les représentations égyptiennes" *Syria* 37 (1960) 1-67. D. Meeks (2005) "L'introduction du cheval en Égypte et son insertion dans les croyances religieuses," in A. Gardeisen (ed.) *Les équidés dans le monde méditerranéen antique, Actes du colloque organisé par l'École française d'Athènes, le Centre Camille Jullian, et l'UMR 5140 du CNRS Athènes, 26-28 Novembre 2003*, Centre National de la Recherche Scientifique et de l'École française d'Athènes, Lattes, 51-59.

⁵⁴ The following represent only a very small sampling of works dedicated to the study of Egyptian chariots and their use; A. R. Schulman (1957) "Egyptian representations of horsemen and riding in the New Kingdom." *Journal of Near Eastern Studies* (1957): 16/4, 263-271. A. R. Schulman (1963) "The Egyptian Chariotry: a Reexamination." *Journal of the American Research Center in Egypt* (1963): 75-98. J. K. Hoffmeier (1976) "Observations on the Evolving Chariot Wheel in the 18th Dynasty." *Journal of the American Research Center in Egypt* 13 (1976) 43-45. M. A. Littauer & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tut'ankhamūn*, 8. Oxford. P. R. S. Moorey (1986) "The Emergence of the Light, Horse-Drawn Chariot in the Near-East c. 2000-1500 BC." *World Archaeology* 18/2 (1986): 196-215. A. Rovetta (et al.) (2000) "Ancient Egyptian Chariots - Design and Functional Aspects." *International Symposium on History of Machines and Mechanisms Proceedings HMM 2000*. Springer Netherlands 149-154. R. B. Partridge (2002) *Fighting Pharaohs: Weapons and Warfare in Ancient Egypt*, Manchester. A. J. Spalinger (2005) *War in Ancient Egypt: The New Kingdom, Ancient World at War Series*, Oxford. A. Calvert (2013) "Vehicle of the Sun: The Royal Chariot in the New Kingdom" in A. Veldmeijer & S. Ikram (2013) *Chasing Chariots, Proceedings of the First International Chariot Conference, Cairo 2012*, Leiden, 45-71.

materials, designs, methods, developments, uses and the contribution of the chariot to Egyptian history. Except for Rommelaere's work, however, the horse itself has still been largely neglected though the information now available relating to it has grown significantly.

At the First International Chariot Conference held in Cairo in 2012, twenty-two papers were delivered examining various issues to do with chariots in Egypt and the Near East.⁵⁵ Whilst "the objective of the conference was to assess the current knowledge on chariots and pinpoint lacunae for further study,"⁵⁶ there was an almost complete lack of material associated with the horse itself. This is something akin to having a conference on automobiles without discussing their engines! Up to now interestingly, the chariot's driving force, the horse, has been studied only incidentally. This thesis aims to address this omission.

1.3 AIMS AND METHODS FOR THE CURRENT STUDY

The focus of this study therefore is to bring together and critically evaluate the results of over a century of work conducted on the horse in ancient Egypt by considering in the main, the physical and iconographic evidence, but including some selected textual evidence, in Egypt for *Equus caballus*, the horse, dating from the end of the Second Intermediate Period and the beginning of the New Kingdom and extending to the early 20th Dynasty, from a variety of sites stretching from the Delta in the north to Nubia in the south. It also aims to bring the horse itself into sharper focus as a major contributor to the nature and capacities of the 18th and 19th Dynasties and to assign its vast contribution to Egypt to its proper place in modern scholarship.

⁵⁵ The Proceedings were later published as A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots*, Leiden.

⁵⁶ <http://www.palarch.nl/2012/03/first-international-chariot-conference-2012-schedule-and-abstracts---palarch's-journal-of-archaeology-of-egyptegyptology-92-2012-1-13-issn-1567-214x-13-pages/> Accessed 23/05/15. The only paper given at the Conference relating to horses was one presented by F. Quesada-Sanz on "The Physical Limits of Horses and Men and the Military Employment of Light Chariots in the Near Eastern Late Bronze Age," which concentrated mainly on battlefield tactics, chariot turning radii and the capacities of men and horses in battle.

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Naturally this thesis is concerned with the traditional question of the origins of the Egyptian horse but it is also concerned with its morphology, uses and the impact it had on Egypt and its people.

The rationale for choosing the time period covered and the sites where evidence has been discovered is as follows:

The earliest evidence for the arrival of *E. caballus* – the horse in Egypt is osteological and occurred at sites in and around the Delta during the late Second Intermediate Period, which corresponds to the Hyksos occupation of the north of Egypt. From this time onwards, the physical remains of the horse can be found at sites extending geographically into Nubia and temporally throughout the period under discussion. It is noteworthy, however, that the number of these remains is extremely limited and often fragmented. Nonetheless, they give enough evidence to gain an understanding of the morphology of the Egyptian horse at the outset of its arrival and over time.

As far as can be currently ascertained, there are no Egyptian images of horses which predate those discovered at the pyramid complex of Ahmose I at Abydos.⁵⁷ In successive periods, however, the number of images of horses in tombs, on temple walls and on artefacts increases. The largest numbers occur in the 18th Dynasty tombs concentrated near the capital cities, at Saqqara, in the Theban necropolis and the cliff tombs of Amarna, with a very small number from provincial cemeteries.

Many tombs contain very badly damaged images, in some cases only small fragments remain, however, there are also many that preserve images in extraordinary detail and these form the bulk of the material examined within this work. It is understood that the level of preservation of various images, and indeed of the number of tombs that are still in existence, will render a skewed vision of the contribution of the horse. Still, there are sufficient images that have been preserved to give a good indication of the nature of the horses and the part that they played in Egypt during this time.

There are large numbers of artefacts containing whole or partial depictions of horses ranging from fragments of larger works to individual items. In order to manage the vast

⁵⁷ S. Harvey (1998) *The Cults of King Ahmose at Abydos*, Doctoral Dissertation: University of Pennsylvania.

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amount of material available and owing to the parameters set for the current study only those images on artefacts that contained limited distortions have been included. Those depicted in three dimensions in restricted contexts exhibited distortions that made them unsuitable for a study of the morphology of the horse. The examination of such artefacts would be a study in itself and as such it will be left to a later work. A few carefully chosen objects have been included for their contribution to the discussion.

Limitations of space have meant that the large amount of textual material concerning horses could only be selectively considered. It should also provide excellent opportunities for future research.

During the early 19th Dynasty, whilst faunal remains and images on artefacts continued, there was a dramatic reduction in the number of horse images in tombs. They were replaced by religious themes as part of the process of “sacralisation” of the tombs as they began to act as temples. The horses leapt out of the tombs and onto the walls of the great temples, becoming common components of reliefs in contexts associated with pharaonic warfare.⁵⁸

The study of the images in tombs, temples and on artefacts enables the development of a chronology for the participation of the horse in Egyptian civilization. The animals can be observed in a variety of different contexts and activities within the corpus of scenes of daily life. This can help to establish a new perspective and deepen our understanding of these scenes. Indeed, the inclusion of the horse adds new dimensions to the messages contained in them. The animals represent function, knowledge, value and prestige and they reveal how and the extent to which, the arrival of the horse changed Egyptian life. The tombs and artefacts containing images of the horse belong to the elite echelons of Egyptian society in this period, and as such, they can be used to reveal more about the nature and activities of these individuals and those who served them.

Whilst much of this work is based on the depiction of horses in Egyptian art, it is not a thesis on art history. It is not concerned with the technical aspects or the artistic analysis of the images. Instead, it uses the products of the painters and sculptors to discover as

⁵⁸ Although one must bear in mind that material may be lost to us; the courtyards of Ramesside tombs were decorated and may have included such scenes but very few of them have survived.

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much as is possible about the horse and its contribution to Egypt, through the mechanism of the examination of iconographic and physical remains. A discussion of the place of the images in Egyptian art was conducted.

1.3.1 AIMS: QUESTIONS TO BE ANSWERED

There are several aims and objectives for writing this thesis which if achieved will shed light on a variety of questions regarding the horse in ancient Egypt. The thesis aims to:

- a. To firmly identify and understand the origins of the Egyptian horse and the developmental and distributive processes through which Egypt acquired the horse. This has been discussed in the past however conclusions regarding the process have rested on supposition.
- b. To establish, as fully as possible, the morphology of the ancient Egyptian horse at its arrival and assess the observable changes that took place in this morphology over time and to discover the reasons why changes took place.
- c. To compile as much information as possible concerning the ways in which the horse was used and by whom, to analyse the evidence and come to an understanding of the social, economic, political and cultural significance that it had in Egypt.
- d. To discern the impact that the horse had on Egypt domestically and internationally.
- e. To understand the context in which this study takes place and endeavour to respond to the information uncovered in an unbiased manner that enables the material to be the major factor that shapes the discussion.
- f. To take advantage of the advancements in the use of technology to reveal greater detail about the past in their application to the study of the horse.
- g. To verify or refute the contentions of Rommelaere regarding the two “types” of horses observable in the iconographic record.

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h. To draw together the various threads of theory and investigation up to now and to establish the study of the Egyptian horse as a specific and a distinct area worthy of study in its own right.

1.3.2 METHODS

In order to reach the goals set above a series of steps were undertaken.

A. A REVIEW OF THE LITERATURE

A collection of secondary studies concerning the Egyptian horse as far back into the past as possible and extending to the present time was undertaken. This enabled an assessment of the information currently available and an understanding of where and how it originated to be established. Analysis of it shed light on the approaches, benefits, directions, contexts and limitations of that scholarship over time. This was included in the review of the literature.

B. CONSIDERATIONS

Investigations into chariots have been extensive and it is almost an independent study itself so only information directly related to the horse was included.

As noted above, only some textual material has been included again to acknowledge its existence and its contribution to the corpus. The inclusion of a full discussion of artefacts and texts concerned with horses would be impossible within the length restrictions. These remain to be investigated at a later date.

C. CONSTRUCTION OF A CORPUS OF PRIMARY SOURCES.

A corpus of primary material from as broad a variety of sources as possible was collected incorporating information from fields as diverse as art, archaeology, science, history, linguistics and others. The material was then organised into general categories, biological, iconographic, inscriptional and textual within a chronological framework.

i. Biological sources

The initial data collection process included gathering material from a range of sources from a time period much longer than the time period, and from a greater geographical

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extent than the parameters set in the thesis. In most cases, these sources comprised excavation reports recording finds ranging from individual teeth and separate bones to almost complete skeletons and, in rare cases, mummified remains. This process was undertaken in order to provide an extensive context within which to place the selected time period and sites.

In some tomb reports, mention is made of faunal remains but there has been no further analysis carried out on them. However, their presence was noted in order to gain a better picture of the overall corpus of horse related material.

In some cases, the remains have been subjected to zooarchaeological analysis, although in many cases this has not been in accordance with the most modern scientific criteria. In the absence of modern standards, especially with reference to many earlier examinations, it has been necessary to note this and include the original analyses where available. Modern re-examinations of some of these sets of remains have, where available, been included.

As far as possible, contact has been made with those working in the field to enable access to the most recent finds either through personal contact or through preliminary excavation reports.

ii. Iconographic sources

Five hundred and three tombs were examined for images of horses or for horse related material such as chariots or chariot making; seventy-one were found to contain this information.

One hundred and twenty-seven temples were examined and a selection in which substantial images are preserved was made. These temples include: the complexes at Karnak, Luxor, Beit el-Wali, the Ramesseum, Abu Simbel, Medinet Habu and the temples of Seti I and Ramesses II at Abydos. Additionally, images of fragments from temples and tombs that displayed horses were collected.

Images on artefacts were collected from the beginning of the period to the end. A representative sample containing much dated material was gathered but many are not unequivocally dated (or very generally so) because of loss of context or poor

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provenance. Images of artefacts associated directly with the horses such as bits were also collected.⁵⁹

iii. Inscriptional sources

Inscriptional evidence was collected including texts from tomb inscriptions such as those of Ahmose son of Ibana, Paheri and Ramose, stelae (such as the Kamose Stele), the temple inscriptions (especially those from the 19th Dynasty including the names of horses).

iv. Textual sources (selected).

Some of those included: The Amarna Letters,⁶⁰ the Victory Poem of Kadesh,⁶¹ the Annals of Thutmose III⁶² and a variety of sources cited in *Urkunden der 18. Dynastie*, Heft 17-22,⁶³ (in translation.) Only where no reliable modern translations were available have new translations been made.

D. RECORDING THE MATERIAL

The material was then recorded in the same general categories and sorted under more detailed and specific headings.

i. Biological material

⁵⁹ Note: Although some images such as that on the stela of Betu⁵⁹ in which Semitic goddesses appear on horses, are mentioned, they form a specific genre that has been precluded because of the length requirements of the thesis. Further investigation of these should take place in future. Leclant's study, J. Leclant (1960) "Astarté a Cheval d'Après les Représentations Égyptiennes" *Syria* 37 (1960) 1-67 is a detailed examination of many images associated with this theme.

⁶⁰ W. L. Moran (ed. and transl.) (1992) *The Amarna Letters*, Baltimore.

⁶¹ M. Lichtheim (1976) *Ancient Egyptian Literature, II, The New Kingdom*, Berkeley, 62-77.

⁶² J. B. Pritchard (1969) *Ancient Near Eastern Texts, Relating to the Old Testament*, Princeton. D. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, Leiden. B. Cumming (1982) *Egyptian Historical Records of the Later Eighteenth Dynasty*, Fascicles 1 & 2. Warminster. B. G. Davies (1992-1995) *Egyptian Historical Records of the Later Eighteenth Dynasty*, 3 Fascicles.

⁶³ B. Cumming (1982) *Egyptian Historical Records of the Later Eighteenth Dynasty*, 3 Fascicles, Warminster. Translated from the original hieroglyphic text as published in W. Helck *Urkunden der 18. Dynastie*, Heft 17-19, (with reference to Professor Helck's German translation.) and B. G. Davies (1992) *Egyptian Historical Records of the Later Eighteenth Dynasty*, 3 Fascicles Warminster, translated from W. Helck *Urkunden der 18. Dynastie*, Heft 20-22.

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Beginning with remains dating from approximately 1750-1700BCE and terminating with those of 350-600AD, there were twenty-one instances of faunal horse remains collected ranging from teeth to almost complete remains. These were recorded under a variety of categories including:

- Dating
- Site
- Source
- Nature of Remains
- Excavation Comments
- Examination Comments
- Withers height
- General Comments.
- Each was entered into a table (See Appendix 3) in chronological order based on the dating of the remains.

ii. Iconographic Sources

The seventy-one instances of horses or horse related materials in or from tombs were organised chronologically (See Appendix 5) and information entered in the following categories:

- Dynasty
- Reign
- Reign Dates
- Site
- Tomb Owner

- Horses
- Chariots
- Scene

The details of each tomb (See Chapter 4. “The Iconography of the Horse in Tombs, Temples and on Selected Artefacts - the Catalogue”), were examined and recorded in the following categories:

Dynasty: 18th or 19th Dynasties.

Reign: Tombs were listed in chronological order of the reigns to which they belonged. In some cases, where an individual served several kings, the last reign was the one the tomb has been ascribed to, based on the assumption that the tomb would have been in its most complete state by this time.

Tomb Number: The tomb numbers used follow the conventions established by B. Porter and R. Moss in the *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings*, Oxford. Additional numbering follows that established by F. Kampp (1996) *Thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, Theben XIII, Mainz.

The Amarna tombs have been numbered in accordance with the system found in Parts 1 to 6 of N. de Garis Davies (1903-1908) *The Rock Tombs of El-Amarna*, London; to this has been added the letters e.g. AN (Amarna North) or AS (Amarna South) making identification more precise.

The information provided on tombs includes:

Tomb Owner: The tomb number and name of the tomb owner has been given. In Chapter 4 the number in brackets represents the number given to identify the tomb in each reign.

Site: In relation to the Theban tombs, the Theban Mapping Project’s grid references and location names have been used, as these are the most modern and consistent available.

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Porter & Moss reference: Several volumes of B. Porter & R. Moss (1994) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings*, London, have been used very extensively. Porter and Moss' reference numbers have been rendered in italics to avoid confusion.

Tomb Owner's Titles: Where possible, the honorific and occupational titles ascribed to the tomb owner have been included as these were pertinent to their being in possession of horses.

Source: The source of the information pertaining to specific tombs such as their excavation reports have been listed.

Condition: The condition of the tomb or the relevant scenes as this pertains to whether or not the scenes have been included in the analysis.

Position of images: The location of the images within the tomb or temple has been listed in most cases using the positions identified in the various volumes of B. Porter & R. Moss (1994) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings*, London.

The Subject: This is the activity that is taking place in the scene for example a rewarding scene, as far as it can be identified.

Number of horses: The number of horses within each scene has been calculated.

Notes: There has been a note made of any special features occurring in the tomb/temple or in any of the excavator's reports.

The Horses Themselves:

Scenes from each tomb were inspected systematically to ensure that the details of every image of horses or related equipment were identified located and recorded. These details were:

- Proportion
- Level of detail

- Colour
- Size
- Layering
- Conformation- gracile or robust
- Ears, forelocks, eyes, nostrils, mouths, manes, tails, in-filling, hooves, fetlocks, pasterns, cannons,
- Gender
- Attitude and apparent relationship with humans

iii. Artefacts

These were treated in a similar manner to the images in the tombs and temples using the same categories for examination where applicable.

E. FORMATION OF THE CATALOGUE

The end product of this process was the formation of the Catalogue of tomb, temple and artefact images that can be found in Chapter 4 and it forms the corpus upon which the analysis was then conducted. Volume 2 holds a complete collection of all the images mentioned in Volume 1 arranged so that they can be examined in concert with the entries in Volume 1.

F. CREATION OF A SPREADSHEET

A spreadsheet of the information was constructed and examined in detail revealing patterns and chronological developments.

G. ANALYSIS

An analysis of all the collected material was then conducted to uncover information about the origins of the Egyptian horse, its morphology and the changes that took place to this. The tombs, temples and artefacts contained evidence about the spread of the horse in Egypt and its impact both domestically and internationally. Professionals in the

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field of horsemanship, equine nutrition and veterinary science were enlisted to provide practical information and experience that contributed to the analysis.

H. REPORTING OF FINDINGS

The results of the analysis were discussed in Chapters 5 to 12 where its findings were presented in distinct sections. These were paralleled in Volume 2, Chapters 5 to 12, with images that illustrated the various points made in the discussion.

1.3.3 DATING ISSUES

The dating that has been applied is that ascribed by the excavator unless more up to date determinations have been made. Additionally, where possible the dates given in the volumes of the Porter & Moss *Topographical Bibliography* have been used. These dates have also been cross referenced with a variety of other sources such as F. Kampp (1996) *Die Thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie*, Theben XIII, Mainz, and M. Wasmuth (2003) *Innovationen und Extravaganzen*, Oxford, and those cited in the Theban Mapping Project.

For the duration of dynasties and various reigns, J. Baines & J. Malek (1993) *Atlas of Ancient Egypt*, Amsterdam, 8-9, 36-37, J. von Beckerath (1997) *Chronologie des pharaonischen Ägypten*, Mainz and I. Shaw (2001) (ed.) *The Oxford History of Ancient Egypt*, Oxford, have been used.

The dating ascribed to artefacts by either by the excavator or by the museum where it remains, and if known the museum number has been included.

1.3.4 SOME CONSIDERATIONS

- Several older sources such as Wreszinski, De Garis Davies and others have been consistently referred to in the interests of thoroughness as damage, deterioration, theft etc. to reliefs over time has often been extensive and these older publications are in several cases the best records of the details of the images, or the only ones in existence at the time of writing.

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- A Section, “Horse Terminology” has been added to provide specific reference material.
- In many cases the images in the second volume have been duplicated to facilitate ease of use for examination.
- Several Appendices have been added where there has been the need for discussions that were judged to be necessary but peripheral to the central themes of the thesis.

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“When God created the horse he said to the magnificent creature: I have made thee as no other. All the treasures of the earth lie between thy eyes. Thou shalt carry my friends upon thy back. Thy saddle shall be the seat of prayers to me. And thou fly without wings and conquer without sword.”
(*The Koran*)⁶⁴

Horses arrived comparatively late in Egypt - towards the end of the Second Intermediate Period - and Sir William Flinders Petrie attributed their introduction to the Hyksos.⁶⁵ Since his time, scholarship has both agreed with him⁶⁶ and challenged his determination on the basis that: his identification of equid remains, especially those at Tell el-Ajjul (Fig. 2.1), being those of horse rather than donkey,⁶⁷ was mistaken and on the issue of the dating of the remains.⁶⁸ Much information about the horse in Egypt is

⁶⁴ Quoted in K. Maffei (2007) *Horses*, New York, 70.

⁶⁵ W. M. F. Petrie (1931) *Ancient Gaza I. Tell el-Ajjul*, British School of Archaeology in Egypt London, 3.

⁶⁶ J. Bottero (1967) “The Second Intermediate Period and the Hyksos Invasion of Egypt,” in J. Bottero, E. Cassin, & J. Vercoutter (eds.) (1967) *The Near East: The Early Civilizations*, transl. R.F. Tannenbaum, New York, 401.

⁶⁷ W. Stiebing (1971) “Hyksos Burials in Palestine: A Review of the Evidence,” *Journal of Near Eastern Studies* (1971) 110-117: Petrie’s identification is questioned here, but note that later specialist’s re-examinations have agreed with his findings. See discussion below.

⁶⁸ T. Säve-Söderbergh (1951) “The Hyksos Rule in Egypt,” *Journal of Egyptian Archaeology*, 37 (1951) 53-71. He criticises Petrie’s conclusions on the basis that “he regarded this as a definite proof on the one hand that the Hyksos used the horse, and on the other hand that the tombs in question belonged to the Hyksos,” 58, upon which Säve-Söderbergh casts doubt. Since 1951, work at Tell el-Daba has shown that horses were known to the Hyksos (whether they brought the horse to Egypt themselves or not) and before the date suggested by Säve-Söderbergh for the Tell el-Ajjul findings. The article is an attempt to disprove the Hyksos “invasion” theory current at the time, and Säve-Söderbergh points out that there is no evidence of large-scale use of horses and chariots which the Hyksos could have used to invade Egypt. The “Hyksos Invasion Theory” which originated with Manetho (*Aegyptiaca*, fragment 42, 1.75-79.2) and restated by D. Redford (1992) *Egypt and Canaan and Israel in Ancient Times*, Princeton, 98-106, is tenacious being quoted by scholars as recently as 2006. K. Jones-Bley (2006) “The Evolution of the Chariot,” in S. Olsen, S. Grant, A. M. Choyke, & L. Bartosiewicz (eds.) (2006) *Horses and Humans: The Evolution of Human-Equine Relationships*. BAR International Series 1560, Oxford 186 states, “In the Near East, war chariots are well documented, and their use by the Hyksos caused the well-known devastation of Egypt.” After more than twenty years excavating at the Hyksos capital M. Bietak (2010) “From Where Came the Hyksos and Where Did They Go?” in M. Marée (2010) (ed.) *The Second Intermediate Period (Thirteenth- Seventeenth Dynasties): Current Research, Future Prospects*, Leuven, 139, states unequivocally that an invasion did not occur: “As no such evidence has been found, Manetho’s account may be discounted as

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scattered, isolated, speculative and found in a diversity of areas of investigation. Rommelaere's work⁶⁹ in the 1990s was the first attempt to examine, in some detail, the corpus of information concerning horses contained in images in tombs, temples and on artefacts dating mainly from the New Kingdom. She discerned differences in the depictions of the horses and concluded that two distinct species existed in Egypt during that time. Much of her work, however, is concerned with discussions of harnesses with relatively little on the examination of the horse itself. In the intervening years, the excavation, publication and re-examination of tombs, temples and artefacts has uncovered new information and raised new questions regarding the horse and its place in Egypt.

In addition to the question of its origins, there are biological questions concerning the morphology, form and structure of the horses when they arrived there. Questions about the changes they underwent over time, issues in relation to the social and economic aspects determining their status, usage, ownership and management, and their impact on the social systems of Egypt are also unanswered. Additionally, there are historical issues concerning their contributions to the capabilities and actions of the Egyptian state, especially in the New Kingdom.

Any attempt to seek answers to these and other questions should begin with an investigation of the horse's introduction into Egypt in the Middle Bronze Age (Fig. 2.2), with the aim of establishing the Hyksos as the conduit through which horses entered Egypt and examining how they themselves came to know and use the horse.

2.1 WHERE AND WHEN THE JOURNEY BEGAN: THE ORIGINS OF THE HORSE AND EARLY DOMESTICATION

2.1.1 THE LATE PLEISTOCENE AND HOLOCENE PERIODS

Examining the post-evolutionary spread of the horse (in its modern form) provides a clear understanding of the reasons behind the relatively late arrival of the horse in the

⁶⁹ inaccurate." Additionally, he bases his conclusions on evidence of Asiatic habitation of northern Egypt existing for at least one hundred and fifty years before the Hyksos hegemony, 150. C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels.

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Near East and Egypt. It also helps to explain the already existing sophisticated level of horse mastery that the Egyptians were able to acquire and adapt to their circumstances.

By the terminal Pleistocene Period and early Holocene (15,000-9,000 BCE) (Fig. 2.3), the equid species *Equus caballus* (the modern horse) (Fig. 2.4), had become widespread through North and South America, Eurasia and Africa with “25-30 valid extinct and living species worldwide.”⁷⁰ Remains dating to the Upper Pleistocene have been found in the Middle East over sites as widely spread as North Africa (Algeria),⁷¹ Syria,⁷² Antalya in Turkey,⁷³ Mdamagh in Jordan⁷⁴ and Palegawra in Iraq⁷⁵ (Fig. 2.5). At the end of the Late Glacial Maximum (15,000-8,000 BCE), however, a mass extinction took place, which “wiped out more than forty mammalian genera throughout the New World and parts of Asia and Africa”⁷⁶ - including most horse species. The cause of this phenomenon remains the subject of debate, but some of the contributing factors appear to have been climate change and human depredations.⁷⁷ Within that period, “all North American horses became extinct.”⁷⁸

⁷⁰ B. MacFadden (1992) *Fossil Horses, Systematics, Paleobiology and Evolution of the Family Equidae*, Cambridge, 187.

⁷¹ B. Bagtache, D. Hadjouis & V. Eisenmann (eds.) (1984) “Présence d’un caballine (*E. algericus* n.sp.) et d’une autre espèce nouvelle d’*Equus* (*E. melkiensis* n.sp.) dans l’Altérien des Allobroges, Algérie.” *Comptes Rendus de l’Académie des Sciences*, Paris, 298 Serie 11, 609-612.

⁷² E. Vila (2002) “Data on Equids from Late Fourth and Third Millennium Sites in Northern Syria,” in M. Mashkour (2002) *Equids in Time and Space, Papers in Honour of Véra Eisenmann Proceedings of the 9th ICAZ Conference, Durham, August 2002*, Oxford, 102.

⁷³ H. P. Uerpmann (1987) *The Ancient Distribution of Ungulate Mammals in the Middle East*, Beihefte zum Tübinger Atlas des Vorderen Orients, Reihe A (Naturwissenschaften) Wiesbaden.16.

⁷⁴ H. P. Uerpmann (1987) “All the horse remains from Levantine sites are Pleistocene in age.” 15.

⁷⁵ R. Meadow & H. P. Uerpmann (1986) “Some Equid Remains from Cayonu Southeastern Turkey,” in R. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World Vol 1*, Wiesbaden. 273. These are from the Palegawra Cave in the south-western foothills of the Zagros Mountains of Kirkuk in Iraq.

⁷⁶ B. MacFadden (1992) *Fossil Horses, Systematics, Paleobiology and Evolution of the Family Equidae*, Cambridge, 187 quotes S. D. Webb (1984) “Ten Million Years of Mammal Extinction in North America,” in P. S. Martin & R. G. Klein (eds.) (1984) *Quaternary Extinctions: A Prehistoric Revolution*, Tucson, 189-210. Webb discusses the extinctions mainly from the perspective of the American continents, but notes that similar phenomena occurred in the “Old World,” 204. He also discusses briefly the contributions to extinction events made by hunting cultures as well as those made by climatic deterioration. 192.

⁷⁷ B. Fagan (2004) *The Long Summer, How Climate Changed Civilisation*, London. This contains a very detailed discussion of the impact of climate change on humans and animals over time.

⁷⁸ D.Bennett & R.S. Hoffman (1999), (updated 2004) “*Equus caballus* Linnaeus, 1758: Horse”, *Mammalian Species* 628, American Society of Mammalogists, 1-54. Article reproduced in pdf format, viewed 4 October 2015,

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The discovery of faunal remains in other areas, however, suggests some groups of horses continued to persist in many areas such as Northern Europe and in the Middle East.⁷⁹ A remnant population seems to have continued into the Holocene in Anatolia (Fig. 2.5), and in the Middle East, evidence suggests, “the areas where wild horses seem to have survived into the post Pleistocene are among the coldest parts.”⁸⁰ There, it is assumed, they may have eventually contributed to domesticated breeding stock and become extinct through absorption.

In Africa, there is only one specimen known to have existed. In the north of the Atlas Mountains, in an area from Tangiers to the Tunisian Peninsula (Fig. 2.5), an African horse, *Equus algericus* was found, but does not appear to have survived the Pleistocene extinctions.⁸¹ Bone and dental remains found at Kom Ombo, identified by Gaillard (Fig. 2.5) as belonging to a small horse,⁸² have been re-examined in the light of more recent excavations of the site by Churcher.⁸³ While in one instance, the evidence for horse has been confirmed, all the other cases have been reassessed as *Equus asinus*. The date suggested by Gaillard as Late Paleolithic cannot be confirmed as the caballine material was obtained from surface collections and there is no corresponding material from securely dated Kom Ombo levels ascribed to this time. It is then reasonable to conclude that native African horses (*Equus caballus*) were extinct in that continent at the outset of the Holocene.

Lively scholarly debate is on going amongst taxonomists⁸⁴ and zooarchaeologists over the identity of the progenitor of all domestic caballine species but “in the case of the

http://www.equinestudies.org/mammalian_species_2008/mammalian_species_equus_caballus_pdf1.pdf

⁷⁹ D. Bennett (2004) “Mammalian Species,” 1-4.

⁸⁰ H. P. Uerpmann (1987) *Ancient Distribution of Ungulate Mammals in the Middle East* 17. Also this may have some implications for the existence of the “Caspian” horse.

⁸¹ B. Bagtache et al. (1984) *Présence*, 609-612. There are no further findings of *Equus caballus* in Africa until the period of their reintroduction in the later stages of the Second Intermediate Period. M. Bibby (2001) “The Arrival of the Horse in Egypt,” in R. Ives (ed.) (2001) *Current Research in Egyptology III* Oxford, 14, cites this set of remains as an “anomaly” in tracing the horse’s introduction to Egypt, however they are Pleistocene remains not Holocene and are therefore far too early to feature in this discussion.

⁸² C. Gaillard (1934) *Contribution à l’Étude de la Faune Préhistorique de l’Égypte*, Archives du Musée d’Histoire Naturelle de Lyon, 16, 125ff.

⁸³ C. S. Churcher (1972) *Late Pleistocene Vertebrates from Archaeological Sites in the Plain of Kom Ombo, Upper Egypt*, Toronto, 82: 48-51.

⁸⁴ “Taxonomy” the branch of biology concerned with the classification of organisms into groups based on similarities of structure, origin etc. Collins English Dictionary (1986) Sydney.

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horse the accumulated evidence indicates that all domestic horses of the past and the present are descended from the single ancestral species, *Equus ferus* (Tarpan) (Fig. 2.6a), with the focus of its domestication being the Scythian steppes north of the Caspian Sea (Ukraine).⁸⁵ It is this species that is understood to be the early progenitor of the horses that eventually reached Egypt. Structural changes in the horse from this time can be attributed to the influence of humans breeding them for particular traits.

2.1.2 THE EARLY HOLOCENE

The Tarpan (*E. ferus caballus*) (Fig. 2.6a) resembled a large pony of heavy to medium build of 12 to 14 hands⁸⁶ (approximately 1.30 m). It was mouse-grey in colour with a well-developed black mid-dorsal stripe, partly falling mane and a slightly concave facial profile.⁸⁷ Over time as its habitat changed (either through climate change or geographical redistribution), the horse responded⁸⁸ physically. Further, human

⁸⁵ J. Clutton-Brock (1992) *Horse Power: A History of the Horse and the Donkey in Human Societies*, Cambridge, 61. There are many differing opinions amongst taxonomists regarding the exact lineage here for instance, S. Bokonyi (1984) *Evolution of Domesticated Animals*, London, 162, “the earliest name for the wild form of the domestic horse is *E. ferus* and *E. przewalski* is only a subspecies of the former.” Bennett contrasts this opinion: “Neither the Przewalski horse nor the Tarpan (*E. ferus*) is ancestral to most living breeds of horse.” D. Bennett (1987) “The Origin of Horse Breeds,” *Equus Magazine* Gaithersburg, Md. 3. 2. 91. The present thesis adheres to the conclusion that the Tarpan (*E. ferus*) was, to all intents and purposes, the direct or indirect progenitor of the horse of the Middle East and therefore of the later Egyptian horse. This decision is based on the widespread consensus amongst scholars that the wild horse, which was involved in the domestication process, was the Tarpan or a close subspecies of it. DNA studies have reinforced this as they have shown that the Przewalski horse is not ancestral to domestic horses, see T. Jansen et al. (2002) *Mitochondrial DNA and the Origins of the Domestic Horse*, Proceedings of the National Academy of Sciences, 99/16 (2002) 10905-10910. This leaves the Tarpan as the most likely ancestor of the domestic horse. See also S. Olsen (2006) “Early Horse Domestication: Weighing the Evidence,” in *Horses and Humans: The Evolution of Human-Equine Relationships*, BAR International Series. 1560. Oxford, 82, “the domestic horse emerged from that single small progenitor, *Equus ferus*, commonly known as the Tarpan. Current researchers generally accept this thesis and look toward a single species with a broad geographic distribution as the wild progenitor of the domestic horse, instead of multiple species.”

⁸⁶ W. Micklem (2003) *Complete Horse Riding Manual*, London, 388. “Hand: The unit of measurement to describe the height of horses. One hand equals 10cm (4 ins). Most ponies are between 12 hands and 14 hands and most horses from 15-17 hands.”

⁸⁷ D. Bennett (2004) “Mammalian Species.” 1-14.

⁸⁸ Two biological generalizations need to be taken into consideration, in light of the large timeframe in this discussion. These are Bergmann’s and Allen’s Rules. (These can be examined at D. O’Neill (1998-2005) *Adapting to Climate Extremes* http://anthro.palomar.edu/adapt/adapt_2.htm (viewed 21/08/06) Bergmann states ‘that within the same species of warm blooded animals, populations having less massive individuals are more often found in warm climates, while those with greater bulk, or mass, are found further from the Equator in colder regions.’ Allen’s rule holds that, “In their range over lower latitudes with hotter climates the same species of mammals tend to have longer and finer limbs relative to the size of the body and longer extremities. The hot climate mammals will also have a shorter

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manipulation in breeding the horse for specific purposes also contributed to changes in its size, shape and appearance. Specific hybrid breeding among other equid species and groups attests to the understanding of the techniques of deliberate interbreeding by the cultures of the times.

Bennett identifies an early Holocene horse of the Northern areas of the Middle East as *E. pumpelli*⁸⁹ (Fig. 2.6b) that may have been a variation on the Tarpan, exemplifying the effects of interbreeding and environmental factors. *E. pumpelli* is

“small in size with ...relatively the longest, slenderest legs and ears. The facial profile was straight or concave (dished) due to a combination of negative cranial flexion and tendency for inflation of the frontal sinuses, ... the cross section of the thorax was a flattened oval. There was a tendency to shorten the lumbar span by the loss or fusion of the posterior lumbar vertebrae.”⁹⁰

This horse exhibits several of the characteristics of the modern Arab breed as well as those exhibited in many of the horses appearing in ancient Egyptian iconography. It is not suggested here that *E. pumpelli* is the direct ancestor of the Egyptian horse or the modern Arab. Rather it illustrates that between the Ukraine and Egypt, the horse went through a variety of changes (of which this is only one) in response to its environment and usage. While it is plausible that some or any of these varieties may have been the ancestor of the Egyptian horse, the evidence currently available does not lead unequivocally to identifying any one as such. The most widely accepted distant progenitor was the Tarpan which, given the period of approximately six thousand years from the start of the Holocene to its domestication, certainly had enough time to respond physically to the diverse environments it encountered.

sleeker coat.” This then explains the variations in the morphology of horses which enabled them to respond successfully to differing environments.

⁸⁹ D. Bennett (2004) “Mammalian Species,” 1-14.

⁹⁰ D. Bennett (2004) “Mammalian Species,” 1-14.

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2.1.3 EARLY DOMESTICATION: THE UKRAINE

The location, timing and nature of the domestication process is still unclear but it is well established that the Sredni Stog culture, occurring at about 6000 years ago at Dereivka, in the southern Ukraine, (Fig. 2.7) was one (if not the first) society to domesticate horses.⁹¹ In addition,

“the Sredny Stog tribes brought horse breeding into use in the late 4th to the early 3rd millennium BCE. This assigns to the Sredny Stog culture an important role in the taming, and employment of the horse as well as in the development of general standards and methods of horse management.”⁹²

The innate hardiness of the horse, especially in winter, and its ability “to exist on a diet which ruminants of a similar body size simply cannot maintain themselves on,”⁹³ together with extended resource ranges made accessible by riding, would have made its domestication very advantageous.⁹⁴ It is logical to assume that peoples in surrounding settlements and regions copied such innovation.

Over time, wild horses moved towards extinction through human depredation, habitat loss and absorption into domestic herds. Domestic horses began to increase in number and spread east, west and south from the Ukrainian steppes and the lands of the Caspian Sea into the Middle East.

It is of note for the study of ancient Egypt that this period corresponds to the period of the foundation of the state, the Early Dynastic period and the Old Kingdom.⁹⁵

⁹¹ D. Anthony & D. Brown (1991) “The Origins of Horseback Riding,” *Antiquity* 65 (1991) 32. The most complete analysis and subsequent conclusions concerning the remains from the site are contained in, D. Telegin (1986) *Dereivka. A Settlement and Cemetery of Copper Age Horse Keepers on the Middle Dneiper*, BAR International Series 287 Oxford. Additional evidence has been uncovered since 1986 but Dereivka remains one of the likely sites for domestication. The difference is that it appears not to have been the only one. A full discussion can be found in S. Olsen (2006) “Early Horse Domestication, Weighing the Evidence” in Olsen et al. (2006) *Horses and Humans*, 82.

⁹² D. Telegin (1986) *Dereivka*, 87.

⁹³ C. Janis (1976) “The Evolutionary Strategy of the Equidae and the Origins of Rumen and Cecal Digestion,” *Evolution* 30/4 (1976) 765. See also D. Anthony (1991) “The Domestication of the Horse,” in R. Meadow & H. P. Uerpmann (eds.) (1991) *Equids in the Ancient World*, 2, 272.

⁹⁴ D. Anthony (1991) “The Domestication of the Horse,” 266.

⁹⁵ J. Baines & J. Malek (1993) *Atlas of Ancient Egypt*, Amsterdam, 8-9.

2.2 MOVING SOUTH: FROM THE UKRAINE TO THE TRANSCAUCASUS

2.2.1 UKRAINE TO THE CAUCASUS

From the early Holocene the existence of the horse and the geographical extension of its use can be traced using its osteological remains, across a variety of sites throughout the Middle East. However, faunal remains are not well preserved in the Middle East, making their discovery and clear identification difficult. Horses were a valued item of food, especially in their earliest relationships with humans. This resulted in their bodies being cut up, cooked and eaten for a variety of reasons, some of which appear to have been ritualistic. Both animals and humans depended on the horse and neither left much to be discovered.

Horses were not evident in huge numbers and so remains available today appear to result from either deliberate interments or accidental deposits - the latter often in deep rubbish sites associated with permanent or semi-permanent settlements. Most remains are fragmentary; whole or nearly complete skeletons and even large cranial sections are rare. Differentiation from other forms of equidae makes finding and identifying horse remains quite difficult. Having noted this however, the penetration of the horse into the Middle East can be traced successfully using discoveries of its osteological remains from various sites over time.

As mentioned previously, the earliest finds of what were possibly domesticated horses occurred at Dereivka in the Ukraine in the 5th millennium,⁹⁶ and Mallory indicates this process as occurring at around 4500-3500 BCE.⁹⁷ Horses can be seen in the archaeology to have been closely associated with humans in the Dnieper-Donets culture (Fig. 2.5), of the 5th millennium in the Pontic-Caspian region.⁹⁸ This cultural group was eventually absorbed by the later Eneolithic cultures that replaced them. Once horses

⁹⁶ D. Telegin (1986) *Dereivka*, 85 “The Sredny Stog domestic horse can be regarded as among the most ancient in Europe.” Telegin notes though that there is some evidence for the domestic horse in the Dneiper area in the Neolithic at the Sobachka campsite.

⁹⁷ J. P. Mallory (1989) *In Search of the Indo-Europeans, Language: Archaeology and Myth* London, 198.

⁹⁸ J. P. Mallory (1989) *Indo-Europeans*, 190.

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were domesticated, the advantages they brought - such as increased mobility,⁹⁹ exploitation of the steppe lands and enhanced stockbreeding potentials - made them very attractive to surrounding cultures.

This is borne out by the fact that from this time the use of horses became endemic to many Pontic-Caspian cultures. There is clear evidence of their use in the Mikhaylovka culture (Fig. 2.8) of the Lower Dnieper and the Crimea,¹⁰⁰ the Samara culture of the middle Volga forest-steppe and the south Urals,¹⁰¹ the Yamnaya culture (3600-2200 BCE) (Fig. 2.9) which stretched east of the Urals¹⁰² and on into the Afanasievo culture (Fig. 2.10) “whose remains are primarily confined to the Minusinsk Basin and the Altai,”¹⁰³ continuing southwards into the Andronovo culture east and southeast of the Caspian Sea (Fig. 2.11).¹⁰⁴ These “horse cultures” all exhibit evidence of the use of domesticated horses from the 5th to the 2nd millennium in contexts of ritual, transportation (being ridden), possibly traction, definite stockbreeding and pastoral nomadic activities. They stretch from the west to the east in a vast arc, north of and contiguous to the Caucasus region throughout the late 5th-3rd millennium and further as time went on.

Mallory, quoting Winn, states that the nature of the mound at Uch-Tepe (Fig. 2.12) and the site of Alikemektepesi (Fig. 2.13) indicate the introduction of the horse and horse-keeping to the Kura-Araxes culture (of the Transcaucasus) (Fig. 2.15) by the north Pontic-Caspian cultures which “brings the steppe, the Caucasus and northern Anatolia into some form of contact relationship,”¹⁰⁵ (See Fig. 2.14). One aspect of this contact was trade, another was probably technological interaction and already by the early 4th millennium finds at Kura-Araxes sites in the Caucasus regularly include horse

⁹⁹ J. P. Mallory (1989) *Indo-Europeans*, 259. Mallory states this would have given them “over five times the mobility of their pedestrian neighbours.”

¹⁰⁰ J. P. Mallory (1989) *Indo-Europeans*, 203.

¹⁰¹ J. P. Mallory (1989) *Indo-Europeans*, 206 and 210.

¹⁰² J. P. Mallory (1989) *Indo-Europeans*, 211.

¹⁰³ J. P. Mallory (1989) *Indo-Europeans*, 223.

¹⁰⁴ J. P. Mallory (1989) *Indo-Europeans*, 227.

¹⁰⁵ J. P. Mallory (1989) *Indo-Europeans*, 232. Here Mallory refers to Shan M. Winn “Burial Evidence and the Kurgan Culture in Eastern Anatolia c. 3000BC: An Interpretation,” *JIES* 9 (1981) for a discussion of the evidence for contact between these areas and cultures, which include horse bones at Norsun Tepe and Tepecik, 116. Additionally see M. M. Winn “Thoughts on the Question of Indo-European Movements into Anatolia and Iran,” *JIES* 2 (1974) 117-142 for more on the cultural contacts in this region.

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remains.¹⁰⁶ There is therefore evidence to support the spread of horse keeping from its areas of origin north of the Black Sea in a southward direction towards Egypt.

2.2.2 TRANSCAUCASIA AND BEYOND

The above-mentioned Kura–Araxes culture (Fig. 2.15) appears to have been the chief vehicle for the movement of the horse southward into Eastern Anatolia (Figs. 2.14, 2.15) and onto the upper reaches of the Euphrates-Tigris drainage. This culture is identifiable in Transcaucasia from the mid to late 4th to the late 3rd millennium,¹⁰⁷ at hundreds of sites (Fig. 2.15). According to Mallory “the earliest domestic horses to the south (of the Ukrainian steppes) appear first in the Caucasus and then in eastern Anatolia.”¹⁰⁸ The Caucasus, then, was their main entry point to the south. Indeed, the distribution of the horse parallels the established patterns of trade and resource sharing in the area, which were predominantly from the north to the south¹⁰⁹ “trade being an initial impetus for the spread of Kura-Araxes styles (of pottery) ... along the northern Taurus front to the Euphrates and then south into Syria-Palestine.”¹¹⁰ The region of Mus shows evidence for the trading of obsidian, silver, lead and copper ores.¹¹¹

A proportion of the population appears to have been semi-nomadic.¹¹² These semi-nomads were similar to the cultures of the Pontic-Caspian. Pontic-Caspian groups were heavily exploiting horses by this time and thus may have been responsible for entering the Kura-Araxes areas and increasing settlement numbers and territories there.¹¹³

¹⁰⁶ J. P. Mallory (1989) *Indo-Europeans*, 232.

¹⁰⁷ C. Edens (1995) “Transcaucasia at the End of the Early Bronze Age,” *Bulletin of the American Schools of Oriental Research* 299/300 (1995) 53-64. This article gives a general discussion of the chronology of the Transcaucasian cultures.

¹⁰⁸ J. P. Mallory (1997) “Horse,” in J. P. Mallory & D. Q. Adams (eds.) *The Encyclopedia of Indo-European Culture*, London, 276.

¹⁰⁹ P. Kohl (1988) “The Northern Frontier of the Ancient Near East: Transcaucasia and Central Asia Compared,” *American Journal of Archaeology* 92/4 (1988) 594.

¹¹⁰ M. S. Rothman & G. Kozbe (1997) “Mus in the Early Bronze Age,” *Anatolian Studies* 47, 105-126.

¹¹¹ M. S. Rothman & G. Kozbe (1997) “Mus” 108.

¹¹² M. S. Rothman & G. Kozbe (1997) “Mus” 115.

¹¹³ M. S. Rothman & G. Kozbe (1997) “Mus” 115. On 112, Rothman and Kozbe discuss the nature of the groups responsible for the spread of Kura-Araxes artefact styles and suggest that, “If we are talking about pastoralists, instead of the expansion of small villages, the suggestion of trade makes more sense. Nomadic pastoral groups have historically ranged far afield, and have often played the role of traders, whether the products they transported were uniquely from their homeland or picked up on the way.”

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On the basis of this evidence, it is reasonable to suggest that horses transited the Caucasus by means of the Kuro-Araxes culture's trading and living activities. As Edens states, "Transcaucasia ... occupied a strategic position, intermediate between Central Asia to the east and western Anatolia to the west, of a trade network along the northern tier of multiple, and probably overlapping, trading systems that connected distant parts of western Asia through much of the Bronze Age"¹¹⁴ (Figs. 2.14, 2.15). Given the benefits associated with horse exploitation and its introduction to these corridors possibly by pastoral nomads, horses spread widely from the original northern areas to the east, to the west and southwest.

In the east at Botai in Kazakhstan (Fig. 2.16), horse heads, skeletons and figurines were found at a site where over 90% of the animal bones were of horses.¹¹⁵ They were found at Tal-I Iblis in South Central Iran (Fig. 2.16) and in the south in the Kerman region.¹¹⁶ At Norsun Tepe (Fig. 2.16), in Eastern Anatolia, finds of horse may be attributed to a remnant population of Pleistocene horses which had survived into the Holocene;¹¹⁷ Bökönyi¹¹⁸ states unequivocally that "there was uninterrupted horse-keeping at Arslantepe (in Anatolia on the Euphrates) since the late fourth millennium" (Fig. 2.16).

By the turn of the 3rd millennium (approximating the Early Dynastic Period in Egypt), horses appear closer to Egypt. Grigson identifies bones found at Shiqmim and Garar (Fig. 2.16) in the northern Negev as "the first time that domestic horses have been identified... in the Middle East outside Anatolia."¹¹⁹ The number of sites increases

¹¹⁴ C. Edens (1997) *Transcaucasia*, 61

¹¹⁵ D. Anthony & D. Brown (1998) "Bit Wear, Horseback Riding and the Botai Site in Kazakstan," *Journal of Archaeological Science* 25 (1998) 344.

¹¹⁶ J. P. Mallory (1989) *Indo-Europeans*, 41 and also A. S. Gilbert (1991) "Equid Remains from Godin Tepe, Western Iran, an interim summary and interpretation, with notes on the introduction of the horse into Southwest Asia" in R. Meadow & H. P. Uerpmann (eds.) (1991) *Equids in the Ancient World*, 2, Wiesbaden, 106.

¹¹⁷ J. Boessneck & A. von den Driesch (1976) "Besprechung der nachgewiesenen Arten im einzelnen," in *Tell el-Daba III. Die Tierknochenfunde, 1966-1969*, Untersuchungen der Zweigstelle Kairo des Österreichischen Archäologischen Institutes III, Vienna, 21-25.

cited by R. Meadow (1986) "Some Equid Remains from Çayönü, Southeastern Turkey," R. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, 1, Wiesbaden, 273.

¹¹⁸ S. Bökönyi (1991) "Late Chalcolithic Horses in Anatolia," R. H. Meadow & H. P. Uerpmann (eds.) (1991) *Equids*, 2, 124.

¹¹⁹ C. Grigson (1993) "The Earliest Domestic Horses in the Levant? - New Finds from the Fourth Millenium of the Negev," *Journal of Archaeological Science* 20 (1993) 652.

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dramatically especially in the area of most interest to this discussion, the Levant.¹²⁰ A list of some of these sites follows:¹²¹

Area	Site	Date	Comparison with Egypt
Northern Negev	Shiqmim & Grar	3 rd mill. BCE ¹²²	Late Pre-Dynastic.
Syria	Tell Beydar	3 rd mill. BCE ¹²³	Dynasty 1 to 3
Northern Negev	Arad	2950-2650BCE ¹²⁴	Dynasty 1 to 3
North-Eastern Syria	Tell Chuera	2650BCE ¹²⁵	Dynasty 3
Syria	Tell es-Sweyhat	2400-2200 BCE ¹²⁶	Dynasty 5 to 10
Syria	Selenkahiye	2400-1900 BCE ¹²⁷	Dynasty 5 to 12
Syria	Mumbaqt	2000 BCE ¹²⁸	Dynasty 11
Western Syria	Umm el-Marra	2000-1600 BCE ¹²⁹	Dynasty 11 to 17
Jordan	Jericho	1720 BCE ¹³⁰	Dynasty 13
Northern Syria	Sweyhat, Hadidi,	1700 BCE ¹³¹	Dynasty 13

-
- ¹²⁰ There are more instances of horse findings further east such as those found at Ur III dated to 2050 BCE. See J. N. Postgate (1986) "The Equids of Sumer, Again," R. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World I*, Wiesbaden, 198.
- ¹²¹ This list features only a few of the known sites exhibiting horse remains. See H. Buitenhuis (1991) "Some Equid Remains from Southern Turkey, North Syria and Jordan," in R. H. Meadow, & H. P. Uerpmann (eds.) (1991) *Equids in the Ancient World*, 2, 34-61, for a much more extensive collection. It concentrates on the Levant area specifically and only on sites where identification is regarded as definite. There are also a large number of sites in Mesopotamia.
- ¹²² C. Grigson (1993) "The Earliest Domestic Horses in the Levant? – New finds from the Fourth Millennium of the Negev," *JAS*, 20, 252.
- ¹²³ E. Vila (2002) "Data on Equids," in M. Mashkour (ed.) (2006) *Equids in Time and Space*, 117.
- ¹²⁴ S. Davis (1976) "Mammal Bones from the Early Bronze Age City of Arad, Northern Negev, Israel: Some Implications Concerning Human Exploitation," *Journal of Archaeological Science* 3 (1976) 153-164.
- ¹²⁵ E. Vila (2002) "Data on Equids from the Late Fourth and Third Millenium Sites in Northern Syria," M. Mashkour (ed.) (2006) *Equids in Time and Space, Proceedings of the 9th ICAZ Conference*, Oxford, 118.
- ¹²⁶ E. Vila (2002) "Data on Equids," in M. Mashkour (ed.) (2006) *Equids in Time*, 118, she quotes H. Buitenhuis (1986) "The Faunal Remains from Tell es-Sweyhat" *Palaeohistoria* 25 (1986) 131-144.
- ¹²⁷ E. Vila (2002) "Data on Equids," in M. Mashkour (ed.) (2006) *Equids in Time*, 117. This is a citing of the findings of P. Ducos (1968) "The Animal Remains from Selenkahiye," *Les annales archéologiques arabes syriennes* 18, 33-34, and of G. F. Ijzereef (2001) "Animal Remains," in: M.N. Van Loon (ed.) *Selenkahiye. Final Report on the University of Chicago and University of Amsterdam excavations in the Tabqa Reservoir, Northern Syria, 1967-1975*, Uitgaven van het Nederlands Historisch-Archaeologisch Instituut te Istanbul 91, Istanbul: 569-585.
- ¹²⁸ E. Vila (2002) "Data on Equids," in M. Mashkour (ed.) (2006) *Equids in Time*, 117.
- ¹²⁹ E. Vila (2002) "Data on Equids," in M. Mashkour (ed.) (2006) *Equids in Time*, 118, she quotes G. M. Swartz, H. H. Curvers, F. A. Gerritsen, J. A. MacCormick, N. F. Miller, J. A. Weber (2000) "Excavation and Survey in the Jabbul Plain, Western Syria: The Umm el-Marra Project 1996-1997," *American Journal of Archaeology*, 104 (2000) 434.
- ¹³⁰ R. Burleigh (1986) "Chronology of Some Early Domestic Equids in Egypt and Western Asia", in R. H. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, 1, 235.

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Area	Site	Date	Comparison with Egypt
	El -Qitar, Selenkahiya		
Southern Syria	Tell Salihieh	1700BCE ¹³²	Dynasty13
Jordan	Jericho	1450BCE ¹³³	Dynasty 18

Table 2.1. Overview. Archaeological Sites with Horse Remains in the Middle East. 3500-1400 BCE.

This overview of the sites clearly indicates that over a period of around two thousand years, horses continued to spread in a southerly direction and into the Levant. There is no evidence for the continued existence of wild populations, and therefore, it is suggested that in their absence, this process was human directed and most probably accomplished through trading relationships and conquest. By the 2nd millennium BCE horses had reached the Syro-Palestinian littoral, (Fig. 2.17) where they were exploited, especially by the peoples of that region. These are groups from whom the Hyksos are believed to have originated and it is reasonable to conclude that the ancestors of the Hyksos were already familiar with the horse in their native lands.

However, this association cannot be taken for granted and a more detailed study of this stage of the transmission process will be undertaken here.

2.3 THE BRONZE AGE AND THE ROLE OF THE HURRIANS

2.3.1 THE HURRIANS

Studies of the Hurrians show them as one of the most significant cultural groups/horse cultures contributing to the expansion of the number, management and uses of the horse in the Near East.

¹³¹ H. Buitenhuis (1991) "Some Equid Remains from South Turkey, North Syria and Jordan" in R. Meadow & H. P. Uerpmann (eds.) *Equids in the Ancient World*, 2, 34.

¹³² E. Vila (2002) in M. Mashkour (ed.) (2006) *Equids in Time*, 118 she quotes J. Lepiksaar (1990) "Die Tierreste vom Tell es-Salihieh," 115-120 in J. Schibler, J. Sedlmeier, & H. P. Spycher (eds.) *Beiträge zur Archäozoologie, Archäologie, Anthropologie, Geologie und Paläontologie (Festschrift für Hans R. Stampfli)* Basel: "Morphologisch und osteometrisch gesicherte Funde des Hauspferdes sind alle auf die älteste Bauschicht XII (etwa 1700 v.Chr.) beschränkt..... Insgesamt repräsentieren diese Funde mindestens zwei Jungspferde. Diese bronzezeitlichen Pferdereste aus der zweiten Hälfte des zweiten vorchristlichen Jahrtausends gehören wahrscheinlich zu den ältesten konkreten Nachweisen des Hauspferdes in dieser Gegend." 116.

¹³³ R. Burleigh (1986) "Chronology of Some Early Domestic Equids," in R. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, 1, 234.

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In the context of his investigation of the origins of the Indo-European speaking peoples, Mallory states, “the area of the Kura-Araxes culture and its close cultural contacts with southwest Asian cultures support its association with the Hurrian-Urartian family, one of the major non-Indo-European groups south of the Caucasus.”¹³⁴ Here, Mallory is concerned with the Indo-European linguistic context and he points out the close association between the Kura-Araxes and the Hurrian-speaking peoples, even designating the horse-keeping Kura-Araxes culture as “the ancestors of the Hurrians.”¹³⁵ According to Mallory, it is the Hurrians who facilitated the spread of the horse and its associated management techniques south of the Caucasus. (See Fig. 2.17 for the principle trade routes.)

The Hurrians present a problem in the tracing of the progress of the horse into Egypt in that, as Wilhelm states, they are “a group identified primarily by the use of a certain language”¹³⁶ and not by a defined Hurrian polity. Based on linguistic evidence it would seem that the Hurrians themselves originated in Transcaucasia, in the vicinity of Lake Van and the Zagros mountains (Fig. 2.15).¹³⁷ Like Mallory, Wilhelm identifies this region as the “oldest homeland of the Hurrians”¹³⁸ and also a centre for the Kura-Araxes culture (see above). He attributes the Hurrian spread into the Fertile Crescent to “a favourable political situation and population pressure,”¹³⁹ identifying them as a society based on “agriculture and animal husbandry.”¹⁴⁰ By the end of the 3rd millennium the presence of horses and horse cultures in Transcaucasia is very well attested. It is not unreasonable, then, to suggest that the Hurrians would have acquired horses and horse

¹³⁴ J. P. Mallory (1997) “Kuro-Araxes Culture,” in J. P. Mallory, & D. Q. Adams (eds.) (1997) *The Encyclopedia of Indo-European Culture*, London, 342.

¹³⁵ J. P. Mallory (1997) *Indo-Europeans*, 233.

¹³⁶ G. Wilhelm (1989) *The Hurrians*, Warminster, 6.

¹³⁷ M. Salvini (1998) “The Earliest Evidences of the Hurrians Before the Formation of the Reign of Mitanni,” in G. Buccellati, & M. Kelly-Buccellati (eds.) (1998) *Urkish and the Hurrians. Studies in Honor of Lloyd Cotsen*, Urkish/Mozan Studies 3, Bibliotheca Mesopotamica 26, Malibu, 99.

¹³⁸ G. Wilhelm (1989) *The Hurrians*, 41. I. Gelb (1944) *Hurrians and Subarians*, Illinois 70, supports this conclusion based on linguistic evidence. S. W. Winn (1981) “Burial Evidence and the Kurgan Culture in Eastern Anatolia c. 3000 BC: An Interpretation”, *Journal of Indo-European Studies* 9, 118, also connects these groups. The local Transcaucasian elements most likely formed the basis of the emergent culture (“which may be the ancestor of Hurrian speaking populations.”).

¹³⁹ G. Wilhelm (1989) *Hurrians*, 42.

¹⁴⁰ G. Wilhelm (1989) *Hurrians*, 42.

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knowledge through their association with these cultures and that they, in turn, spread them further by means of their own expansion.

Based on textual and archaeological evidence, the Hurrians were eventually influential over a vast area. Hurrian names and words appear in Old Akkadian (2230-2090 BCE Old Kingdom Egypt)¹⁴¹ and in documents of the Ur III period¹⁴² (in Egypt this is approximately the end of the Old Kingdom and the beginning of the First Intermediate Period). By the 2nd millennium they inhabited the entire area between the upper course of the Tigris and the Balikh and the Khabur basin,¹⁴³ as well as North Syria.¹⁴⁴ While small ethnically Hurrian states seem to have appeared earlier,¹⁴⁵ the great Hurrian state of Mitanni arose¹⁴⁶ in approximately 1500 BCE (Fig.2.18). Wilhelm defines its extension as between the “Euphrates bend and the upper reaches of the Tigris, with the triangle of the Habur tributaries at its centre, ... bordering in the north on the lands of Isuwa and Alse.”¹⁴⁷

About 1470 BCE it extended its power to the Mediterranean with the incorporation of Alalakh.¹⁴⁸ Hurrian influence exceeded the territorial boundaries of the state of Mitanni and as Hoffner points out; “Hardly a single political state of Mesopotamia, Syria, Anatolia, Palestine and Egypt in the mid-2nd millennium was untouched by their influence.”¹⁴⁹ Naaman offers evidence to support Hurrian incursions “along the Syro-African rift, i.e., on both sides of the Orontes river and the Lebanese Beq’a as far as the Upper Jordan Valley.”¹⁵⁰ He cites Hurrian linguistic inclusions, changes to the

¹⁴¹ I. Gelb (1944) *Hurrians and Subarians*, 56-57.

¹⁴² I. Gelb (1944) *Hurrians and Subarians*, 60.

¹⁴³ P. Steinkeller (1998) “The Historical Background of Urkesh and the Hurrian Beginnings in Northern Mesopotamia,” in G. Buccelatti & M. Kelly-Buccelatti (eds.) (1998) *Urkesh and the Hurrians. Studies in Honor of Lloyd Cotsen*, Urkesh/Mozan Studies 3, Bibliotheca Mesopotamic 26, Malibu. 75. See also, G. Wilhelm (1989) *Hurrians*, 10.

¹⁴⁴ I. Gelb (1944) *Hurrians*, 69 and G. Wilhelm (1989) *Hurrians*, cites Hurrian textual influence as far west as Alalakh on the Orontes, 13.

¹⁴⁵ G. Wilhelm (1989) *Hurrians*, 12-13.

¹⁴⁶ I. Gelb (1944) *Hurrians*, 70. See also G. Wilhelm (1989) *Hurrians*, who gives an extensive discussion of the origin of the name “Mitanni” and the extent of its influence 25.

¹⁴⁷ G. Wilhelm (1998) *Hurrians*, 25.

¹⁴⁸ G. Wilhelm (1998) *Hurrians*, 25.

¹⁴⁹ H. Hoffner (1998) “Hurrian Civilization from a Hittite Perspective,” in G. Buccelatti & M. Kelly-Buccelatti (eds.) (1998) *Urkesh and the Hurrians, Studies in Honor of Lloyd Cotsen*, Urkesh/Mozan Studies 3, Bibliotheca Mesopotamic 26, Malibu, 167.

¹⁵⁰ N. Naaman (2005) *Canaan in the Second Millennium BCE, Collected Essays*, vol. 2, Winona Lake, 11. (This is a predominantly linguistic study, based on names. He does cite some

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populations and elites of new political states in the area and changes in the military personnel and the equipment of their armies¹⁵¹ as evidence. It is beyond the scope of this work to investigate Hurrian history, but a brief examination of the scholarly corpus concerning them shows the Hurrians, throughout their history, profoundly influenced (both directly and indirectly) the various groups and states of the region extending from Transcaucasia as far south as northern Palestine. The Hurrians were a “horse culture” and it would be expected that they facilitated the spread and use of the horse in the lands they controlled or influenced and onwards, further south towards Egypt.

Pontic-Caspian cultures were the first to domesticate the horse and demonstrate the advantages of successful horse management, breeding and use to others.¹⁵² The Hurrians inherited their knowledge and techniques by means of incorporating the Kura-Araxes culture into their own as they began their long period of influence. There is much evidence available to define them as a horse culture.

Putatively domesticated horse remains are found at Alikemektepesi south of the Kura and Araxes in the 4th millennium.¹⁵³ This is an area of Hurrian origin.¹⁵⁴

At the end of the 3rd and the beginning of the 2nd millennium BC, in the archaeological record in the Transcaucasus, there is considerably greater emphasis on horsemanship and the use of drawn wheeled vehicles.¹⁵⁵ Again, these are areas of Hurrian origin.¹⁵⁶

2.3.2 HURRIAN LINGUISTICS AND ARTEFACTS

In addition to the faunal remains mentioned above, there is a widespread appearance of words (“issiy” is identified as the stem for the word “horse” in Hurrian¹⁵⁷) as well as

archaeological evidence but rests much of his case on the broader political events which caused a migratory “domino effect” resulting in “northern” Hurrian intrusions into Canaan.) 8-10.

¹⁵¹ N. Naaman (2005) *Canaan*, 11.

¹⁵² V. Ivanov (1998) “Horse Symbols and the Name of the Horse in Hurrian,” in G. Buccelatti & M. Kelly-Buccelatti (eds.) (1998) *Urkish and the Hurrians. Studies in Honor of Lloyd Cotsen*, Urkish/Mozan Studies 3, Bibliotheca Mesopotamica 26, Malibu. 146. “The Caucasian Caspian area seems to be connected to the Lower Volga culture where the horse sacrifice and the horse cult are documented at a most early age (starting with the border of the fifth and fourth millennium B.C.)”

¹⁵³ J. P. Mallory (1996) *Indo-Europeans*, 232.

¹⁵⁴ J. P. Mallory (1996) *Indo-Europeans*, 233. See also G. Wilhelm (1989) *Hurrians*, 41.

¹⁵⁵ P. Kohl (1988) “The Northern Frontier of the Ancient Near East: Transcaucasia and Central Asia Compared” *American Journal of Archaeology* 92/4 (1988) 596.

¹⁵⁶ J. P. Mallory (1996) *Indo-Europeans*, 233 and also G. Wilhelm (1989) *Hurrians*. 41.

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artefacts, both Hurrian and otherwise depicting horses and horse related material from the end of the 3rd millennium and the beginning of the 2nd. From the east, the Nuzi texts refer to the use of horses and chariots and the provision of armour and fodder for horses.¹⁵⁸ At Urkesh, which has been identified as a Hurrian capital,¹⁵⁹ horses feature in the palace economy.¹⁶⁰ In addition to horse bones,¹⁶¹ a large number of figurines (over 300) have been found, many of which depict equids, with several identified as horses, showing signs of domestication such as halters and tether-rings.¹⁶²

In contiguous and contemporary cultures,¹⁶³ Hurrian words were used to describe activities concerning horses.¹⁶⁴ There are multiple Hittite texts mentioning horses in several contexts including an archaic poem and an Old Hittite inscription.¹⁶⁵ The Hittite for “horse,” using a Sumerian logogram, was “ANSE.KUR.RA.”¹⁶⁶ Hoffner states that in the 15th and 14th centuries, the Hittites adopted Hurrian methods of training horses for their chariots¹⁶⁷ and he points to the Hittite translation of the Kikkuli horse-training manual as evidence for this. Raulwing¹⁶⁸ points out that these Kikkuli texts “used common terms as well as special hippological *termini technici* from different languages such as Sumerian, Akkadian, Hittite, Luvian, Hurrian and Indo-Aryan” which demonstrates the widespread knowledge and use of horses during the Middle Hittite period. An older artefact cited by Canby is an unfinished Old Hittite (17th-15th centuries

¹⁵⁷ V. Ivanov (1998) “Horse Symbols and the Name of the Horse in Hurrian,” in G. Buccellati & M. Kelly-Buccellati (eds.) (1998) *Urkesh, and the Hurrians. Studies in Honor of Lloyd Cotsen*, Urkesh/Mozan Studies 3, Bibliotheca Mesopotamica 26, Malibu, 152.

¹⁵⁸ G. Wilhelm (1989) *Hurrians*, 46.

¹⁵⁹ G. Buccellati & M. Kelly-Buccellati (1997) “Urkesh: The First Hurrian Capital,” *The Biblical Archaeologist* 60/2 (1997) 77-96.

¹⁶⁰ V. Ivanov (1998) “Horse Symbols,” 147.

¹⁶¹ S. Bökönyi (1994) *Prehistoric Domestic and Wild Fauna of Mozan, Syria: A Preliminary Report*, (this is an unpublished expedition paper) here quoted by R. Hauser (1998) “The Equids of Urkesh: What the Figurines Say,” in G. Buccellati & M. Kelly-Buccellati (eds.) (1998) *Urkesh*, 65.

¹⁶² R. Hauser (1998) “Equids of Urkesh,” in G. & M. Buccellati (eds.) (1998) *Urkesh*, 65.

¹⁶³ See below (2.3.3) for a more detailed discussion of the etymology of the word horse.

¹⁶⁴ A. Nyland (1993) *The Kikkuli Method of Horse Training*, Armidale, 9.

¹⁶⁵ V. Ivanov (1998) “Horse Symbols and the Name of the Horse in Hurrian,” in G. Buccellati & M. Kelly-Buccellati (eds.) (1998) *Urkesh*, 147.

¹⁶⁶ V. Ivanov (1998) “Horse Symbols,” 152.

¹⁶⁷ H. Hoffner (1998) *Hurrian Civilisation*, in: G. Buccellati M. Kelly-Buccellati (eds) *Urkesh* 175.

¹⁶⁸ P. Raulwing (2009) *The Kikkuli Text. Hittite Training Instructions for Chariot Horses in the Second Half of the 2nd Millennium B.C. and Their Interdisciplinary Context*, http://www.lrgaf.org/Peter_Raulwing_The_Kikkuli_Text_masterfile_Dec_2009.pdf Online publication. Accessed 10 May 2011. 6.

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BCE) relief from the Hittite capital Hattusa of a battle scene with a god speeding forward in a chariot drawn by what appear to be horses.¹⁶⁹

The Hurrian state of Mitanni, formed in approximately 1550 BCE in Upper Mesopotamia and Syria with its capital at Wassukanni (Fig. 2.18), was enormously influential in further exposing the Near East to the horse and its uses. So intrinsic to the Mitanni were horses, that their aristocracy were designated as the “chariot warriors,”¹⁷⁰ the “marianni.”¹⁷¹ In other areas outside Mitanni itself, Naaman points out that, “A military elite known by the name ‘Mariannu’ appeared in the regions where the majority of inhabitants were Hurrian.”¹⁷² Redford extends this into the New Kingdom period in Canaanite societies whose chariot-driving aristocracy was also termed, “mariannu.”¹⁷³

So proficient were the Hurrians in the use of the horse in combination with the chariot that the Hittites put their expertise to active use. This was achieved, in part, through the application of (at least one) Mitannian horse-training manual purportedly written by the horse-master (“assussanni”) Kikkuli, a “mariannu,” the translation of which can be dated to the Middle Hittite period¹⁷⁴ (Fig. 2.19). Individual Mitannian horse masters were themselves in demand to instruct and develop the horse management techniques of neighbouring states, with Kikkuli offering “... a precise prescription for conditioning

¹⁶⁹ J. V. Canby (1989) “Hittite Art,” *The Biblical Archaeologist* 52 (1989) 114.

¹⁷⁰ The chariot in this sense is the new light spoke-wheeled chariot rather than the heavy solid wheeled type depicted in the Royal Standard of Ur. British Museum 121201.

¹⁷¹ I. Gelb (1944) *Hurrians and Subarians*, 68-69 Gelb points out that the term “marianni was used by the Hurrians for their nobles and that Albright identifies the term as “chariot warriors”. Albright notes also that the Egyptians used “m(a)-ar-ya-na” in “the double sense “chariot warrior, knight” and “Syrian noble.” W. F. Albright “Mitannian maryannu, ‘chariot-warrior’ and the Canaanite and Egyptian Equivalents,” *Archiv für Orientforschung* 6 (1930-31) 217-21 See also G. Wilhelm (1989) *Hurrians*, 19 notes that the “maryanni” were a military elite associated with the acquisition and upkeep of chariot teams.

¹⁷² N. Naaman (2005) *Canaan*, 11.

¹⁷³ D. Redford (1993) *Egypt, Canaan and Israel in Ancient Times*, Princeton, 195.

¹⁷⁴ H. Hoffner (1998) *Hurrian Civilization*, 176. See also E. Neu (1986) “Zur Datierung der Hethitischen Pferdetexte,” in H. Hoffner & G. Beckman (eds.) (1986) *Kaniššuwat: A Tribute to Hans G. Güterbock on his Seventy-Fifth Birthday May 27, 1983*, Chicago, 151-163 for a full discussion of the dating of the texts and T. Bryce (1998) *The Kingdom of the Hittites*, Oxford, 415, for the dating of Middle Hittite as “the language of the texts of the first half of the New Kingdom (Hittite) fifteenth- fourteenth centuries.” P. Raulwing (2009) *The Kikkuli Text. Hittite Training Instructions for Chariot Horses in the Second Half of the 2nd Millennium B.C. and Their Interdisciplinary Context*. http://www.lrgaf.org/Peter_Raulwing_The_Kikkuli_Text_masterfile_Dec_2009.pdf Accessed 10 May 2011 is the most up to date confirmation of the dating of the original Kikkuli Texts, 5.

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(exercise and feeding) Hittite chariot war horses over 214 days.”¹⁷⁵ The proficiency and recognised expertise of the Hurrians may have contributed both to the establishment of Mitanni itself and later, to its demise as the techniques and skills associated with the horse and the chariot dispersed to surrounding groups.

In summary, on the basis of the evidence, it is reasonable to conclude that the Hurrians were a “horse culture” responsible for transmitting the horse itself, its breeding and management techniques and its applications in war and peace throughout the Middle East from the Transcaucasus to the south possibly as far as Canaan by the time of the New Kingdom in Egypt.

2.3.3 THE HURRIANS AND THE EGYPTIAN WORD FOR “HORSE”

At this juncture it would be useful to examine the specific etymology of the Egyptian word for “horse”¹⁷⁶ to identify any parallels with Hurrian or other words associated with horses in support of the faunal evidence. The etymology of the Egyptian word for “horse,” *ssm.t* has been the subject of considerable academic research and discussion over a long period of time resulting in several hypotheses. These investigations have taken place within contexts that have at times deeply effected the direction of research.

The horse was not native to Egypt, it passed through many geographical and political areas over long time periods before it arrived there and the words used in reference to it in those places determined what the Egyptians used to describe it.

Tracing the etymology of *ssm.t* is made especially difficult because of the great complexity of the connections between languages in the ancient Near East and surrounding areas over extensive time periods, the continuing discovery of new evidence, the lag in the translation of extant sources and its close connection with the

¹⁷⁵ A. Nyland (1993) *The Kikkuli Method of Horse Training*, Armidale, 8.

¹⁷⁶ The concentrated examination of the linguistics involved in a discussion of the etymology of all hippological terms in Egyptian is well beyond the scope of this thesis and as such only one term *ssm.t* “horse” will be discussed. I am most grateful to Dr. Peter Raulwing for his untiring, patient, expert and extensive assistance with the linguistic complexities associated with this investigation.

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development and spread of the light, spoke-wheeled chariot¹⁷⁷ amongst a myriad of other problems.

Two main theories have emerged concerning the etymology of the word for “horse,” first that it can be traced to an Indo-European source and second that it originates from a Non-Indo-European source.

The “Indo-European” theory suggests that the origin of the Egyptian and Hurrian words for “horse” (*ssm.t* and *e/išši* respectively) is Proto-Indo-European **ek’wos-* which via Indo-Aryan and /or Hittite entered the Sumerian, Akkadian and other Semitic languages and thence into Egyptian.¹⁷⁸ Research discovered more hippological terms which were included in the Indo-Aryan lexicon.¹⁷⁹ There is a strong connection with Hittite, an Indo-European language; documented in an area in today’s modern Turkey¹⁸⁰ and the Kikkuli Text¹⁸¹ attributed to a Hurrian “horse master” called Kikkuli, who is designated

¹⁷⁷ The utilization of horses can be traced much further back in history than the time when they can be seen as the driving force for the chariot. Horses were used as food sources at Dereivka for example and for riding (see D. Anthony (2003) “Bridling Horse Power,” in S. Olsen (ed.) (2003) *Horses Through Time*, Lanham MD, 61 and M. Van de Mieroop (2004) *A History of the Ancient Near East, ca. 3000-323 BC*, Oxford, 97.) Care should be taken not to associate the horse and the chariot etymologically in all circumstances.

¹⁷⁸ See e.g. William Ward, “Notes on Egyptian Group-Writing,” *JNES* 16 (1957) 198-203, p 201 who sees *ssm.t* as being borrowed through Indo-European, connecting it with Sanscrit *aśva*, Persian asp. H. Donner, “Die Herkunft des ägyptischen Wortes Pferd,” *ZÄS* 80 (1955) 97- 103 argued for a connection with Canaanite *𐤍𐤍*, *sūs*, which he understands to be a loanword of indeterminate origin, i.e. he sees the word as having passed through Canaanite to Egyptian.

¹⁷⁹ P. Raulwing (2013) “Manfred Mayrhofer’s Studies on Indo-Aryan and the Indo-Aryans in the Ancient Near East: A Retrospective and Outlook on Future Research,” in T. Schneider & P. Raulwing (eds.) (2013) *Egyptology from the First World War to the Third Reich*, Leiden, 257.

¹⁸⁰ P. Raulwing (2013) “Manfred Mayrhofer’s Studies on Indo-Aryan and the Indo-Aryans in the Ancient Near East: A Retrospective and Outlook on Future Research,” in T. Schneider & P. Raulwing (eds.) (2013) *Egyptology from the First World War to the Third Reich*, Leiden, 254. P. Raulwing & H. Meyer (2004) “Der Kikkuli-Text. Hippologische und methodenkritische Überlegungen zum Training von Streitwagenpferden im Alten Orient” in M. Fansa & S. Burmeister (eds.) (2004) *Rad und Wagen. Der Ursprung einer Innovation. Wagen im Vorderen Orient und Europa*, Mainz. 491-506.

¹⁸¹ The Kikkuli Text (CTH 284) was discovered in 1906/07 by Winckler in the royal Hittite archive. More horse training texts were found later in the campaigns in Boghazköy/Hattuša in the 1930s (CTH 285–286). Potratz published his PhD thesis 1938 analyzing the “old” texts (those found in 1906/07). Kammenhuber then published “old” and “new” that is all Hittite horse texts in 1961 (after two longer articles she published in the 1950s.)

The text is named after the author “Kikkuli the horse trainer from the land of Mittani.” See P. Raulwing (2006) “The Kikkuli Text (CTH 284). Some Interdisciplinary Remarks on Hittite Training Texts for Chariot Horses in the Second Half of the Second Millennium B.C.” in A. Gardeisen (ed.) (2006) *Les Équidés dans le monde méditerranéen antique. Actes du colloque organisé par l’École française d’Athènes, le Centre Camille Jullian, et l’UMR 5140 du CNRS, Athènes, 26-28 Novembre 2003*, 61-75.

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“the horse trainer from the land of Mitanni,” was discovered in the Hittite royal archives in 1906/7.¹⁸²

As Raulwing states, “the fact that the Hittites had “commissioned” training instructions for chariot horses, signed by a ^{LÜ}*aššuššanni* named “Kikkuli from the land of Mitanni,” archived and copied it several generations later has given rise to an all too enthusiastic evaluation of the Indo-Aryan’s role in ancient Near Eastern chariotry on the part of certain scholars under the influence of the social ideologies of their time.”¹⁸³

The Hurrians were an acknowledged “horse culture”¹⁸⁴ whose influence spread throughout the Near East. The upper levels of Hurrian aristocracy were associated with Indo-Aryan names and loanwords.¹⁸⁵ Terms for technical innovations such as the chariot can be used as loan words in the case where a language does not have words to describe them and they then can become the standard terms commonly used and spread far from their places of origin. “The Mitanni-Hurrian horse trainers (Kikkuli) and their Hittite colleagues used common terms as well as special hippological *termini technici* from different languages such as Sumerian, Akkadian, Hittite, Luvian, Hurrian and Indo-Aryan in the ancient Near East.”¹⁸⁶ The theory suggests then that the terms for horses filtered into Sumerian and Akkadian and into other Semitic languages and thence to Egyptian. Certain issues arose with the Indo-Aryan theory one being that there are no hippological technical terms attested in the cuneiform sources before the 16th century BCE.¹⁸⁷

The second theory, the Non-Indo-European theory suggests that the term originated from Sumerian, thence to Akkadian and then into Egyptian.

¹⁸² P. Raulwing (2013) “Manfred Mayrhofer’s Studies on Indo-Aryan and the Indo-Aryans in the Ancient Near East: A Retrospective and Outlook on Future Research,” in T. Schneider & P. Raulwing (eds.) (2013) *Egyptology from the First World War to the Third Reich*, Leiden, 254.

¹⁸³ P. Raulwing (2006) “The Kikkuli Text (CTH 284). Some Interdisciplinary Remarks on Hittite Training Texts for Chariot Horses in the Second Half of the Second Millenium B.C.” in A. Gardeisen (ed.) (2006) *Les Équidés*, 63.

¹⁸⁴ See Chapter 2.

¹⁸⁵ G. Wilhelm (1989) *The Hurrians* Warminster, 18-19.

¹⁸⁶ P. Raulwing (2006) “The Kikkuli Text,” 62-63.

¹⁸⁷ G. Wilhelm (1995) “The Kingdom of the Mitanni in the Second-Millennium Upper Mesopotamia” in J. M. Sasson (ed.) (1995) *Civilizations of the Ancient Near East*, 2. New York, 1246ff.

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The Old Akkadian *sisā'um* can be traced to the Neo-Sumerian logogram ANŠE.ZI.ZI, meaning “horse.” M. Civil has proven that ANŠE.ZI.ZI at the end of the 3rd millennium meant “horse” and that it was replaced sometime later by ANŠE.KUR.RA.¹⁸⁸ The Akkadian equivalent *sisā'um*¹⁸⁹ was then passed down through other Semitic languages such as Old Assyrian,¹⁹⁰ Old Babylonian,¹⁹¹ Ugaritic and others, and these languages permeated the ancient Near East, the Levant and Asia Minor as the use of the horse and its related equipment and activities spread. Egypt’s interactions with the Hyksos and others would have provided the conduit for acquiring and then transmitting hippological technical terms.

Decker¹⁹² points out that *ssm.t* can be seen as the morphological reflection of the “mimation”¹⁹³ of the Akkadian *sisā'um*. Schneider¹⁹⁴ suggests that the “m” was misunderstood by the Egyptians as belonging to the word stem of *ssm.t*, the Egyptian >s< was still affricated as /ts/ and the .t is the Egyptian feminine ending.

Thus the Egyptian word for “horse” could have originated. However the great complexity of the linguistic, social, cultural and political connections in the ancient Near East, the paucity of evidence and the extensive time periods involved make a definitive conclusion as to the etymology of “*ssm.t*” quite equivocal.

¹⁸⁸ M. Civil (1966) “Notes on Sumerian Lexicography 1,” *Journal of Cuneiform Studies* 20, 3/4 (1966) 119-124. (122) See also J. Zarins (1978) “The Domesticated Equidae of Third Millenium B.C. Mesopotamia” *Journal of Cuneiform Studies* 30 (1978) 5, and N. Postgate (1986) “The Equids of Sumer, Again,” in R.H. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, Wiesbaden 194-206 and J. Zarins (2014) *The Domestication of Equidae in Third-Millennium BCE Mesopotamia*, Maryland, 150-170.

¹⁸⁹ N. Postgate (1986) “The Equids of Sumer, Again,” in R. H. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, 1, Wiesbaden, 198.

¹⁹⁰ J. Zarins (1978) “The Domesticated Equidae of Third Millenium B.C. Mesopotamia” *Journal of Cuneiform Studies* 30 (1978) 10.

¹⁹¹ N. Postgate (1986) “The Equids of Sumer, Again,” in R. H. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, 1, Wiesbaden 198 and J. Zarins (1978) “The Domesticated Equidae of Third Millenium B.C. Mesopotamia” *Journal of Cuneiform Studies* 30 (1978) 10.

¹⁹² W. Decker (1994) “Pferd und Wagen im Alten Ägypten” in B. Hänsel & S. Zimmer (eds.) (1995) *Die Indogermanen und das Pferd. Akten des Internationalen Interdisziplinären Kolloquiums Freie Universität Berlin*, 1-3. Budapest 259-270...(260)

¹⁹³ “Mimation” refers to the suffixed -m- which occurs in some Semitic languages. This occurs in Akkadian in singular nouns. W. von Soden (1969) *Grundriss der akkadischen Grammatik*, Rome.

¹⁹⁴ T. Schneider (2008) “Fremdwörter in der ägyptischen Militärsprache des Neuen Reiches und ein Bravourstück des Elitesoldaten (Pap. Anastai 1, 23, 2-7).” *Journal of the Society for the Study of Egyptian Antiquities* 35 (2008) 181-205.

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The use of the word in its linguistic context is again beyond the scope of this thesis, for a thorough examination of this see Pascal Vernus (2005).¹⁹⁵

2.4 THE ROLE OF THE HYKSOS AND THE ARRIVAL IN EGYPT.

2.4.1 THE HYKSOS AND HORSES.

Over time, horses moved through the established corridors of trade and travel in the region. That is they moved through the Fertile Crescent and up and down the coastal Levant. The availability of other animals, such as *Equus asinus* (the donkey) for draught purposes and the apparent relative rarity of the horse delayed its arrival in Egypt until comparatively late. Since it was not a beast of burden, no longer a food and resource staple, its rarity, behaviour and the difficulties and expense of maintaining it, made the horse primarily only accessible to the elites of the Middle East. Its speed, spirit and nobility of form made the horse a desirable possession. However, until the innovation of the light horse-drawn spoke-wheeled chariot and in the absence of the development of cavalry, the horse would remain a relatively rare and novel item in earlier periods in this region.

It is evident from the examination of the faunal deposits mentioned above, that horses permeated the Levant from the 3rd millennium BCE. Textual and archaeological sources also give a clear indication of the spread of both the possession and usage of horses through the Middle East and specifically through the Syro-Palestinian region. In addition to Hurrians, this area was home to the Amurru (Fig. 2.20, 2.21) who may have been the precursors of the Hyksos or may have inhabited the area from which they originated.

From the Pontic-Caspian through the Transcaucasus and into the near East, horse-keeping was a feature of groups who were, at least to a degree, semi-nomadic. This can be explained considering the nature and advantages of horse keeping and the type of

¹⁹⁵ P. Vernus (2005) “Réception linguistique et idéologique d’une nouvelle technologie: le cheval dans la civilisation pharaonique,” in M. Wissa (ed.) (2005) *The Knowledge Economy and Technical Capabilities Egypt, the Near East and the Mediterranean 2nd millennium B.C.- 1st millennium A.D. Proceedings of a conference held at the Maison de la Chimie Paris, France, 9-10 December 2005*, Barcellona. 1-46.

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trading opportunities available to such groups. It goes some way also to explaining the means and motive for the gradual spread of the horse before the invention of the war chariot. One such semi-nomadic people were the Amorites who also took part in horse dealings.¹⁹⁶

In 1961, based on Mari written sources from Eastern Syria on the Euphrates and linguistic evidence, Gelb identified Amurru as “a kingdom in Syria”¹⁹⁷ (Fig. 2.20, 2.21). Since then, scholars have identified the Amurru as a group of kingdoms or communities inhabiting the Syrian and Palestinian region¹⁹⁸ and sharing similar social, political, military, religious and other affinities.¹⁹⁹ These communities definitely had horses. In Eastern Syria there is ample evidence of horses being used for pulling chariots from as early as 1900 BCE.²⁰⁰ A letter from the Mari archives from the palace prefect to King Zimri-Lim admonishing him for riding a horse instead of a donkey establishes that at least in kingly circles, horseback riding existed between 1776 and 1761 BCE.²⁰¹ The Mari texts also describe Syria in the west as being a horse rearing area.²⁰²

The Alalakh texts²⁰³ refer to the Amorites as having horses and grooms,²⁰⁴ there being “horses from Amurru”²⁰⁵ and the Amurru are identified unequivocally as traders.²⁰⁶

¹⁹⁶ M. Van De Mieroop (2004) *A History of the Ancient Near East*, Oxford. “Very important in the political and social life of the Near East, were people whose livelihood was not tied to the agriculture that supported the urban centres.In the late 3rd and early 2nd millennium they were grouped together under the term Amorites.” 82.

¹⁹⁷ I. J. Gelb (1961) “The Early History of the West Semitic Peoples,” *Journal of Cuneiform Studies*. 15 /1 (1961) 41 and 47. D. B. Redford (1992) *Egypt*, 96 also identifies Syria as the home of the Amurru.

¹⁹⁸ E. Oren (ed.)(1997) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, xxiii and also D. B. Redford (1992) *Egypt*, 94.

¹⁹⁹ E. Oren (1997) “The Hyksos Enigma- Introductory Overview,” in E. Oren (ed.) (1997) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, xxiii.

²⁰⁰ D. Anthony (2003) “Bridling Horse Power,” in S. Olsen (ed.) (2003) *Horses Through Time*, Lanham, MD, 62.

²⁰¹ D. Anthony, (2003) “ Bridling Horse Power,” in S. Olsen (2003) *Horses*, 61 and M. Van De Mieroop (2004) *A History of the Ancient Near East*, 97. This gives the dates for the reign of Zimri Lim.

²⁰² B. Landsberger (1954) “Assyrische Königsliste und “dunkles Zeitalter,” *Journal of Cuneiform Studies* 8/2 (1954) 56.

²⁰³ M. Van De Mieroop (2004) *Near East*, 80 gives the date for the Mari archives as 1800-1762 BCE.

²⁰⁴ I. J. Gelb (1961) *Semitic Peoples*, 47, also J. Van Seters (1966) *The Hyksos. A New Investigation*, New Haven. 184, “In fact horsemanship in the Alalakh VII texts is associated entirely with the Amurrites.”

²⁰⁵ B. Landsberger (1954) “Assyrische,” 56. On page 41 of this article Gelb discusses the possible origins of the horse in the Middle East and suggests that it may have been native to Amurru.

²⁰⁶ B. Landsberger “Assyrische,” (1954) 56 and I. J. Gelb (1961) *Semitic Peoples* 47.

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Amurru in Syria/Palestine was an area of profound Hurrian influence on the western edge of the state of Mitanni and possibly the area of Hyksos origin. There are strong connections between the Amorite cultures in these areas and those of Canaan and the Nile Delta.²⁰⁷ It is reasonable to assume that from their earliest times, the Hyksos were acquainted with horses. Indeed, they may have used and traded them and taken them with them as they moved into Egypt for it was the Hyksos who brought the horse into Egypt.

The question of Hyksos origins has been the subject of scholarly speculation and investigation for decades. Until the 1960s, it had been established that they were a West Semitic²⁰⁸ people who moved from the Amorite regions of Syria - Palestine and from Canaan towards the eastern Delta from the time of the 12th Dynasty.²⁰⁹ Work conducted at Tell el-Daba/Avaris in the Eastern Delta since the 1960s, however, has added an enormous amount to the scholarly corpus concerning the Hyksos. Importantly for this study, it has assisted in further clarifying the area of origin of the Hyksos which “appears to have been the coastal Levant, most probably the region around Byblos.”²¹⁰ As some of the supporting evidence for this, Bietak cites Beni Hasan tomb scenes²¹¹ and grave goods,²¹² architectural characteristics of structures at Avaris,²¹³ the Egyptian use of the term “Retenu” referring to Syria - Palestine²¹⁴ (Fig. 2.22) and the custom of donkey burials, all of which typify the culture and practises of Middle Bronze Age Palestine and northern Syria.²¹⁵ Oren states “recent theories concerning their origin

²⁰⁷ E. Oren (1997) “The Hyksos,” in Oren (ed.) (1997) *The Hyksos*, xxii.

²⁰⁸ J. Van Seters (1966) *The Hyksos; A New Investigation*, New Haven, 181. D. Redford (1992) “Egypt,” 100. E. Oren (1997) “The Hyksos Enigma – Introductory Overview,” in E. Oren (ed.) *Hyksos*, (1997) xxi-xxii.

²⁰⁹ E. Oren (1997) “Hyksos,” in E. Oren (ed.) *The Hyksos*, xxii. D. Redford (1992) *Egypt*, 100. M. Bietak (1996) *Avaris. The Capital of the Hyksos, Recent Excavations at Tell el-Dab’a*, London, 13-14.

²¹⁰ M. Bietak (1996) *Avaris*, 14.

²¹¹ M. Bietak (1996) *Avaris*, 14.

²¹² M. Bietak (1996) *Avaris*, 14.

²¹³ M. Bietak (1996) *Avaris*, 10.

²¹⁴ M. Bietak (1996) *Avaris*, 19. “Retenu... is understood to be a very general term for the region of Syria-Palestine during the period of the Middle Kingdom”. He then refers to A. H. Gardiner (1947) *Ancient Egyptian Onomastica*, 1, Oxford, 142-149. Gardiner conducts an exhaustive discussion of the geographical location of “Rtjenu” his conclusions, based on multiple evidence cited from the Middle and New Kingdoms, identify Rtjenu as a wide term defined as “(1) Palestine and Syria together, (2) a land of petty principalities, and (3) excluding the large kingdoms of Nahrin and Khatty.” 144. W. F. Albright (1930-31) “Mitannian maryannu,” supports this conclusion, 218.

²¹⁵ M. Bietak (1996) *Avaris*, 25.

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suggest that Syria (northern or central) and Lebanon (the Bek'a or Byblos) figured importantly in the rise of the Hyksos and the foundation of Avaris.”²¹⁶

More recently, after decades of examining Hyksos material from Tell el-Daba and other sites, Bietak concludes unequivocally that the Hyksos originated from “the northern Levant.”²¹⁷ These regions are the very areas where the textual, archaeological and osteological remains clearly indicate the presence of horse - they are areas deeply influenced by both the Hurrians and the Amorites, both established “horse cultures.” So, from their origins and associations, the peoples who would become the Hyksos had past experience with horses.

When Petrie examined Tell el-Ajjul (Fig. 2.23) he identified it as a settlement dating back to the Old Kingdom²¹⁸ that also showed evidence of prolonged Hyksos occupation beginning at the time of the early 15th dynasty.²¹⁹ In this context, Petrie found a variety of faunal remains and artefacts that support the presence of the horse at the site. From early Hyksos contexts, he found a series of disarticulated horse remains including a large horse skull²²⁰ and incomplete skeletons that appeared to have been part of foundation deposits.²²¹ He found deliberate horse burials such as those in Tomb 411 where the animals had been buried after having had parts removed for what he concluded were sacrificial meals.²²² There were also several finds of horse bits and

²¹⁶ E. Oren (1997) “The Hyksos Enigma – Introductory Overview,” in E. Oren (1997) (ed.) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia. xxii. This text contains the proceedings of the International Seminar on Cultural Interconnections in the Ancient Near East, held at the University of Pennsylvania Museum of Archaeology and Anthropology in 1992 and the papers presented support the conclusion of Canaanite and Levantine origins for the Hyksos.

²¹⁷ M. Bietak (2010) “From Where Came the Hyksos and Where Did They Go?” in M. Marée (ed.) (2010) *The Second Intermediate Period, (Thirteenth – Seventeenth Dynasties): Current Research, Future Prospects*, OLA 192 Leuven, 139-181. He cites ceramic, architectural, religious, economic and historical contacts as evidence as well as Egyptian iconographic symbols in Northern Syrian art to support his conclusion.

²¹⁸ W. M. F. Petrie (1931) *Ancient Gaza I. Tell El-Ajjul*, British School of Archaeology in Egypt, London, 4.

²¹⁹ H. F. Petrie (1952) “Introduction,” in W. M. F. Petrie, E. J. Mackay & M. Murray (1952) *City of Shepherd Kings and Ancient Gaza 5*, British School of Archaeology, London. 2.

²²⁰ W. M. F. Petrie (1932) *Ancient Gaza II. Tell El-Ajjul*, British School of Archaeology, London. 14.

²²¹ W. M. F. Petrie (1932) *Gaza II*, 14 and W.M.F. Petrie. (1952) *Shepherd Kings 2*. Cheek pieces are straps on a bridle connecting the crownpiece and the bit.

²²² W. M. F. Petrie (1932) *Gaza II*, 14. See also E. J. Mackay (1952) “Lower Levels of Excavation,” 23, and M. Murray “Notes on Beliefs and Ritual,” 32ff, in W. M. F. Petrie, E. McKay & M. Murray (1952) *City of Shepherd Kings and Ancient Gaza V*, London, 23. M. A.

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cheek pieces²²³ and a ceramic “horse’s head and neck of brown pottery showing the kind of mane of the Hyksos horses.”²²⁴

In subsequent years, some questions were raised concerning the dating of these finds, especially of the few bones still extant today and those initially radio-carbon tested which showed the extraordinary result of 6200bp.²²⁵ Tests on the remaining bones have indicated that the original samples were contaminated with paraffin wax (used as a preservative in the 1930s) and revealed²²⁶ 3400+/- 120bp which “falls within the Hyksos period when calibrated.”²²⁷ According to Oren, the Tell el-Ajjul horse burials definitely date from MBI and MBII.²²⁸ On the site occupied from the Old Kingdom until at least the 19th Dynasty,²²⁹ horse remains have been found covering a period which corresponds to MBIIA to MBII B/C.²³⁰ To date, no osteological evidence of the existence of horses in Egypt before the Hyksos period has been found and there is a clear line of association between the horse and the Hyksos leading from Syria - Palestine towards Egypt.

Petrie’s identification of *Equus caballus* at Tell El Ajjul, as opposed to other domesticated equids, was also questioned. Stiebing stated that “Petrie identified the animals in Tomb 101 as “asses” and those in the other tombs as “horses,” but he was not an expert in this field, ... and it is probable that Petrie’s “ horses” were actually

Murray (1952) *Gaza V*, 32 ff gives a very full discussion of this process and refers to examples of the same behaviour in widely spread cultures and also includes a possible reason for the apparent scarcity of horse remains.

²²³ W. M. F. Petrie (1952) *Shepherd Kings*, 15, and 28, also W. M. F. Petrie (1934) *Ancient Gaza.4 Tell El-Ajjul*, British School of Archaeology in Egypt, London, 9 and 11.

²²⁴ W. M. F. Petrie (1931) *Gaza I, Tell El Ajjul*, British School of Archaeology in Egypt, 9.

²²⁵ R. Burleigh (1986) “Chronology of Some Early Domestic Equids in Egypt and Western Asia,” in R. H. Meadow & H. P. Uerpmann (eds.) (1986) *Equids in the Ancient World*, 1, 232.

²²⁶ R. Burleigh, J. Clutton-Brock & J. Gowlett (1991) “Early Domestic Equids in Egypt and Western Asia: An Additional Note,” in R. Meadow & H. P. Uerpmann (eds.) (1991) *Equids in the Ancient World*, 2, 10. The tests were carried out using the same metacarpal of the Gaza horse that was used in the initial tests.

²²⁷ R. Burleigh, J. Clutton-Brock & J. Gowlett (1991) in R. Meadow & H. P. Uerpmann (eds.) *Equids in the Ancient World*, 2, 10.

²²⁸ E. Oren (1997). *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, 266.

²²⁹ W. M. F. Petrie (1952) *City of Shepherd Kings and Ancient Gaza V*, 1-2.

²³⁰ P. Wapnish (1997) “Middle Bronze Equid Burials at Tell Jemmeh and a Reexamination of a Purportedly Hyksos Practice,” 349-352 in E. Oren (ed.) (1997) *The Hyksos*, She includes dates from W. F. Albright (1974) “The Chronology of a South Palestinian City. Tell El-Ajjul,” 64-75 in J. R. Stewart (ed.) (1974) “Tell El-Ajjul. The Middle Bronze Age Remains,” Göteborg. *Studies in Mediterranean Archaeology*. xxxviii. Göteborg.

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onagers.”²³¹ A further study, an zooarchaeological examination by the equid specialist J. Clutton-Brock, found Petrie’s original designation of the remains as “horse” to be correct.²³²

Further examples of horse remains have been found in the Eastern Delta. There are small numbers of horse bones found to the south of Tell el-Ajjul at Tell Jemmeh.²³³ At Tell el-Maskhuta in the Wadi Tumilat (Fig. 2.23) Wapnish states that “two horse bones from Tomb 8,079”²³⁴ were found.²³⁵ These fall into the period MBII, Bietak’s 1700-1600 BCE.²³⁶

An almost intact horse skeleton was discovered at Tell Heboua in Egypt (Fig. 2.23). The five to eight-year-old female of “medium” size was found in the collapsed eastern part of a large building in the western part of the city.²³⁷ Chaix dates this stratigraphically to “between the end of the Second Intermediate Period and the very beginning of the New Kingdom.”²³⁸ This would place this horse at the end of the Hyksos period. These instances indicate that horses were present in several unequivocally Hyksos sites before the 18th Dynasty.

Finally, horse remains were also found in the Egyptian North Eastern Delta at the capital of the Hyksos, Avaris - Tell el-Daba (Fig. 2.23). Bietak states that Tell el-Daba is “both the oldest and the largest site of this culture (Syro-Palestinian) yet known from

²³¹ W. Stiebing (1971) *Hyksos Burials* 110-117. Stiebing agrees with Petrie that the “horse” in Tomb 411 is in fact one used in a ritual feast, 115. This appears to parallel the use of horse sacrifices in the Levant and even throughout Europe. It parallels donkey burials found at this site and many others in the region.

²³² P. Wapnish (1997), “Middle Bronze,” in E. Oren (ed.) (1997) *Hyksos*, 350.

²³³ P. Wapnish (1997) “Middle Bronze,” in E. Oren (ed.) (1997) *Hyksos*, 336 and 349. Unfortunately Wapnish does not provide any specific information relating to the dating of these bones except to mention them in a Middle Bronze context.

²³⁴ P. Wapnish (1997) “Middle Bronze,” 354 in E. Oren (ed.) (1997) *Hyksos*,

²³⁵ J. Holladay (1997) “The Eastern Nile Delta during the Hyksos and Pre-Hyksos Periods: Towards a Systemic/ Socio-economic Understanding,” in E. Oren (ed.) (1997) *Hyksos*, 195, referring to Tell el-Maskhuta, “As at Tell el-Daba, the horse was marginally present in the osteological record of the excavated area.”

²³⁶ P. Wapnish (1997) “Middle Bronze,” in E. Oren (ed.) (1997) *Hyksos*, 354. She indicates here the difficulty of finding out more about these finds in her note (19) 364.

²³⁷ L. Chaix (2000) “An Hyksos Horse from Tell Heboua. (Sinai, Egypt)” in H. Buitenhuis, M. Mashkour and A.M. Choyke (eds) (2000) *Archaeozoology of the Near East IV B: Proceedings of the Fourth International Symposium on the Archaeozoology of Southwestern Asia and Adjacent Areas*, ARC-Publications 20, Gronigen, 177.

²³⁸ L. Chaix (2000) “An Hyksos Horse,” 177. (No radio-carbon date is available on the horse and it seems that the preservation techniques used on the animal may preclude any in the future.)

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the Delta.”²³⁹ It is a very complex site that has yielded information on settlements dating from the beginning of the 12th Dynasty²⁴⁰ continuing on into the 19th Dynasty.²⁴¹ Horse teeth were found in Stratum E/2=b/1 (Areas A/11, A/V, and F/1), (1650-1610 BCE)²⁴² in the first indication of their presence at the site. There is osteological evidence for horse again in Stratum E/1=b/1-a/2 (1620-1590 BCE) (Areas A/11, A/V, and F/1).²⁴³ In the Stratum consistent with the fall of Avaris, D/1-D/2, (c.1530 BCE) the remains of at least five stallions have been found together with multiple human inhumations. He suggests “these finds seem to reflect clearing operations within the citadel that may have taken place before major building projects were started.”²⁴⁴ This is the short time period between the last phase of Hyksos occupation and the beginning of the building program of Ahmose I, which Bietak would place during or slightly after the period 1532-1512 BCE. This provides evidence that the horse entered Egypt from the northeast and that horses existed within Hyksos sites up to and including the beginning of the 18th Dynasty.

Currently, the earliest instance of the return of the horse to Africa is still the Buhen horse (Fig. 2.23), which is dated by Emery to 1675 BCE.²⁴⁵ It was found, not in Egypt, but in Nubia. (See Appendix 1 for a discussion of this important find.)

The fortress at Buhen, Emery’s site of discovery during the late 1950s and early 1960s, was originally constructed by the kings of the Twelfth Dynasty to guard Egypt’s

²³⁹ M. Bietak (1997) “Avaris. Capital of the Hyksos Kingdom. New Results of Excavation,” in E. Oren (ed.) (1997) *The Hyksos*, 87. He also states here, “that by the late 12th Dynasty, Tell el-Daba was already occupied by settlers of the Syro-Palestinian culture.”

²⁴⁰ M. Bietak (1997) “Avaris,” in E. Oren (ed.) (1997) *Hyksos*, 97.

²⁴¹ M. Bietak (1997) in E. Oren (ed.) (1997) *Hyksos*, 125.

²⁴² J. Boessneck (1976) *Tell el-Daba 111. Die Tierknochenfunde 1966-1969*, Vienna, 25 and J. Holladay, (1997) in E. Oren (ed.) (1997) *Hyksos*, 85-86.

²⁴³ M. Bietak (1991) “Egypt and Canaan in the Middle Bronze Age,” *Bulletin of the American Schools of Oriental Research* 281 (1991) 42, and J. Holladay (1997), in E. Oren (ed.) (1997) *Hyksos* 186.

²⁴⁴ M. Bietak (1997) “Avaris,” in E. Oren (ed.) (1997) *Hyksos*, 116.

²⁴⁵ J. Clutton-Brock (1979) “The Buhen Horse,” in W. B. Emery, H. S. Smith & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*, London, 191. See also P. Raulwing & J. Clutton-Brock (2009) *The Buhen Horse: Fifty Years After Its Discovery (1958-2008)*, Leiden, for an exhaustive discussion of this horse. The Buhen horse is a significant instance of remains studied in this work and so a section contained in the Appendices has been especially devoted to it.

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southern borders and to control the annexed Lower Nubian territory.²⁴⁶ In addition to this primary function, Buhen, sited north of the Second Cataract, provided a vital trading conduit for goods passing up and down the Nile. Emery suggests that this was the administrative centre for the whole area of the Second Cataract²⁴⁷ and also a centre for mining and working of minerals such as amethyst and copper.²⁴⁸ It was responsible also for the control of the desert routes. During his excavations, Emery discovered the almost complete skeleton of a horse that lay on top of the Middle Kingdom rampart pavement. It was covered by evidence of fire as well as a stratified deposit 1.15m deep on top of which the New Kingdom reconstruction of the fortress was built.²⁴⁹

For the next thirty-five years, no other remains were identified until teeth dated to 1640-1600 BCE were found at Tell el-Daba. After the teeth, horse remains and occasionally complete skeletons were found at Tell el-Daba (1532-1512 BCE),²⁵⁰ Tell Heboua (1532-1512 BCE)²⁵¹ Sai (1500 BCE)²⁵² (Fig. 2.23) Deir el Bahri (c.1470 -1450 BCE)²⁵³ (Fig. 2.23) Soleb (1408-1372 BCE)²⁵⁴ (Fig. 2.23) and Saqqara (1300-1200 BCE)²⁵⁵ (Fig. 2.23).

²⁴⁶ W. B. Emery, H. S. Smith. & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*, Egypt Exploration Society, Excavation Memoirs 49, London.

²⁴⁷ W. B. Emery et al. (1979) *Fortress*, 3.

²⁴⁸ W. B. Emery et al. (1979) *Fortress*, 101

²⁴⁹ W. B. Emery (1960) "A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen 1958-59," *Kush* 8-9 (1960-61) 8.

²⁵⁰ M. Bietak (1997) "Avaris, Capital of the Hyksos Kingdom: New Results of Excavations," in E. Oren (ed.) (1997) 116. Bietak sets out his chronology clearly in "Egypt and Canaan during the Middle Bronze Age," *Bulletin of the American Schools of Oriental Research* 281 (1991) 27-72, these are the remains of five stallions. Bietak insists that the fall of Avaris occurred within this period, between the 11th and the 18th years of the reign of Ahmose I.

²⁵¹ L. Chaix (2000) "Hyksos Horse," 177. Chaix places the Heboua skeleton "between the end of the Second Intermediate period and the very beginning of the New Kingdom." Bietak's dates for this would again be between 1532 and 1512 BCE.

²⁵² B. Gratien (1986) *Sai. I. La nécropole Kerma*, Paris. L. Chaix (2000) "Hyksos Horse," 179 cites Gratien and attributes this Sai skeleton to 1500 BC, which would suit both the Bietak chronology and the fact that the horse "was found in the centre of a tumulus dated from Late Kerma to the beginning of the New Kingdom." Neither the cited text nor the article by Gratien in B. Gratien (1985) "La nécropole SAC4 de l'île de Saï: l'occupation Kerma," in F. Geus & F. Thill (eds.) *Mélanges offerts à Jean Vercoutter*, Paris. 93-105, mentions this find specifically, however a full examination of the remains can be found in L. Chaix & B. Gratien (2002) "Un cheval du Nouvel Empire à Saï (Soudan)," in *Archéologie du Nil Moyen*, 9. 53-59.

²⁵³ T. Chard (1937) "An Early Horse Skeleton," *The Journal of Heredity* 28 (1937) 317-319. These are the findings of the examination of the horse found by A. Lansing & W. Hayes (1937) "The Egyptian Expedition 1935-1936, The Museum's Excavations at Thebes," *The Metropolitan Museum of Art Bulletin* 32. 1 / 2: Supplement 4-39. In this report the tomb at the front of which

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The horse had reached Egypt and penetrated as far south as Buhen. It appears to have done so from the 17th century BCE²⁵⁶ and become more prevalent in the period of Hyksos hegemony in Egypt. Generally, the horse is attested first in the north then spreading over time to the south, with several instances of remains coinciding with the 15th (Hyksos) Dynasty. There was no native Egyptian horse. Prior to this era there is no indication of horses, osteological or representational before the arrival of Asiatics exhibiting Syro-Palestinian culture, that is, the Hyksos or their precursors. The presence of the horse coincides with the Hyksos rule and therefore it is plausible that the Hyksos did in fact introduce the horse to Egypt and they did so by continuing a gradual process, which had originated in the Ukrainian steppes centuries earlier.

It must be pointed out that the attribution to the Hyksos of the introduction of the horse does not suggest the acceptance of the early belief in an “invasion” by those people. Manetho’s assertion that the Hyksos invaded Egypt²⁵⁷ has been refuted especially by work at Tell el-Daba. Research in this area has traced Caananite and Levantine settlement in the area of Avaris through structures, artefacts and ceramics to the late 12th Dynasty²⁵⁸ and proven that the immigration of the Hyksos to Egypt was generally a long, slow process of integration.


2.4.2 OTHER METHODS OF INTRODUCTION.

There are other possible means by which the horse moved into Egypt and trade is most likely to have been the motivator for this. It is not reasonable to construe that only one group, the Hyksos, traded horses deliberately and single-mindedly into Egypt and

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- this horse was found was attributed to Senenmut. If this is the case, the horse could reasonably be dated to the reign of Hatshepsut.
- ²⁵⁴ P. Ducos, (1965) “Le Cheval de Soleb,” in M. Schiff Giorgini (ed.) (1965) *Soleb II, Les nécropoles*, 2, Florence, 260-265. The date quoted in the present work is from L. Chaix (2000) *An Hyksos Horse*, 179.
- ²⁵⁵ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” *ASAE*, 26 (1926) 172-177. Once again the date has been supplied by Chaix.
- ²⁵⁶ M. Bietak (1996) *Avaris. The Capital of the Hyksos*, London, 31, “The horse was also probably an occasional import into Egypt at this time.” Bietak refers to Boessneck and Driesch (1976) *Tell el-Daba 3 Die Tierknochenfunde 1966-1967*, Vienna. See also M. Bietak (1997) in E. Oren (ed.) (1997) *The Hyksos* 90 for Bietak’s stratigraphy of Tell el-Daba.
- ²⁵⁷ Manetho *Aegyptiaca*, (Fragment 42), in *Manetho* (1940) transl. W. G. Waddell, Loeb Classical Library. Cambridge, Mass., 76-91 and quoted in J. Van Seters (1966) *The Hyksos: A New Investigation*, New Haven, 121-126.
- ²⁵⁸ M. Bietak (1997) “Avaris: New Results” in Oren (ed.) (1997) *The Hyksos* 97 ff also in M. Bietak (1996) *Avaris*.

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certainly not that they did so in large numbers. It is reasonable to assume that it would have been a filtered process of either direct trade (where horses were imported as a specific commodity), or indirect trade (where they were passed from group to group, finally arriving in Egypt in small numbers from Levantine regions). That trade would have been varied and driven by market forces and carried out by others as well as the Hyksos. If there were others involved then their efforts have left no appreciable impression on that country with the possible exception of the Buhen horse. It is important to note that dated at 1675 BCE, this predates the period of Hyksos hegemony but not the Hyksos presence.²⁵⁹ The earliest osteological material is also directly associated with the Hyksos.²⁶⁰ This may change with continued investigation but at the time of writing, Petrie's conclusion regarding the Hyksos' responsibility for the presence of the horse in Egypt is supported by the available evidence.

Trade most likely played a major role in bringing horses into Egypt. There were three major northern trade routes between Egypt and the Levant. The first is directly by sea. At least one Amorite city, Byblos, traded with Egypt for "a millennium and a half."²⁶¹ So well established was this sea-borne commerce that "one of the oldest Egyptian words for an ocean-going boat was  *Kpn.t.*²⁶² a "Byblos ship."²⁶³ The Amorites were a "horse culture." Both Avaris (on the Pelusiac) and Tell Heboua were sites on branches of the Nile easily accessible to the Eastern Mediterranean maritime trade routes especially from sources like Byblos. When Kamose attacked the Hyksos capital of Avaris (Tell el-Daba), he captured a vast number of ships bearing "all the fine products of Retenu."²⁶⁴ He listed some of the goods including, "gold, lapis-lazuli,

²⁵⁹ See Appendix 1 for a detailed discussion of the Buhen horse.

²⁶⁰ The Tell el-Kebir remains would appear to be the earliest, however the identification as *Equus caballus* is questioned, and so the Tell el-Daba remains are considered to be the earliest in this work. The Tell el-Daba finds are discussed in detail in Appendix 2.

²⁶¹ D. B. Redford (1992) *Egypt*, 96. M. Bietak (2010) "From Where Came the Hyksos and Where Did They Go?" in M. Mareé (ed.) (2010) *The Second Intermediate Period, Current Research, Future Prospects*, Leuven, 142. These outline the trade with Byblos extending at least back to the time of the Old Kingdom.

²⁶² Altägyptisches Wörterbuch V, 118, 3-6.

²⁶³ D. B. Redford (1992) *Egypt*, 36.

²⁶⁴ H. Smith. & A. Smith (1976) "A Reconsideration of the Kamose Texts," *Zeitschrift für ägyptische Sprache und Altertumskunde* 103, 60; L. Habachi (1972) *The Second Stela of Kamose and his Struggle against the Hyksos Ruler and his Capital*, Abhandlungen des Deutschen Archäologischen Instituts Kairo, Ägyptologische Reihe 8. Glückstadt. 37. Smith and Smith

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turquoise, honey” as well as precious woods and bronze weapons.²⁶⁵ “Retenu” (*Rtnw*) has been identified as Palestine/Canaan²⁶⁶ and the “princes of Retenu” was a common Egyptian designation for the Hyksos.²⁶⁷ If horses were valued and traded they may have entered Egypt by this route from Hyksos lands or from others accessible by sea.

The other two paths into and out of northern Egypt were by land. One route, the “Ways of Horus” hugs the coastline and then passes down the Pelusaic branch of the Nile, once again leading to Avaris (Tell el-Daba); and the other “collects traffic originating from South and North Arabia, Cis and Trans-Jordan and the southern portions of the Sinai Peninsula and funnels it into the heart of the upper Delta region by means... of the Wadi Tumilat”²⁶⁸ Here, Tell el-Maskhuta (Fig. 2.23) shows evidence of the presence of horses together with Tell el-Daba which could be reached by all three routes. On the other end, Canaan/Retenu “served as the main channel for Asiatic trade with the Delta”²⁶⁹ and horses were most certainly present there. If they were seen as advantageous in some way and fit for trade or as “gifts”²⁷⁰ they most certainly had long established pathways through which they could move into the Nile Valley.

Two-way trade existed between Byblos and Egypt in cedar and other products from Byblos and technology and engineering developments from Egypt.²⁷¹ A large body of evidence indicates the extent and volume of trade coming and going through these corridors. At Tell el-Maskhuta Redmount identified pottery that was imported “from

suggest there were three hundred ships. Habachi (note b) suggests that this is to be understood as plural: “hundreds.”

²⁶⁵ L. Habachi (1972) *Kamose*, 37.

²⁶⁶ E. Oren (1997) “The Hyksos Enigma-Introductory Overview,” in E. Oren (ed.) (1997) *Hyksos*, xxii; D. B. Redford (1992) *Egypt*, 82ff.

²⁶⁷ D. B. Redford (1992) *Egypt*, 102, also M. Bietak (1996) *Avaris*, 19. “Retennu.... is understood to be a very general term for the region of Syria-Palestine during the period of the Middle Kingdom.”

²⁶⁸ J. S. Holladay (1982) *Cities of the Delta, Part III. Tell el-Maskhuta*, Malibu.1.

²⁶⁹ E. Oren (1997) “Enigma,” in E. Oren (ed.) (1997) *Hyksos*, xxiii.

²⁷⁰ The Amarna Letters point to a tradition concerning the exchange of gifts between associated states, see W. L. Moran (1992) *The Amarna Letters*, Baltimore. Ten letters EA 2, 3, 7, 9, 15, 17, 19, 22, 34, and 37 make specific mention of horses as suitable gifts between Amenhotep III and Tušratta of Mitanni and the king of Alashiya. This was during a period when horses were common. It could be suggested that at an earlier period they would have constituted even more desirable presents. (6,7,12,18,38,42,45,51,106,110).

²⁷¹ D. B. Redford (1992) *Egypt*, 39-40.

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Cyprus, Palestine, Upper Egypt and possibly Syria.”²⁷² At Avaris evidence of contact with Aegean cultures is indicated by the presence of Kamares ware, a Middle Minoan gold pendant²⁷³ and an estimated “two million amphorae, broken and whole”²⁷⁴ which appear to have contained imported olive oil and wine. The size and variety of the commerce would suggest that if horses were available and a market existed for these faunal exotica, they would have been traded along these routes.

By the Middle Kingdom this two-way relationship with the Near East was even further developed and extended beyond the exchange of commodities to also include people with the arrival of foreign workers into Egypt, “bringing with them new techniques and preparing the way for a slow infiltration that would eventually result in ‘Asiatics’ gaining temporary control over the country.”²⁷⁵ This process continued throughout the Second Intermediate Period. In Bietak’s stratum H at Avaris (-d/2),²⁷⁶ around 1800 BCE, peoples from the Levant as seen in tomb scenes from Beni Hassan²⁷⁷ were employed by the Egyptians as soldiers, miners²⁷⁸ and sailors.²⁷⁹ They brought their culture with them, including their burial practices,²⁸⁰ their ceramic styles²⁸¹ their architecture²⁸² and aspects of their religion.²⁸³ It would not be unusual for them to bring a familiar animal with them and they are known to have introduced the wool-sheep to Egypt in the 13th Dynasty. Bietak suggests “the horse was also probably an occasional import at this time.”²⁸⁴ If this is the case horse numbers remained small. One can therefore conclude that they may have been considered a curiosity as they were

²⁷² C. A. Redmount (1995) “Ethnicity, Pottery and the Hyksos at Tell el-Maskhoutha in the Egyptian Delta,” *The Biblical Archaeologist* 58/4 (1995) 185.

²⁷³ M. Bietak (1991) *Egypt and Canaan*, 36.

²⁷⁴ M. Bietak (1996) *Avaris*, 20.

²⁷⁵ N. Grimal (1997) *A History of Ancient Egypt*, transl. I. Shaw, London, 165-166.

²⁷⁶ M. Bietak (1996) *Avaris* 10.

²⁷⁷ P. Newberry (1893) *Beni Hassan* Part 1, The Egypt Exploration Fund: Archaeological Survey of Egypt 1st Memoir, London. Tomb scenes shown in plates 16, 31 and 47 show people from Canaan being used as soldiers. M. Bietak (1996) indicates that structures found at Tell el-Daba dated from this time “reveal that the settlers were not Egyptians but people from the Levant,” because their houses resemble architectural characteristics of houses in northern Syria.

²⁷⁸ M. Bietak (1996) *Avaris* 14.

²⁷⁹ M. Bietak (1996) *Avaris* 20.

²⁸⁰ M. Bietak (1996) *Avaris* 41.

²⁸¹ M. Bietak (1996) *Avaris* 55ff.

²⁸² M. Bietak (1997) in E. Oren (ed.) (1997) *Hyksos*, 100ff.

²⁸³ M. Bietak (1996) *Avaris* 41.

²⁸⁴ M. Bietak (1996) *Avaris* 31.

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physically relatively small and the idea of using them with the chariot could not be realised, as this new technology had not yet spread through the Near East into Egypt.

Though the numbers are small there is an apparent increase in horse remains²⁸⁵ at Tell el-Daba and other Hyksos sites coinciding with the rise of the Hyksos 15th Dynasty, Bietak's c.1649 BCE.²⁸⁶ There is also significant growth of the settlement at Tell el-Daba itself. As this took place, there would have been an upsurge in trade and this, perhaps, explains the rise in the numbers of horses.

As the Hyksos approached the zenith of their hegemony in Egypt the horse in other areas of the Near East was becoming associated with the most exciting advance in military technology of the time: the light, spoke-wheeled horse-drawn war chariot. The chariot was introduced and disseminated, according to Bietak, "in the middle of the second millennium BCE."²⁸⁷ This development began in the Near East and gradually spread west and south to include Egypt. Much experimentation and experience was needed before the chariot became a vehicle suited to chariot warfare. But during the time of the Hyksos hegemony, this process was being undertaken in the Levant and Mesopotamia and a forward thinking Hyksos king would not have been averse to the importation of this new weapon and its power source: the horse.²⁸⁸ There is no suggestion in the sources that the Hyksos used chariot warfare, but the timing of the development of the chariot and the increase in the numbers of horse remains from the 15th Dynasty onwards suggests that this technology had begun to reach Egypt. During

²⁸⁵ This notion is based on the findings to date and acknowledges that there are many other factors that might be influential here, however, this is what seems to be the case at the time of writing.

²⁸⁶ M. Bietak (1984) "Problems of Middle Bronze Age Chronology: New Evidence from Egypt," in *American Journal of Archaeology* 88 (1984) 4, 473 and M. Bietak (1991) *Egypt and Canaan*, 43.

²⁸⁷ P. R. S. Moorey (1986) "The Emergence of the Light, Horse Drawn Chariot in the Near East c. 2000-1500," *World Archaeology* 18/2 (1986) 197.

²⁸⁸ M. Mellink (1995) "New Perspectives and Initiatives in the Hyksos Period," in M. Bietak (ed.) *Egypt and the Levant* 5, 85-89 in discussing the use of king-to-king gifts Mellink identifies a fragment of an obsidian perfume vessel bearing the cartouches of the Hyksos king Khyan and suggests this as perhaps representative of tokens exchanged in the establishment of a relationship between the Hittites and Egypt. This concept is supported by D. Redford (1992) *Egypt and Canaan*, 132, "one wonders whether the jar of Khyan found at Hattusas was not a diplomatic gift to a rising young Hittite ruler." Mellink goes further to suggest "The Old Hittite use of chariotry in warfare may have been one of the aspects which impressed Khyan when he became the first Egyptian king to approach an Anatolian king for contact and presumably alliance," 88, and Mellink points out that Khyan would have known about Hattushili's victories at Alalah, Hurrian Hassuwa and Urshu all of which involved the use of chariotry and perhaps have been inspired to seek to import these new weapons and their power sources, the horses.

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their hegemony, the Hyksos were responsible, directly or indirectly, for the introduction of chariot technology and the importation of the horses needed to power it.

2.4.3 EGYPT: THE ACQUISITION OF HORSES.

It is thus reasonable to confidently conclude that directly or indirectly, the Hyksos introduced horses to Egypt. Horse numbers increased in the 15th Dynasty but they remained rare and were most probably only the property of the elite if not the Hyksos kings themselves. The Egyptians acquired them from the Hyksos either peacefully, as traded commodities, perhaps as “gifts” or as trophies of war. Horses in small numbers seem to be present in the battle scenarios of both Kamose’s and Ahmose’s attacks on Hyksos installations.

When Kamose attacked the region of Nefer he declared in his famous stela, “The [...] of Per-Shak was gone before I had reached it, their horses having fled within”²⁸⁹ and later when he attacked Avaris, “...I took away the chariotry.”²⁹⁰ Although the attack on Avaris appears to have been primarily a naval one, it is quite clear from the text that the group in possession of the horses were the Hyksos. At Per Shak, it could be suggested that the horses were grazing outside the town and at Kamose’s approach were taken into the town only to become part of his army’s “*plunder* of their possessions”²⁹¹ as they were again following his attack on Avaris. However there is a complication with this interpretation of the word *htry* as “chariotry.”

In 1980 Schulman challenged Habachi’s 1972 interpretation²⁹² of *htry* as “chariotry.”²⁹³ Although Habachi acknowledged Schulman’s 1964 statement that the term should not be understood in its later Ramesside context²⁹⁴ he did use “chariotry” in his translation.

²⁸⁹ H. Smith & A. Smith (1976) *Reconsideration*, 60. See also D. B. Redford (1997) “Textual Sources for the Hyksos Period,” in E. Oren (ed.) (1997) 14 and J. B. Pritchard (1969) *Ancient Near Eastern Texts, Relating to the Old Testament*, Princeton, 233.

²⁹⁰ L. Habachi (1972) *The Second Stela of Kamose*, Glückstadt, 36.

²⁹¹ H. Smith & A. Smith (1976) *Reconsideration*, 60. The term “plunder” is Smith’s translation which Redford interprets quite differently, “and the border patrol...those who had spent the night (?) in the valley, their property... (remainder lost.) (1997)14.

²⁹² L. Habachi (1972) *The Second Stela of Kamose*, Glückstadt, 36, “I took away the chariotry.” Habachi in note “g” mentions that “*ʿt nt-ḥtri*” that is the first time it is found.

²⁹³ A. R. Schulman (1980) “Chariots, Chariotry and the Hyksos,” *JSSEA* 10/2 (1980)112.

²⁹⁴ A. R. Schulman (1964) *Military Rank, Title, Organisation in the Egyptian New Kingdom*, Münchner Ägyptologische Studien 6, Berlin, 14ff “believes that in the reign of Kamose the

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This has given rise to an interpretation or understanding of *htry* that Schulman countered in his 1980 work.²⁹⁵ He stated that “chariotry,” which could be understood as describing a sizable division of the Hyksos army that could be used in battle, did not exist at this early stage. Schulman stated that there is no evidence for the existence of chariots per se in Egypt at this time either archaeologically or in the texts relating to the period.²⁹⁶

One of the causes of this issue arises from what in 1916 Gardiner described as “the work of a very careless and ignorant copyist and abounds in smudges, alterations and ambiguities of all sorts,”²⁹⁷ that he points to as the main difficulty for translation. There is no horse or chariot determinative for “*t3 nt htry*” in the Second Stela and the determinative used in the First Stela indicates mammals in general.²⁹⁸

Schulman suggests that the term might more likely indicate “farm animals.”²⁹⁹ Gardiner³⁰⁰ suggests that “*htr*” here more probably refers to horses than to cattle.” This thesis would suggest that the use of the term does indicate the presence of horses. There were possibly some horses in Per Shak and in Avaris when they were attacked but there is no evidence of either chariots or chariotry as such. The existence of horses in Egypt at this time is based on Hyksos horse ownership attested by faunal material found in excavations undertaken subsequent to Schulman’s articles. Textual evidence also provides support as Gardiner says the Kamose text was “nearly contemporary with the events it records; in no case can it have been written more than fifty years later”³⁰¹

Evidence of the existence of chariots comes from the reign of Ahmose I from the inscriptions in the tomb of Ahmose son of Ibana which clearly state that, “Thus I used to accompany the Sovereign- life, prosperity, health! – on foot, following his excursions

word, attested in Ramesside contexts, had not yet acquired the technical connotation of chariotry.”

²⁹⁵ A. R. Schulman (1980) “Chariots, Chariotry and the Hyksos,” *JSSEA* 10 (1980) 2, 112.

²⁹⁶ A. R. Schulman (1980) “Chariots, Chariotry and the Hyksos,” *JSSEA* 10 (1980) 2, 112ff.

²⁹⁷ A. H. Gardiner (1916) “The Defeat of the Hyksos by Kamōse: The Carnarvon Tablet, No. 1” *JEA* 3 (1916) 2/3, 95-110.

²⁹⁸ A. H. Gardiner (1994) (Third Edition Revised) *Egyptian Grammar*, Oxford, 464, “F 27 cow’s skin, mammals generally.”

²⁹⁹ A. R. Schulman (1980) “Chariots, Chariotry and the Hyksos,” *JSSEA* 10 (1980) 2, 112-113.

³⁰⁰ A. H. Gardiner (1916) “The Defeat of the Hyksos by Kamōse: The Carnarvon Tablet, No. 1” *JEA* 3 (1916) 2/3, 107.

³⁰¹ A. H. Gardiner (1916) “The Defeat of the Hyksos by Kamōse: The Carnarvon Tablet, No. 1” *JEA* 3 (1916) 2/3, 97.

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in his chariot.”³⁰² This statement is accompanied by a chariot determinative. Horses and chariots were in existence in Egypt by the time of Ahmose I. There is still no evidence for the extensive use of “chariotry” as such. The extended use of the term “chariotry” has led to the use of the terms “chariot teams” in some subsequent scholarship.³⁰³ The use of this term in this way, which issues from Habachi’s translation implies a situation that the evidence does not support.

Horses and chariots seem to have been desirable booty and are mentioned twice in the Kamose stela. In the very next reign, as the campaign continued, Ahmose I is mentioned riding in a chariot. There is no mention of chariot warfare, simply of the king riding in a chariot.³⁰⁴ It appears that no one else has a chariot as Ahmose son of Ebana boasts of following the king “on foot,”³⁰⁵ the possession of a chariot seemingly being the exclusive privilege of the king himself. The Egyptians acquired horses from the Hyksos, with evidence suggesting warfare was one method for this. Later, some teams may have died in the attacks on Avaris as the remains of the five stallions found by Bietak in the citadel at Tell el-Daba could indicate. He suggests these haphazard burials may be consistent with “clearing operations” which may have preceded early 18th Dynasty building by Ahmose I of a residence and stronghold for the continued persecution of the Hyksos.³⁰⁶ Thus, there is evidence to support the case that by the 17th Dynasty the horse’s five hundred year journey from the Caucasus to the Nile Valley was complete and that one of the most significant groups in this process were the Hyksos.

After its extinction in the Pleistocene the horse re-entered Africa after a long journey from the steppes of the Ukraine. It passed through the Near East and spread down into Egypt in the 17th century BCE roughly coinciding with the pharaonic 15th Dynasty through a continuing series of trading relationships, population movements, technological innovations and confrontations. It came by sea and/or by land. The

³⁰² J. B. Pritchard (1969) *Ancient Near Eastern Texts*, 233.

³⁰³ H. Smith & A. Smith (1976) “Reconsideration of the Kamose Texts,” *Zeitschrift für ägyptische Sprache und Altertumskunde* 103, Berlin, 60 and W. Kelly Simpson (2003) *The Literature of Ancient Egypt* Yale, 348 and 349.

³⁰⁴ J. B. Pritchard (1969) *Ancient Near Eastern Texts*, 233. Pritchard, note 6, states that this was “the first use of the horse and chariot by the Egyptians.”

³⁰⁵ J. B. Pritchard (1969) *Ancient Near Eastern Texts*, 233.

³⁰⁶ M. Bietak (1997) “Avaris,” in E. Oren (ed.) (1997) *Hyksos*, 116.

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Hyksos and their progenitors were integral to this process and it was through their auspices that it finally came into Egyptian possession. At first it was to continue to be a rarity, but coupled with the light, horse-drawn chariot it was to enable a new imperial phase in Egyptian history and it would cement its own place in Egyptian life.

Note: A very interesting recent development may potentially influence the understanding of the arrival and use of the horse in Egypt. In January 2014 a Penn Museum team working in Abydos discovered the tomb of a previously unknown king, Woseribre Senebkay³⁰⁷ that they dated to 1650-1600BCE. In February of 2015 a forensic analysis of the skeleton³⁰⁸ suggested that the king died in battle. Of most interest to the current work are the indications on the body that “ muscle attachments on Senebkay’s femurs and pelvis indicate he spent a significant amount of his adult life as a horse rider.”³⁰⁹ Additionally “another king’s body discovered this year in a tomb close to that of Senebkay also shows evidence for horse riding.”³¹⁰

Since it is possible for these attachments to be caused by extensive riding of other equids it does not provide sufficient evidence for the riding of horses in Egypt at that time. However there is no evidence for other equids being ridden by Egyptian kings or for them riding equids of any kind at any time and very limited evidence for other individuals riding even later. Further investigation of this and subsequent discoveries should further clarify the issues associated with the arrival and use of the horse in Egypt.

³⁰⁷ <http://www.penn.museum/press-releases/1032-pharaoh-senebkay-discovery-josef-wegner.html>
Accessed 29/03/15.

³⁰⁸ Conducted by Dr. Josef Wegner of the Penn Museum.

³⁰⁹ <http://www.penn.museum/press-releases/1180-senebkay-forensic-evidence.html>
Accessed 29/03/15.

³¹⁰ <http://www.penn.museum/press-releases/1180-senebkay-forensic-evidence.html>
Accessed 29/03/15.

CHAPTER 3: CORPUS OF HORSE REMAINS IN THE ARCHAEOLOGICAL RECORD

*“ Somewhere in time’s own space
There must be some sweet pastured place
Where creeks sing on and tall trees grow
Some paradise where horses go,
For by the love that guides my pen
I know great horses live again.”³¹¹*

If an understanding of the physiology of the ancient Egyptian horse is to be achieved it is necessary to systematically examine as many of the extant faunal remains of this animal as possible. The material can be ordered chronologically, examined and analysed and an understanding can be reached. Therefore, this survey is organised as follows:

Section 3.1 is an examination of the collections of faunal remains of the horse in Egypt and Nubia on the basis of their estimated chronological age from the earliest to the latest over a period lasting from approximately 1750BCE to 350-600CE. The examination summarises the context of each find as well as the overall characteristics of each animal. The specific details and relevant measurements of the examined remains are compiled in Vol. 2, Table 3.1 (See also Appendix 3 for the complete corpus). The analysis of these and the summary comments of the examiners build up a general understanding of the nature of the animal in question.³¹²

Section 3.2 is an analysis of the findings relative to categories such as site, estimated dating, gender, age, withers height and legs.

³¹¹ S. Harrison quoted in K. Maffei (2007) *Horses*, New York, 266.

³¹² A. von den Driesch (1976) *A Guide to Measurement of Animal Bones from Archaeological Sites*. Peabody Museum Bulletin 1, Cambridge. This text has been invaluable for the use of the measurements included in the reports on horse bone finds in Egypt. It has become the standard for the criteria for the measurement of animal bones.

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In the third and final section of this chapter, 3.3, these findings are compared and assessed. Examination of the physical remains of *Equus caballus* recovered from the archaeological record, can yield information concerning the morphological characteristics of the Holocene horses in Egypt from their earliest appearance and possibly track changes in them over time. Additionally, earlier scholarly conclusions regarding these animals can be reviewed in light of new discoveries.

Instances of the physical (usually skeletal) remains of the horse in Egypt are rare. At the time of writing one hundred and forty-six sets of remains, from wide chronological and geographical ranges have been found. These finds vary from a few scattered bone collections, often in a poor state of preservation, to full skeletons. In three instances, the Buhen horse [2], a horse from Saqqara [15] and one from Deir el-Bahri [10] were found with some remaining tissue.³¹³ Unfortunately, of the complete or near complete skeletons, only a few have been properly examined. However, remains do exist in sufficient condition to give some indication of the morphological characteristics of the ancient Egyptian horse. The paucity of remains scientifically examined (or otherwise) should not be misconstrued to indicate this small group comprises the only members of the species present in ancient Egypt; they reflect a population the size of which remains as yet unknown. Still, it is the case that, as Ray Johnson concludes, there is an “... incredible range of information that can be gleaned from seemingly insignificant fragments.”³¹⁴

As expected, the dating of these remains is equivocal. In most cases, nevertheless, this work will confine itself to the dating conclusions attributed by the excavators of the various sites unless otherwise stated as these have been adhered to by the zooarchaeologists who have examined the remains.

³¹³ J. Clutton-Brock (1979) “The Buhen Horse” in W. B. Emery, H. S. Smith & A. Millard (eds.) (1979) *The Fortress of Buhen. The Archaeological Report*. London 191-195; J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” *ASAE* 26 (1926) 172-177. T. Chard (1937) “An Early Horse Skeleton” in *Journal of Heredity* 28 (1937) 317-319.

³¹⁴ W. R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramesside Battle-Narrative Tradition*, Dissertation: University of Chicago, 2.

3.1 CORPUS OF HORSE REMAINS IN THE ARCHAEOLOGICAL RECORD

This section discusses each instance of faunal remains of horses in Egypt and Nubia according to a chronology based on their estimated dating. Each instance is identified by site including a description of the remains themselves, an assessment of how many individuals (partial or complete) there are, their context and the significance of this set of remains to the overall understanding of the horse in Egypt and Nubia.

Vol.2, Table 3.1. The numbers enclosed in square brackets represent each instance of the excavated remains.

[1] TELL EL-DABA (BONE) (TABLE. 3.1)

A partial horse bone - “a crumbled femur (hind leg bone) of the horse ... in which only the depth of the head (of the bone) could be measured: 49mms.”³¹⁵ - found by Boessneck and von den Driesch³¹⁶ at Tell el-Daba together with the remains of cattle, sheep and pig in what appeared to be a foundation deposit, “F/I-i/22, aus dem Fundament des c-Hauses über der Krone der Palastmauer, H=5,12m. Str.c=MB II/A und ägyptische Mischkultur (13 Dyn. ca. 1750-1700 v. Chr.).”³¹⁷ This find gives no useful information on the overall physiology of the horse, but it does have significance in identifying the time period when the horse may have first entered Egypt as it places the animal in a confirmed Hyksos site at approximately 1750-1700 BCE.³¹⁸ It is also significant for Bietak to note that it is in this period when the settlement identified as “Canaanite” at Tell el-Daba shows evidence of the first importation of the wool-sheep

³¹⁵ J. Boessneck & A. von den Driesch (1992) “Tell el-Daba VII.” 25. “....ein zerbröckeltes Oberschenkelbein vom Pferd, an dem nur die Tiefe des Caput gemessen werden konnte: 49mm.” 25.

³¹⁶ J. Boessneck & A. von den Driesch (1992) *Tell el-Daba VII. Tiere und historische Umwelt in Nordest-Delta in 2. Jahrtausend v. Chr. anhand der Knochenfunde der Ausgrabungen. 1975-1986. Untersuchungen der Zweigstelle Kairo des Österreichischen Archäologischen Institutes* X. 25. “F/1 – i/22, aus dem Fundament des c-Hauses über der krone der Palastmauer, H=5,12m. Str. C=MBII/A und ägyptische Mischkultur (13 Dyn. ca. 1750-1700 v. Chr.).”

³¹⁷ J. Boessneck & A. von den Driesch (1992) *Tell el-Daba VII*, 25.

³¹⁸ The excavator concedes that, even in the presence of this bone, the proof of the presence of the horse in the 13th Dynasty is still open to question. J. Boessneck & A. von den Driesch, “*Tell el-Daba VII*, 24.

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and he suggests that the horse may have been imported at the same time.³¹⁹ If this is the case, it predates the previous earliest horse find at Buhen (See [2] below) by twenty-five or more years. This excludes the Tell el-Kebir horse.³²⁰ A deposit of fragmentary horse bones together with the remains of animals typically used for food could suggest that at this time, the horse, once dead, would have continued to be put to its most ancient use, as a food source. There is no evidence relating to other possible uses.

[2] BUHEN (ALMOST COMPLETE SKELETON) (TABLE. 3.1) (FIGS. 3.1 AND 3.2)

An almost complete skeleton was found by Emery during 1959-1960 at the Buhen fortress in Nubia. It was the oldest relatively complete (two thirds) horse skeleton in the Egyptian cultural context. This was a most significant discovery, as the “horse” remains from Tell el-Kebir,³²¹ in the absence of any supporting evidence, cannot be verified as those of a horse and the previously mentioned Tell el-Daba bone deposit [1] is so minimal. The Buhen horse appears to have died in situ and there is no evidence of ceremony or grave goods. It was found 0.5m under a layer of cinders and charred wood on the Middle Kingdom floor and under the New Kingdom masonry of the rebuilding of the fortress.³²² Emery dated it to the destruction of the fortress in c.1675 BCE.³²³ Emery’s conclusions concerning the dating of this find are unequivocal,³²⁴ but several

³¹⁹ M. Bietak (1996) *Avaris. The Capital of the Hyksos*, London, 31. Bietak also refers here to the examination conducted by Boessneck and von den Driesch.

³²⁰ In 1994 Dr A. Hassan of the EAO announced the finding of tombs near Tell el-Kebir in the northeast Delta containing the skeletons of two horses. He dated the find to approximately 1750 BCE, which would make these horses some of the earliest found in Egypt. However, no further information concerning them has ever been forthcoming and none can be obtained today. Scholars mentioned in references to these remains when asked, have no knowledge of them and Dr Hassan has not been contactable. Given the lack of supporting material, these remains appear to have been misidentified and should be regarded as those of donkeys. (See Appendix 2 for a complete discussion of these remains.)

³²¹ See note 10 above.

³²² W. B. Emery (1960) “A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen, 1958-59,” in *Kush* 8 (1960-61) 8.

³²³ W. B. Emery (1961) “A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen, 1958-59,” in *Kush* 8 (1960-61) 9.

³²⁴ W. B. Emery (1960) “A Preliminary Report” 9. Also D.M. Dixon (1979) “Introduction” in W. B. Emery, H. S. Smith & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*, London, 191. He reiterates the dating criteria of the horse and makes reference to a work then going to press where more information could be found. However this researcher cannot find any subsequent publication of this text. See also W. B. Emery, H. S. Smith & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*, London.

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scholars have cast some doubt (see Appendix 1, for a discussion of the dating of the remains of horse). There is, however, no doubt concerning the species of the animal as it has been categorically identified as a horse by the zooarchaeologist J. Clutton-Brock.³²⁵

The horse, its withers height approximately 150cm, was

“a male horse of about nineteen years of age at the time of its death...the horse may have been a gelding. ...quite an old animal.... it was a perfectly healthy individual.”³²⁶

Further:

“the Buhen skeleton is from an animal that was larger and more fine-limbed than the prehistoric horses of Western Europe, and that it belongs to the group of horses that is so well depicted in the art of ancient Egypt after the Eighteenth Dynasty. These horses have all the looks of the present day Arab breed.”³²⁷

Clutton-Brock assigns it to Bökönyi’s “eastern group” of “small relatively slender-limbed horses or ponies”³²⁸ and she concludes that the “Egyptian Buhen... Hittite and probably the later Mesopotamian horses all belong to the same group ... [which] closely resemble the modern Arab.”³²⁹ (For detailed measurements see Appendix 1). Clutton-

³²⁵ J. Clutton-Brock (1979) “The Buhen Horse,” in W. B. Emery (1979) *The Fortress of Buhen*.

³²⁶ J. Clutton-Brock (1979) “The Buhen Horse,” 192.

³²⁷ J. Clutton-Brock (1979) “The Buhen Horse,” 193.

³²⁸ Bökönyi, S. and Angel, J.L. (1968) *Mecklenburg Collection, Part I: Data on Iron Age Horses of Central and Eastern Europe* [Bökönyi] and *Human Skeletal Material from Slovenia* [Angel], Peabody Museum, Harvard University, Bulletin 25, Cambridge, 3ff. (This text is referred to by Clutton-Brock within the discussion of the Buhen horse, 1979, 193) Bökönyi, indicates that the “oriental horse type” is characterised as “small-bodied and fine boned horses [...] whose withers height was between 112 and 137cm,” 9. Also these horses were “thin-legged, slender-bodied,” 9.

³²⁹ J. Clutton-Brock (1974) “The Buhen Horse,” in *Journal of Archaeological Science* 1 (1974) 89-100. 97, makes mention of the effect of early castration on a young horse in that “when an animal is castrated the fusion of the epiphyses is delayed and the bone continues to grow for a greater length of time than it does in the normal male,” 193. This results in a taller animal and she refers to S. Bökönyi, (1968) *Data on Iron Age Horses*, 33. More recently this is supported by S. Olsen (2006) “Early Horse Domestication: Weighing the Evidence,” in *Horses and Humans* (2006) 85. However Prof. A. Dart (University of Sydney School of Veterinary Medicine) (personal communication March 5 2012) suggests the height of the animal would “more likely be a normal variation.” Given the variations of opinion by professionals in the field it would be best not to draw too much from the withers height especially considering the wide variation in the heights of male and female horses of the same breed in this century.

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Brock quotes Boessneck's opinion concerning the similarity of the Buhen horse and the later Theban (Deir el-Bahri) horse to the Hittite horses excavated from Osmankayasi, which is that they are nearly identical in size.³³⁰ This is not surprising given that the horse as a species made its way to Egypt through eastern Anatolia over a long period, however, there is no evidence to support more direct contact in this instance. There is also far too much individual variation within horses of the same breed to suggest that there could be another more complex explanation for this specimen's large size.

There is considerable wear on the teeth indicating that this animal was ridden or driven with a hard bit and as such was not a curiosity but a working animal.³³¹ This is the first evidence of a horse being used in this way in Egypt.

[3] TELL EL-DABA: GRAVE 9 (TEETH)(TABLE. 3.1)

Two upper jaw horse teeth were found at Tell el-Daba in a grave pit together with cattle bones. Unfortunately no other information concerning the burial is available. The teeth were examined by Boessneck, (M/12, Grave 9, area OSO of grid P3 or P4, and M/12, Planum 3, P3, P4 or M1).³³² Based on stratigraphical evidence both Boessneck and Bietak conclude that these teeth originate from the time of the early to middle Hyksos hegemony (Strata E/2, E/1),³³³ indicating a possible date of between 1630 and 1600 BCE. There is no indication of wear patterns on the teeth so no information about the use of the horse or its age can be obtained.

³³⁰ J. Boessneck (1970) "Ein altägyptisches Pferdeskelett," in *MDAIK* 26 (1970) 47. "Vergleicht man aber die Originalmaße der Extremitäten dieser Hethiterpferde mit denen des hier besprochenen altägyptischen Pferdes, ist man überrascht, festzustellen, daß sie praktisch gleichgroß sind." See W. Herre & M. Röhrs (1958) "Die Tierreste aus den Hethitergräbern von Osmanskayasi," in K. Bittel (ed.) (1958) *Bogazkoy- Hattusa II. Die Hethitischen Grabfunde von Osmanskayasi*, Berlin, 63 ff for a complete listing of the measurements of the horses found at the site.

³³¹ J. Clutton-Brock (1974) "The Buhen Horse," *JEA* 1, (1974) 93.

³³² J. Boessneck (1976) *Tell el-Daba III. Die Tierknochenfunde 1966-1969*, Vienna, 25.

³³³ J. Boessneck (1976) *Tell el-Daba III*, 25. (These teeth are from M/12 Grab 9. Str. E/2, E/1) Bietak is definite about the dating and Boessneck is of the opinion that they could have come from the same animal.

[4] TELL EL-DABA: GRAVE 4 (BONE) (TABLE. 3.1)

One part of a bone from a horse, the distal end of a metacarpus, was found in A/II-O/21, Grave 4, at Tell el-Daba, together with several cattle teeth. There were no grave goods which suggests that the remains were possibly settlement waste. This may again point to the horse being used as a food source once dead. These bones occurred in Strata E/1-D/3 and are dated to 1630-1600 BCE³³⁴ in the Second Intermediate Period.

[5] TELL EL-DABA: PIT 9 (ALMOST COMPLETE SKELETON) (TABLE 3.1) (FIG 3.3)

A horse skeleton was found at Tell el-Daba and examined by Driesch and Peters. It may constitute the oldest nearly complete Egyptian skeleton (if the Buhen horse and Tell el-Kebir remains are excluded because of the unconfirmed nature of the species identification at Tell el-Kebir and the debate over the dating of the Buhen specimen).³³⁵ It belonged to a medium sized, slim statured stallion with a “small nicely formed head” and it was 1.38m in height.³³⁶ It was found in a stratum (on the northern edge of a ruined wall) associated with the late Hyksos period (c.1600–1540 BCE) at H/III-q/16, Pit 9 lying on its left side and accompanied by a bone from a mule.³³⁷ The horse appears to have been 6-7 years of age at death and to have had a stocky skull and a slightly convex arched nose. The squares q and p/16-19 do not contain human remains though both human and horse skeletons occur in nearby squares s-t/18-19 and these are dated to the early 18th Dynasty. The depositional context of the horse at q/16 remains unclear³³⁸ and there is no indication of the usage of the horse either for traction or riding. Driesch and Peters date this individual to the late Second Intermediate Period. On the basis of

³³⁴ J. Boessneck & A. von den Driesch (1992) *Tell el-Daba VII, Tiere und historische Umwelt in Nordost-Delta in 2. Jahrtausend v. Chr. anhand der Knochenfunde der Ausgrabungen. 1975-1986*. Untersuchungen der Zweigstelle Kairo des Österreichischen Archäologischen Institutes X, Vienna, 25.

³³⁵ A. von den Driesch & J. Peters (2001) “Frühe Pferde- und Maultierskelette aus Avaris (Tell el-Daba), östliches Nildelta,” in M. Bietak (ed.) *Ägypten und Levante*, Vienna. 301-311. (See Appendix 2 for a discussion of the Tell el-Kebir horse.)

³³⁶ A. von den Driesch & J. Peters (2001) “Frühe Pferde,” 308. “Es gehörte einem mittelgroßen, mittelschlankwüchsigen Hengst von schätzungsweise 1,38 in Stockmaß. Das Tier besaß einen kleinen, schön geformten Kopf.”

³³⁷ A. von den Driesch & J. Peters (2001) “Frühe Pferde,” 301.

³³⁸ A. von den Driesch & J. Peters (2001) “Frühe Pferde,” 302-304.

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the stratigraphic dating of these bones, together with the others appearing at this site Avaris (Tell el-Daba) the Hyksos capital may have been a significant entrepôt in the transfer of the horse into Egypt and the Hyksos may have been the agents for this traffic.

[6] TELL EL-DABA (COMPLETE SKELETON) (TABLE 3.1) (FIG. 3.4)

The complete skeleton of a mare (L1428) constitutes the most recent set of horse remains uncovered in Egypt. It was discovered in excavations of the 2008 and 2009 seasons at Tell el-Daba in stratum c/2 in the context of the 15th Dynasty 1640-1532 BCE (E/1 and D/3) in an expansion phase of the palaces there.³³⁹ The horse has been deposited beneath a layer of ceramic fragments and it was interred by itself in a vestibule in front of a magazine and under a child's burial also dated to the 15th Dynasty (L1417). It's placement in front of a magazine is problematic and the excavator's interpretation that the owner of the palace placed great value on the horse - "Die besondere Position des Tieres im Vestibul des Magazintraktes kann als Hinweis aufgefasst werden, dass sie ihrem Besitzer- vermutlich war es der Inhaber des Palastes- besonders wertvoll war"³⁴⁰ - is not supported by the evidence available. Other than the remains there are no indications of any special treatment of the horse such as attempts at preservation or the inclusion of grave goods. The horse's age has been estimated as between five and ten years,³⁴¹ based on the absence of canine teeth and it's withers height at 1.38m. Again, there is no indication of the usages to which this animal was put.

³³⁹ M. Bietak & I. Forstner-Müller (2009) "Der Hyksos-Palast bei Tell El-Daba: Zweite und dritte Grabungskampagne (Frühling 2008 und Frühling 2009)," *Ägypten und Levante*, 19 (2009) 91-119 Vienna (98-100).

³⁴⁰ M. Bietak & I. Forstner-Müller (2009) "Der Hyksos-Palast bei Tell El-Daba" 98-100.

³⁴¹ M. Bietak & I. Forstner-Müller (2009) "Der Hyksos-Palast bei Tell El-Daba. Zweite und Dritte Grabungskampagne (Frühling 2008 und Frühling 2009)," *Ägypten und Levante*, 19 (2009) 91-119 Vienna, 98-100. I would like to thank Günter Karl Kunst (personal communication 5.3.2012) for his information and his photographs of this mare. Also, for his later communication (personal communication 24/8/2012) concerning the withers height of this animal.

[7] TELL HEBOUA (PARTIAL SKELETON) (TABLE 3.1(FIG. 3.5)

The partial skeleton of a horse was uncovered in a large building in the eastern part of Tell Heboua in the northern Sinai.³⁴² Chaix examined the remains and they were found to be generally complete but in poor condition (later wall building had damaged the remains). They are of a 5-8 year old animal with no evidence of canines and so probably female (though the pelvis is badly damaged) and Chaix interprets it as belonging to the “medium sized group.”³⁴³ Dating has been determined by its stratigraphic position to “between the end of the Second Intermediate Period and the very beginning of the New Kingdom.”³⁴⁴ This is further confirmed by Al-Ayedi who states that the horse was found (at what is now known as Tell Heboua II) in a structure dating to the Second Intermediate Period. Additionally, it appears to have been a burial accompanied by some ceremony or ritual in that it contained “many pieces of Tell el-Yahudiyah ware and a number of bronze arrowheads” and was sited in an area used for other burials³⁴⁵ and in what Chaix describes as a “palace.”

In 2006, Al Ayedi identified the building as a possible granary that was reused for the horse’s burial.³⁴⁶ The skeleton was found lying on its right side with its head facing west. Chaix summarises the morphology of the horse as, “a medium size animal, smaller than the horses from el-Kurru. It was characterised by a heavy head with large teeth and robust distal limbs (metapodials and first phalanges).³⁴⁷ It seems to belong rather to the ‘breviligne’ type than to the slender animals from the ‘longiligne’ type.”³⁴⁸

³⁴² M. Abd-el-Maksoud (1992) *Enquête archéologique sur la fin de la 2ème Période Intermediaire et le Nouvel Empire à l’extrémité orientale du Delta*. Thèse Université, Lille. L. Chaix cites Abd-el Maksoud (1992) in L. Chaix (2000) “An Hyksos Horse from Tell Heboua (Sinai. Egypt)” in H. Buitenhuis, M. Mashkour and A.M. Choyke (eds.) *Archaeozoology of the Near East IV: Proceedings of the Fourth International Symposium on the Archaeozoology of Southwestern Asia and Adjacent Areas*. 4B, 177- 88, Gronigen, 177.

³⁴³ L. Chaix (2000) “An Hyksos Horse from Tell Heboua,” 179.

³⁴⁴ L. Chaix (2000) “An Hyksos Horse from Tell Heboua,” 177.

³⁴⁵ A. Al-Ayedi (2006) “The Dwelling of the Lion: A New Fortress on the Ways of Horus,” in *ASAE* 80 (2006) 37.

³⁴⁶ A. Al-Ayedi (2006) “The Dwelling of the Lion” in *ASAE* 80 (2006) 37.

³⁴⁷ L. Chaix (2000) “An Hyksos Horse,” 181.

³⁴⁸ L. Chaix (2000) “An Hyksos Horse,” 181. Here Chaix refers to the two types or breeds of horse that existed in Egypt that were postulated by C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels.

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In this last statement, he refers to the hypothesis put forward by Rommelaere³⁴⁹ that around 2000 BCE two sub-species of horse proceeded to the Near East and the two can be readily identified as foundation stock for the Egyptian horse in Egyptian representations from the time of the 18th Dynasty. That hypothesis is based on an examination of the depictions of horses in tombs and artefacts but does not include any material relating to the faunal remains of the horse in Egypt that are extant and therefore must be viewed as unsubstantiated zoologically. (For a detailed discussion of this work see Appendix 4.)

[8] TELL EL-DABA (PITS 51, 52, 11) (SKELETONS) (TABLE. 3.1)

Five equid skeletons were found and examined by Driesch and Peters in Area H/III at Tell el-Daba, (the same archaeological excavation area as for the much earlier horse skeleton at H/III-q/16, Pit 9³⁵⁰) in Pits 51, 52, 23, 27 and 11. Three were horses and two were mules. The remains in Pit 23³⁵¹ could have been a horse, but the remains are in too poor a condition for any reliable determination of species. Those in Pit 27 are determined to be those of a mule.³⁵²

* Horse A (H/III-q/18E, Pit 51)

This was a partial skeleton of a horse (without the skull or pelvis) of a four year or older animal whose gender could not be established. It had a withers height of approximately 1.38 m.³⁵³

* Horse B (H/III-q/18E, Pit 52)

This was a partial skeleton of a horse lying on its left side with its head turned back to the right. It had clearly defined canines denoting a stallion with significant wear on the

³⁴⁹ C. Rommelaere (1991) *Les chevaux*, 34.

³⁵⁰ A. von den Driesch & J. Peters (2001) "Frühe Pferde," 308

³⁵¹ A. von den Driesch & J. Peters (2001) "Frühe Pferde" 305. The authors give a thorough explanation of the scientific basis for their determinations of the various species of equids examined.

³⁵² A. von den Driesch & J. Peters (2001) "Frühe Pferd," 305.

³⁵³ A. von den Driesch & J. Peters (2001) "Frühe Pferd," 305.

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teeth to indicate the individual was 13-15 years of age at death. The presence of the femur assisted in the determination of the withers height at 1.36 m.³⁵⁴

* Horse C (H/III-q/19, Pit 11)

This was an adult skeleton most probably a horse with a withers height of 1.34 m.³⁵⁵

These three horses were interred together with humans but without grave goods and in disarray. They appear as if they were thrown into the pits in the same time frame.³⁵⁶ Based on the context and stratigraphical evidence, Driesch and Peters postulate that these horses died in the early 18th Dynasty in the fall of Avaris, although there is no clear evidence of injuries because of the poorly preserved condition of the bones. The excavators have admitted the possibility of other factors such as an epidemic being involved.³⁵⁷ The condition of the burials, without offerings, in single and multiple graves and with the inclusion of incomplete human bodies as well as the dating, would tend to reinforce the interpretation of these burials as being from an army camp or associated with the fall of the Hyksos capital.³⁵⁸ Bietak goes further and interprets the deposit as the result of “clearing operations within the citadel that may have taken place before major building projects were started.”³⁵⁹

Based on the examinations, these horses are clearly small, a mixture of both young and older animals and they were held in conjunction with mules.³⁶⁰ There is no evidence from the bones indicating the use to which these horses were put.

³⁵⁴ A. von den Driesch & J. Peters (2001) “Frühe Pferd,” 305.

³⁵⁵ A. von den Driesch & J. Peters (2001) “Frühe Pferd,” 305.

³⁵⁶ M. Bietak & J. Dorner (1999) “Ausgrabungen Tell el-Daba- Ezbet Helmi, 8 Sept-30 Nov 1998” in *Jahreshefte des Österreichischen Archäologischen Institutes*, Vienna, 1999, 5-11.

³⁵⁷ A. von den Driesch & J. Peters (2001) “Frühe Pferd,” 310.

³⁵⁸ M. Bietak & J. Dorner (1998) “Ausgrabungen Tell el-Dab’a – ‘Ezbet Helmi.”, *Jahreshefte des Österreichischen Archäologischen Institutes* 68, 8 Sept–30 Nov 1998” 5-11.

³⁵⁹ M. Bietak (1997) “Avaris, Capital of the Hyksos Kingdom: New Results of Excavations,” in E. Oren (ed.) (1997) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, 116.

³⁶⁰ A. von den Driesch & J. Peters (2001) “Frühe Pferd,” 310.

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[9] SAI (ALMOST COMPLETE SKELETON) (TABLE 3.1) (FIG. 3.6)

In 1970, at Sai in the Sudan, the “grave” of a horse was excavated. The contents of Pit 128 have been confidently dated to the beginning of the New Kingdom,³⁶¹ based on its being one of a series of other pits dated stratigraphically and by context to this time. The horse had been deposited in a rectangular pit, on its left side with its head facing the east, front legs folded and its remaining back leg brought to the front, suggesting some care was taken in the deposition. There were no material goods associated with this burial. Chaix and Gratien clearly identify the remains as those of a horse. It was a 3-3.5 year old male of medium size that exhibited lengthened and robust metacarpals and metatarsals. The authors suggest that these features may in fact distinguish African horses from others and be an adaptation to the climate and conditions there.³⁶² This would give the horse longer limbs but it would still maintain its more gracile appearance. Its withers height is estimated as between 1.36m and 1.44 m.³⁶³ The apparent care in disposing of this animal suggests that it had a relatively high value or significance. There is no assessment of the condition or patterns of wear on the teeth so there can be no indication of the use of this horse.

[10] THEBES (DEIR EL BAHRI) (COMPLETE SKELETON, PARTIAL MUMMIFICATION) (TABLE 3.1) (FIG. 3.7)

The Theban horse, the oldest found at the time of its excavation was discovered by Lansing and Hayes in 1935.³⁶⁴ It was unusual in that it appeared to have been buried with some considerable care and/or ceremony. The complete horse had been wrapped in linen, but not mummified (at least artificially) buried in a coffin made from reused wood and was accompanied by a linen saddle, or more accurately, a saddlecloth.³⁶⁵ Its

³⁶¹ L. Chaix & B. Gratien (2002) “Un cheval du Nouvel Empire à Saï (Soudan),” in *Archéologie du Nil Moyen*, 9, 54-55.

³⁶² L. Chaix & B. Gratien (2002) “Un cheval,” 57.

³⁶³ L. Chaix & B. Gratien (2002) “Un cheval,” 57.

³⁶⁴ A. Lansing & W. C. Hayes (1937) “The Egyptian Expedition 1935-1936, the Museum’s Excavations at Thebes”, *Bulletin of the Metropolitan Museum of Art* 32, Supplement 4-39.

³⁶⁵ A. Lansing & W. C. Hayes (1937) “The Egyptian Expedition 1935-1936,” 10.

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dating appears unequivocal, Lansing and Hayes identify it as having been buried when Senenmut's tomb was being cut, it being covered with the chippings from this process and not actually interred in a grave.³⁶⁶ Charmingly, they speculate that such a carefully buried horse might have been the personal pet of Senenmut himself. The deposit was in the near vicinity of the rock-cut chamber that contained the mummies of Senenmut's parents and in very close association to five other burials including four humans and two coffins, one including the horse, the other a mummified ape. Dorman's examination of the excavation records confirmed that this burial, together with the others, lay beneath the accumulated chippings from Senenmut's tomb (TT 71).³⁶⁷ There is no evidence other than proximity and the trouble and expense involved in wrapping and burying the horse to associate it with the wealthy Senenmut. However, Dorman points out that Senenmut was the first to build in this area and as the horse was found under the chips from the excavation of his tomb it must at least be contemporaneous with Senenmut.³⁶⁸

In 1937, T. Chard oversaw an examination of the horse. While this work will not use the measurements obtained from this examination,³⁶⁹ the general comments made concerning the horse at the time might contribute further useful information to the current exercise.³⁷⁰ The group that assisted Chard in examining the horse included Brunton, Keimer, Derry, Boulgakow, Brown and Chubb. These individuals contributed their expertise in various areas. They concluded that the remains were of a small female horse approximately 5-6 years old at the time of death. Chubb, acknowledged in the report as the "osteology expert of the American Museum of Natural History"³⁷¹ is quoted as saying "the skull is long, ...and ...the measurements and description very

³⁶⁶ A. Lansing & W. C. Hayes (1937) "The Egyptian Expedition 1935-1936," 10.

³⁶⁷ P. Dorman (1988) *The Monuments of Senenmut. Problems in Historical Methodology*, Studies in Egyptology Series, London, 87.

³⁶⁸ P. Dorman (1991) *The Tombs of Senenmut, The Architecture and Decoration of Tombs 71 and 353*, New York, 22. "The topographical situation and impressive façade of Tomb 71 indicate that Senenmut was the first to build in this vicinity, reserving for himself one of the most desirable locations in the necropolis." Dorman goes on to mention that the tombs of Senimen (TT 252) and Amenhotep (TT 73) followed soon after. Among those who also followed was Tjanuni (TT 74) who had what appears to be remains of horses in his tomb together with several depictions of them on its walls.

Their work preceded modern criteria for examination and were superseded by more recent measurements obtained in 1969 by J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 43-47.

³⁷⁰ T. Chard (1937) "An Early Horse Skeleton," 317-319.

³⁷¹ T. Chard (1937) "An Early Horse Skeleton," 319.

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strongly suggest the Arab type.”³⁷² Further evidence of similarity is offered with the numbering of the lumbar vertebrae as 5, which is considered “the proper vertebrae formula.”³⁷³ In the years following the discovery of this horse, considerable advances were made in the methodologies used to measure animal bone remains. These apply to the degree and amount of measurement, especially in relation to the teeth and the comparison of the remains to such standardised criteria as the Kiesewalter and Vitt formulae.³⁷⁴

In 1969 Boessneck’s³⁷⁵ re-examination of the remains in the Cairo Museum called into question many of the earlier findings and it is these newer results which are preferred in this work.

The age of the horse is determined as between 5-6 years. However, there is some question concerning its gender; the pelvic characteristics would indicate a stallion or gelding, but because there is only a “hint” of canines this would incline the determination towards a mare.³⁷⁶ Further, the horse “... was substantially bigger than it seemed according to the first investigation. It had a living withers height between 1.40-1.45m.”³⁷⁷ This is slightly more than Chard’s estimate of approximately 1.3m or 50

³⁷² T. Chard (1937) “An Early Horse Skeleton,” 319.

³⁷³ T. Chard (1937) “An Early Horse Skeleton,” 319. Chubb is quoted here by Chard: “The details of this vertebrae formula are; cervical 7; ribbed 18; *lumbar* 5; sacrum 5; and tail 14 which latter according to Mr Chubb varies between 14 and 16; but in this skeleton it is 14, making a total number of vertebrae 49.” Later, Chard states that Chubb “said that the general appearance of the Egyptian skull was that of an Arabian.” In non-scholarly texts relating to the Arabian horse one feature said to be typical of the “perfect” Arabian horse is a back that is “short and strong.” H. Amirsadeghi (ed.) (2005) *The Arabian Horse*, London, 23, see also J. Forbis (1976) *The Classic Arabian Horse*, New York, 230, “five lumbar vertebrae instead of six.” 230. However, in more recent veterinary texts this is discounted. See J. Hedge & D. Wagoner (eds.) (2004) *Horse Conformation, structure, soundness and performance*, Guildford, Connecticut, 309. “Some people attribute the Arabian’s short back to a reduced number of lumbar vertebrae. But studies show that, like most domestic horses, the Arabian normally has 6 lumbar vertebrae.”

³⁷⁴ L. Kiesewalter (1888) *Skelettmessungen an Pferden als Beitrag zur theoretischen Beurteilungslehre des Pferdes*, (Dissertation) Leipzig. V. O. Vitt (1952) “Die Pferde der Kurgane von Pasyryk”, *Sovjetskaja Arch.* Moskau 16: 163-205. These were used to standardise the measurements of horse bone remains especially withers heights until the publication of A. von den Dreisch (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Cambridge, Mass.

³⁷⁵ J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 43-47.

³⁷⁶ T. Chard (1937) “An Early Horse Skeleton,” 317.

³⁷⁷ J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 44. “Das Pferd war beträchtlich größer, als es nach der ersten Untersuchung schien. Es hatte lebend eine Widerristhöhe zwischen 1,40-1,45m.”

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inches.³⁷⁸ Boessneck describes the animal as “slender” and similar to the horses from prehistoric and early historic Europe and corresponds in type to the horses in New Kingdom representations.³⁷⁹ He concludes that the Hittite horse from Osmankayasi and the Theban horse are virtually equal in size.³⁸⁰

This interpretation would also align this horse with the Buhen horse which, at 1.50m, is only 5 centimetres taller. The similarities in height suggest a correlation between them, as well as being generally descriptive of the Egyptian horses at this time. However, the evidence is far too sparse to support this as anything other than a theory. What is significant about the Theban horse is that it provides the first unequivocal evidence that the horse (at least this horse), was as highly valued a creature in death as in life and was interred with some ritual and within a definite cultural context.

[11] THEBES (TT 74) (EQUID BONES) (TABLE. 3.1)

Several disarticulated equid bones were discovered in the Theban tomb of Tjanuni, a soldier and scribe of Thutmose III who also served Amenhotep II and Thutmose IV.³⁸¹ There were no material goods associated with the remains. In find 1/33 some large skull fragments, half of a lower jaw and several long bones were excavated but the zooarchaeologist J. Boessneck was able to examine only photographs of them and was not able to positively classify them as those of a horse as opposed to a donkey.³⁸² The tomb contains representations of seven horses being brought forward by a servant.³⁸³ The identification of the bones as belonging to a horse was made by the excavators based on the association of the bones to these depictions in the tomb. The definitive

³⁷⁸ T. Chard (1937) “An Early Horse Skeleton,” 317.

³⁷⁹ J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 45. “Das Tier war schlankwüchsiger als die Pferde aus dem vor-und frühgeschichtlichen Europa im Durchschnitt. Es entspricht, wenn man die idealisierenden Übertreibungen außer acht läßt, dem Typ der auf zahlreichen Wandbildern des Neuen Reiches dargestellten Pferde.”

³⁸⁰ J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 47. “Vergleicht man aber die Originalmaße der Extremitäten dieser Hethiterpferde mit denen des hier besprochenen altägyptischen Pferdes, ist man überrascht, festzustellen, daß sie praktisch gleichgroß sind.” Here he makes reference to the following text, W. Herre & M. Röhrs (1958) “Die Tierreste aus den Hethitergräbern von Osmankayasi,” S. 63 f. in K. Bittel (1958) *u.a.: Bogazkoy – Hattusa II. Die Hethitischen Grabfunde von Osmankayasi*, 60-80, 71, Berlin.

³⁸¹ A. Brack & A. Brack (1977) *Das Grab des Tjanuni. Theben Nr. 74*, AV 19, Mainz am Rhein, 9. He also seems to have served two kings Amenhotep II and Thutmose IV.

³⁸² A. Brack & A. Brack (1977) *Das Grab des Tjanuni*, 65- Note 373.

³⁸³ A. Brack & A. Brack (1977) *Das Grab des Tjanuni*, 44.

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identification of the bones as those of a horse would be possible upon scientific examination of the remains. Unfortunately, the whereabouts or even continued existence of the bones is unknown at this time.³⁸⁴

The dating of the tomb to the time of Thutmose IV places it in a period when horses were in Egypt in increasing numbers³⁸⁵ and Tjanuni's rank as "commander of troops" *imy-r ms* (general)³⁸⁶ would introduce the possibility that he had at least something to do with the use of chariots as a tool of war. The bones could be those of a horse. Its inclusion in the tomb of such an official would indicate not only the level of prestige in which the animal was held but also the fact that officials of Tjanuni's rank had access to them.

[12] SOLEB (PARTIAL SKELETON) (TABLE 3.1)(FIG. 3.8)

The substantial yet incomplete skeleton of a horse was found near the remains of a dog in excavations undertaken at Soleb in Nubia in the context of a cemetery associated with a temple and town dating to the jubilee of Amenhotep III,³⁸⁷ together with six sets of human remains and some modest funerary material. Ducos examined the remains of the horse in T28.³⁸⁸ It was an incomplete skeleton of a horse lying on its right side with its head to the east and with many bones bearing evidence of breaks, bites and scratches. It was buried with some of its disarticulated bones replaced in approximately anatomically correct positions. The horse appears, based on the evidence, to have been attacked and killed by predators. Care seems to have been taken in interring the animal.

³⁸⁴ J. Peters (Insitutsvorstand und Direktor der Staatssammlung für Anthropologie und Paläoanatomie München. Abt. Paläoanatomie) personal communication. 15/8/2012: "Because of the depictions of horses in the tomb, the Bracks (as non-specialists, though) decided that the remains most likely pertained to a horse." Peters stated that Anton Brack died in 1993 and there is no present knowledge of the whereabouts of Annelies Brack. He also states that the Institute does not have any of Boessneck's notes relating to these bones and the Antiquity Service does not have the bones themselves.

³⁸⁵ There was at the least an increase in the number of horses in Egypt as a result of the military campaigns of Thutmose III and Amenhotep II. See Chapter 8 for a discussion of this material.

³⁸⁶ B. Porter & R. L. B. Moss (1994) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings*, 7 vols (2nd editions 1960-1981), Oxford. 1: 1, 144 "commander of soldiers" and A. Al-Ayedi (2006) *Index of Administrative, Religious and Military Titles of the New Kingdom*, Ismailia, 63-64 identifies him as a "general."

³⁸⁷ P. Ducos (1971) "Le cheval de Soleb", in M. Schiff-Giorgini (ed.) (1972) *Soleb II. Les nécropoles*. Florence, 80.

³⁸⁸ P. Ducos (1971) "Le cheval de Soleb," 261-264.

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Most of the horse was intact; the disarticulated parts of its damaged left side had been placed in the grave alongside the body when it was buried accompanied by parts of a red earth vase and a small scarab. Although it was poorly conserved, much of it remained in sufficiently good condition for measurements to be successfully carried out.³⁸⁹ The remains are those of a male horse of approximately 9 or 10 years of age³⁹⁰ having a withers height of 1.34-1.38m and 5 lumbar vertebrae.³⁹¹ Ducos describes it as of “average size” with a well-developed small skull and muzzle and short and rather sturdy legs.³⁹² Bökönyi, in 1993, challenged the withers height of this horse as calculated by Ducos based on his apparently incorrect use of the Kiesewalter indexes and suggested a revised height of 3-5cm smaller making it the “smallest of all known Egyptian horses” at approximately 1.32m³⁹³ which, in modern terms, would identify it as a pony.³⁹⁴ There is no indication of how the horse was used. The effort in disposing of this animal suggests that at this time horses (or at least this horse in its individual context) were held in high regard.

[13] TELL EL-BORG (COMPLETE SKELETON) (TABLE 3.1)(FIG. 3.9)

In 1998 at Tell el-Borg, in northern Sinai, the second fort on the “Ways of Horus” was identified by Hoffmeier as the “Dwelling of the Lion.”³⁹⁵ In the unfinished moat of the Ramesside period fort (Field, V, Area 2.)³⁹⁶ equid remains of one or two horses and two donkeys were found and S. Ikram³⁹⁷ supervised their examination. The skeletons were deposited on top of each other with their limbs tangled and their heads at varying angles. There were no ritual burial materials associated with them. Hoffmeier interprets

³⁸⁹ P. Ducos (1971) “Le cheval de Soleb,” 258 and 260.

³⁹⁰ P. Ducos (1971) “Le cheval de Soleb,” 258 and 260.

³⁹¹ P. Ducos (1971) “Le cheval de Soleb,” 265.

³⁹² P. Ducos (1971) “Le cheval de Soleb,” 265.

³⁹³ S. Bökönyi (1993) “Two Horse Skeletons from the Cemetery of Kurru, Northern Sudan,” in *Acta Archaeologica Academiae Scientiarum Hungaricae*, 45, 301-316. This reference occurs on 309. Bokonyi points out that Ducos used the incorrect measurements, the greatest lengths as opposed to the lateral dimensions, to approximate the withers height. This work will include both.

³⁹⁴ As it is under 1.40m which is the “cut-off” for the delineation between horse and pony today.

³⁹⁵ J. K. Hoffmeier (2006) “Recent Excavations on the ‘Ways of Horus’; The 2005 and 2006 Season at Tell el-Borg,” in *ASAE* 80 (2006) 257-276.

³⁹⁶ J. K. Hoffmeier (2006) “Recent Excavations,” 260.

³⁹⁷ S. Ikram (in preparation) “The Equids of Tell Borg” in *Tell Borg II*, J. K. Hoffmeier (ed.).

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the incomplete and abandoned moat as a “garbage dump for the dead horses and donkeys.”³⁹⁸

There were circular horse bits (bridle parts) found in the fort (the north-east corner, square Ua) and a small stele depicting Resheph/Astarte on horseback with an epithet mentioning *ihw* (stable) and small chariot trappings. The remains of harnesses and chariots themselves indicate the existence of stables which tell us about the usage of horses here. These facts, alongside images of divinities associated with horses, all occurring within such a concentration, reinforces the identification of the remains as those of horses.³⁹⁹

The remains were poorly preserved, but in Square A, of the four tangled equids present, one was identified with some confidence as a horse.⁴⁰⁰ It was probably female - a determination that rests upon the absence of identifiable canines, the pelvic vertebrae being either absent or badly preserved. Its age at death was five years to mature, the teeth being “well worn and eroded.”⁴⁰¹ Only one long bone, the humerus, could provide information regarding withers height for this animal, giving a tentative finding of 1.50m.

This type of deposition of remains could indicate a change in the status of horses that would not be unexpected. By the Ramesside period, Egypt was typically using large chariot divisions as major contingents in its armies as attested by the temple reliefs of such battles as Kadesh. This would have necessitated a large number of horses to be available domestically and, as such, the relative value of any individual horse would have been reduced. This is in great contrast to the apparent rarity, and thus possibly higher value, of horses in the early 18th Dynasty.

[14] TELL EL-DABA (BONES) (TABLE. 3.1)

Ten disarticulated horse bones were found at Tell el-Daba in a rubbish pit (A/II-O/19) dating from the Ramesside period. Unfortunately, they were in very poor condition and

³⁹⁸ J. K. Hoffmeier (2006) “Recent Excavations,” 261.

³⁹⁹ J. K. Hoffmeier (2006) “Recent Excavations,” 261.

⁴⁰⁰ S. Ikram *The Equids of Tell el-Borg*, In preparation.

⁴⁰¹ S. Ikram *The Equids of Tell el-Borg*, In preparation.

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could not be measured.⁴⁰² This form of disposal of the horses could indicate that the change in the numbers available, and their relative value, had occurred by this time. The nature of the depositions at Tell el-Borg, dating to approximately the same time, and the great chariot divisions depicted in Ramesside reliefs on temple walls, all indicate that by this period, horses were common in Egypt.

[15] SAQQARA (COMPLETE SKELETON-PART SKELETONS) (TABLE. 3.1) (FIG 3.10)

The remains of three horses were found at Saqqara in an Old Kingdom mastaba⁴⁰³ within intrusive burials from a later period. One complete skeleton was buried in a large painted coffin, one skeleton was decapitated and laid on a mat and the third animal was indicated only by the presence of a single hoof.⁴⁰⁴ There appeared to have been grave goods associated with these burials comprising food offerings of joints of meat.⁴⁰⁵ The complete horse in the coffin was wrapped in a cloth and tied with papyrus ropes and the excavators indicate that it had been mummified and was in good condition. Quibell and Olver date the find to between the 20th Dynasty and the Ptolemaic period.⁴⁰⁶

They observed that “this was the mummy of a somewhat powerfully built, moderately deep-chested horse, with a strongly developed bony frame and large head ...[and that] the bones of the limbs were of fine quality.”⁴⁰⁷ It was an 18-year-old male, 14 hands 1½ inches (1.4605m) and its hoof was not typical of an Arab horse. The authors make comparisons with modern Arabs and consider that it was not of the Arab type. They concluded that “this horse most closely approached ... the Barb or North African type.”⁴⁰⁸

⁴⁰² J. Boessneck & A. von den Dreisch (1992) *Tell el-Daba. VII*, 25.

⁴⁰³ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” in *ASAE* 26, 172-177.

⁴⁰⁴ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” 172.

⁴⁰⁵ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” 172. These included “bones from offerings of food, consisting of three joints of veal, ribs, foot and shoulder – as if for a human being.”

⁴⁰⁶ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” 173.

⁴⁰⁷ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” 174.

⁴⁰⁸ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” 174.

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The most complete horse of the three appears to have been interred at the same time as four wooden coffins that lay beneath its coffin, with food offerings at the east end of the coffin “as if for a human being.”⁴⁰⁹ Much care and possible ritual activity seem to have been applied to this animal, perhaps indicating its importance to those involved in its interment, and yet the wide dating range for the burial makes understanding its significance problematic. There is no indication, discernable from the remains, of the use to which the animal was put.

[16] HILLAT EL-ARAB (BONES) (TABLE. 3.1)

Horse bones were found (ARA7, chamber B)⁴¹⁰ at Hillat el-Arab in the Sudan, in a necropolis dating from 1120 to 340 BCE.⁴¹¹ They belong to a single individual buried in its entirety. It was 17 to 18 months old and was approximately 1.47m at the withers. It was a large animal with long and slender leg bones. There were two bones found in another chamber that could indicate only the presence of an adult horse.⁴¹²

These bones were found in graves affiliated with human burials and these tombs also contained the remains of cattle and dogs. Chaix points out that such animals were typically ritually slaughtered in funeral ceremonies of the Napatan period.⁴¹³ Hillat el-Arab is a burial site of the wealthy, not royalty, which suggests that horses were valued highly enough at least as burial inclusions in society at the time, but it also shows that they were common enough, that is, not too valuable, to be included in such activities. This is further supported by the fact that this was the burial of a young animal and not one that was old and past its prime.

[17A, B] KURRU (PARTIAL SKELETONS) (TABLE. 3.1) (FIG. 3.11)

In 1919, 24 incomplete horse skeletons were found in graves in one of the royal cemeteries of Kush at Kurru in northern Sudan which Reisner dated to between 701 and

⁴⁰⁹ J. E. Quibell & A. Olver (1926) “An Ancient Egyptian Horse,” 172.

⁴¹⁰ L. Chaix (2006) “The Animal Remains,” in I. Vincentelli (2006) *Hillat el-Arab. The Joint Sudanese-Italian Expedition in the Napatan Region, Sudan*, Sudan Archaeological research Society, 15, Oxford, 186.

⁴¹¹ L. Chaix (2000) “An Hyksos Horse from Tell Heboua,” 181.

⁴¹² L. Chaix (2006) “The Animal Remains,” 188.

⁴¹³ L. Chaix (2006) “The Animal Remains,” 189.

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690 BCE⁴¹⁴ and two of them, from graves 211 [17b] and 212 [17a] (next to each other), were examined by Bökönyi in 1993.⁴¹⁵ The bones were not fully complete and some of the long bones of the horse in Grave 212 were missing. Many of the bones of the two animals were mixed and there was much damage caused by tomb robbers. Nonetheless, based on the fact that the bones of the horses were a different colour, Bökönyi was able to separate and identify the individuals.⁴¹⁶ The leg bones were long and their “shafts were rather slender ... with strong muscle insertion places at their ends. The bones of the feet were large on both fore and hind limbs and the hoof bones were conspicuously wide and flat.”⁴¹⁷ Bökönyi concluded that (though the incisors are missing), they were both adult (5 years +) and one was adult-mature (10 years +). Based on the existence of one well-developed canine tooth, Bökönyi identified one as a stallion and noted that their stature was similar, with well-balanced metapodials that were not exceptionally long or slender. He identified the second horse to be a stallion also, as the horses were similar in size. Both were large, the horse in Grave 211 [7b] had a withers height of 152.29m and the one in Grave 212 [17a], was 155.33m.⁴¹⁸

He considered them to have been an ideal size and composition for a chariot team as they were “... well built, large horses, they could easily pull a royal chariot with the king and its driver at a high speed or carry the weight of any rider while maintaining a great velocity.”⁴¹⁹ Interestingly, he attributes the size of these horses, which he indicates would have been too large to pull the chariot of Tutankhamun, to “be the result of conscious breeding.”⁴²⁰ Overall, he describes them as large with very slender limbs, wide flat hooves and much larger than the “average oriental horses of their time.”⁴²¹

⁴¹⁴ G. A. Reisner (1919) “Discovery of the Tombs of the Egyptian XXVth Dynasty at El-Kurruw in Dongola Province”, *Sudan Notes and Records* II, Part 4 Boston, 237-254.

⁴¹⁵ S. Bökönyi (1993) “Two Horse Skeletons,” 302-316.

⁴¹⁶ S. Bökönyi (1993) “Two Horse Skeletons,” 302.

⁴¹⁷ S. Bökönyi (1993) “Two Horse Skeletons,” 303.

⁴¹⁸ S. Bökönyi (1993) “Two Horse Skeletons,” 305-306. Bökönyi discusses the 3cm variations in the heights of both horses explaining the difficulties experienced because of the bones missing in horse 212 but points out the physical similarity of both horses. Horse 211 shows a variation between its fore and hind limbs of 4cm indicating that it was overgrown in its croup.

⁴¹⁹ S. Bökönyi (1993) “Two Horse Skeletons,” 309.

⁴²⁰ S. Bökönyi (1993) “Two Horse Skeletons,” 309. He refers to the study by M. A. Littauer & J. H. Crowel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Tutankhamun’s Tomb Series, 8, Oxford, 70ff.

⁴²¹ S. Bökönyi (1993) “Two Horse Skeletons,” 307.

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Dunham, Bökönyi and Mallory-Greenough attribute these two horses to King Shebitku based on faience cartouches found in each row of burials.⁴²² Gold and silver beads, silver Hathor heads, bronze ball beads and faience Udjat eyes were also found. Robber damage to the skulls has made pole-axing as a cause of death undeterminable. The horses appear to have been deliberately buried with their heads orientated to the north east in a supported upright posture and side-by-side as a team, but without harnesses. It is unclear if the significance of these burials was as accompaniment for the kings or other reasons. As they are buried in a group some distance from the royal graves, their function will remain unknown, although we can comfortably conclude that they appear to have been considered valuable and of enough significance to be interred in this fashion.

[18] MEROË (COMPLETE SKELETON) (TABLE. 3.1)

The complete skeleton of a horse was found and dated to the mid 7th century BCE at the south cemetery at Meroë.⁴²³ Mallory-Greenough explains:

“ The lone burial in the south cemetery at Meroë is not of the same type although it has been lumped with the Napatan horses. This grave contained the complete skeleton of a small, young horse that was placed on its side in a pit burial with rounded ends. No artefacts were found. It may be a beloved pet that died early and was interred by its owner.”⁴²⁴

The total of Meroitic horse burials, including the above, is four and only one of them (the pit burial) could be identified as a stallion.⁴²⁵

⁴²² D. Dunham (1950) *The Royal Cemeteries of Kush I, El-Kurru*, Boston, 110-117. L. Mallory-Greenough (2005) “The Horse Burials of Nubia,” in *Journal of the Society for the Study of Egyptian Antiquities*, 32 (2005)106 and Bökönyi (1993) “Two Horse Skeletons” 302.

⁴²³ D. Dunham (1963) *The Royal Cemeteries of Kush 5, The West and South Cemeteries at Meroë*, Museum of Fine Arts, Boston 441 (S 193) Figs 239B, 443.B and S193. “Intact skeleton of a small (young?) horse on the left side, head west. No objects. Note: suggestive of the horse graves of the time of Piankhy and El-Kurru,” 441.

⁴²⁴ L. Mallory-Greenough (2005) “The Horse Burials of Nubia,” *JSSEA* 32 (2005) 116, Note 17.

⁴²⁵ L. Mallory-Greenough (2005) “The Horse Burials of Nubia” 108.

[19] BALLANA & QUSTAL (COMPLETE SKELETONS) (TABLE. 3.1)

In 1938, horse burials were excavated at the much later dated sites of Ballana and Qustul in Lower Nubia.⁴²⁶ Emery uncovered a total of 122 tombs at Ballana and 61 at Qustul, under large tumuli that contained royal burials of the Ballana culture of 350–600CE in which the individuals had been interred together with horses, donkeys, camels and dogs. Emery recorded the presence of these animals but undertook no further investigation or examination of the remains.⁴²⁷

Forty-two sets of horse remains were located at Qustal and ten sets at Ballana in the forecourts and ramps of the tombs. The animals wore their harnesses and trimmings and it appears that they were taken into the tomb and killed. Artefacts contained in these tombs included bronze bells, bridles with silver or bronze ornaments, silver chains and bits of iron and silver. Mallory-Greenough cites as evidence for their deliberate sacrifice the fact that one of the animals has a head injury that perfectly matches an axe head found near it.⁴²⁸ She interprets these burials as the horses being intended to provide appropriate service for the kings in the afterlife.

At Qustal five other burials are not as defined. The 41 horses (and 11 donkeys) contained in them were placed en masse in pits either dug into the mounds or near them and the animals are often not complete. There are saddles and saddle blankets included in these burials. Mallory-Greenough interprets this as evidence of either a change in the level of expenditure on burials or the introduction of Christianity, which would have curtailed rituals associated with earlier forms of religious practice.⁴²⁹

⁴²⁶ W. B. Emery & L. P. Kirwan (1938) *The Royal Tombs of Ballana and Qustul. Mission Archéologique de Nubie. 1929-1934*, 1, Service des Antiquités de L'Égypte, Cairo.

⁴²⁷ The main reason for this discrepancy is the changing nature of archaeological methodology. In the period up to the 1970's and even later in some situations, bone remains, especially those other than human have often had the scantiest examination and haphazard preservation. Modern methodologies excavate, examine and preserve even the tiniest of material remains. In the past many finds of significance did not attract the attention of excavators as their priorities were different. Today, everything is significant, hence the increasing number of horse finds that are being made and then given detailed examination.

⁴²⁸ L. Mallory-Greenough (2005) "The Horse Burials of Nubia," 107.

⁴²⁹ L. Mallory-Greenough (2005) "The Horse Burials of Nubia," 107. See also Table 6-03. Pit Burials. 114.

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Again, the inclusion of horses dispatched together with harnesses and trappings indicate that they were seen as suitably appropriate in the burials of kings and chieftains, yet were not so rare or too valuable to be included in this practice.

[20] FIRKA (ALMOST COMPLETE SKELETON) (TABLE. 3.1)

One almost complete horse skeleton was found in the Post Meriotic (5th century CE) site at Firka⁴³⁰ in tomb A11 that also contained eight humans, four male and four female. The horse was small, at twelve hands (1.22m) and buried at the base of the stairway into the tomb. The cause of death could not be identified because of the fragility of the bones.⁴³¹ It was interred with a bit, noseband, harness buckles, pins, bronze bells and girth rings and broken ceramics. The bit, with a curb chain attached was similar to those found at Qustal and Gammal.⁴³²

[21] GAMMAL (TWO SKELETONS) (TABLE.3.1)

One horse skeleton was found in Mound Y at Gammal⁴³³ in burial Y1 in the shaft of the tomb with the bones of a camel beneath it. No apparent cause of death was reported by Dunham. The horse was associated directly with an iron bit, bronze bells, the remains of a pad-saddle and some string trappings. There was also a pit burial at the site containing one horse skeleton (Gam J4/J5).⁴³⁴

⁴³⁰ L. P. Kirwan (1939) *The Oxford University Excavations at Firka*, London, 3-4. Kirwan dates the tomb to the 5th century based on the fact that: "An amphora in the intact Room 1 of Tomb A.12 was inscribed with graffiti assignable [...] to about the 5th century A.D. and this seems to be the central date for the tombs of Cemetery A which lie between the 4th Century and the 6th Centuries." Xiii.

⁴³¹ L. P. Kirwan (1939) *Firka* xiii states "the wound in the skull of Horse C in A.11 seems to have been inflicted by an axe or some such weapon and was clearly the cause of death." He refers to A. M. El-Batrawi (1935) "Report on the Human Remains" *Archaeological Survey of Nubia*, 138, 1929-1934, (this could not be accessed at the time of writing.) On page 3, Kirwan states: "The bones of the Camel B and the Horse C were extremely fragile owing to the damp and it was impossible to be certain of the cause of death."

⁴³² L. P. Kirwan (1939) *Firka*, 32.

⁴³³ O. Bates & D. Dunham (1927) "Excavations at Gammal," in: E.A. Hooton and N.I. Bates (eds.), *Varia Africana* 4, Harvard African Studies vol. 8, Cambridge, 89, pl 45.

⁴³⁴ O. Bates & D. Dunham (1927) "Gammal" 84 pl 44. There were two pits, J4 & 5 "Each contained bones of a horse, one animal between two pits." 84. There were bronze bells with iron clappers associated with the bones.

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[22] GIZA (TEETH AND BONES) (TABLE. 3.1)

In 1978, Kokabi reported the finding of several teeth and bones from a horse (and other species) in an Old Kingdom site in the area of the pyramids at Giza to the south of the pyramid of Menkaure.⁴³⁵ The site was occupied throughout a period stretching from the First Dynasty to the Fourth Dynasty. On the basis that horses did not appear in Egypt until much later, Kokabi has identified the bones as coming from a much later period, (however there is no indication of what period that might be and no further examination of the bones was performed other than to identify them positively as horse). This set of remains has been excluded from much of the analysis because of the lack of dating.

These, then, are the remains of horses discovered to date.

3.2. ANALYSIS OF FINDINGS

Unfortunately, whilst there are in excess of 146 identified instances of remains of horse discovered in Egypt and Nubia, very few have been systematically examined.

The remains cited here, in relation to location, dating, gender, age, withers height and legs, range chronologically from 1700 BCE to approximately 600 CE. Where possible, the analysis includes all the information, but the main concentration will be on the sets of remains that fall within the area covered in the thesis, that is, the Seventeenth Dynasty to the early Twentieth Dynasty.

Ref No.	Approx. Date	Period	Egypt	Sudan/Nubia	Remains	MNI
4.1. [1]	1750-1700BC	Second Intermediate Period	Tell el-Daba		Femoral head	1
4.1. [2]	1675			Buhen	Skeleton	1
4.1. [3]	1640-1600 Early to middle Hyksos		Tell el-Daba		Teeth	1
4.1. [4]	1630-1600		Tell el-		Distal end of	1

⁴³⁵ M. Kokabi (1979) "Tierknochenfunde aus Giseh/Ägypten." in *Annalen des Naturhistorischen Museums*, 83 (1979) Vienna, 519.

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Ref No.	Approx. Date	Period	Egypt	Sudan/Nubia	Remains	MNI
		New Kingdom	Daba		metacarpus.	
4.1. [5]	1640-1532		Tell el-Daba		Skeleton	1
4.1. [6]	1640-1532		Tell el-Daba		Skeleton	1
4.1. [7]	1550		Tell Heboua		Skeleton	1
4.1. [8a] [8b] [8c]	1532-1512		Tell el-Daba		Skeletons and mixed bones.	3
4.1. [9]	1500			Sai	Skeleton	1
4.1. [10]	1494-1483		Deir el-Bahri		Skeleton	1
4.1. [11]	1453-1419		Thebes (Tjanuni)		Skull fragments	1
4.1. [12]	1408-1372			Soleb	Skeleton	1
4.1. [13]	1300	Third Intermediate Period	Tell el-Borg		Skeleton (s)	1 (2)
4.1. [14]	1307-1196		Tell el-Daba		Bones	1
4.1. [15]	1300-1200		Saqqara		1 skeleton 2 partial	3
4.1. [16]	1120-340			Hillat el-Arab	Skeleton and bones	2
4.1. [17a] [17b]	700-690			Kurru	Skeletons	24
4.1. [18]	300BCE-350CE			Meroe	Bones	4
4.1. [19]	350-600CE			Ballana/ Qustal	Skeletons	93
4.1. [20]	350-600CE			Firka	Skeletons	1
4.1. [21]	350-600CE			Gammai	Skeletons	2
4.1. [22]	Old Kingdom	Late Period	Giza		Bones and teeth	1
					Total	146

Table. 3.2. Overview: Physical Remains of Horses in Egypt and Nubia.

3.2.1 SITES

Table. 3.2 above summarises the sites where horse remains have been found. These sites range geographically from the Sinai and the Eastern Delta in the north, to the Sixth Cataract in Upper Nubia in the south. All occur in close proximity to the Nile. Of the twenty-two instances of horses, thirteen fall in Egypt (and the Delta and Sinai) and nine in either Lower or Upper Nubia. The largest number of remains (one hundred and twenty-nine) occurs in Nubia at later dates and the lowest (seventeen) occur in Egypt at earlier dated sites. A large number of finds – 60% of all the sites in Egypt/Delta and Sinai - occur at Tell el-Daba (Avaris) which was the Hyksos capital in Egypt, and the majority of these fall within the first two hundred years of horse finds in these areas. This supports the interpretation that the Hyksos introduced the horse to Egypt and that

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there were at least some horses existing at that site for almost two hundred years. Tell el-Daba's ready access to both maritime and land based trade routes would have facilitated their arrival there.

The sites where horses have been found may also reflect the political situation in Egypt in this period. Tell el-Daba (Avaris) was a polity at some odds with the Egyptians at Thebes, so perhaps the possession of the horse was restricted to the Hyksos themselves, kept for its military advantage, as the "engine" behind the latest in military technology, the light spoke-wheeled chariot. The apparent anomalous appearance of the Buhen horse, so far to the south, might be explained not by possible incorrect dating of the remains, but by its involvement in the practice of the exchange of gifts between allies of the Hyksos to the south of Thebes.⁴³⁶ (See Appendix 1 for a full discussion of the Buhen horse). The locations of horse remains (Giza excepted) most likely reflect not only the spread of the horse throughout Upper and Lower Egypt over time but the suitability of various environments to keeping horses, the level of access to horses and a reflection of the value they represented in the various areas and time periods.

Table 3.2 above (see also Vol. 2) would indicate that horses were extremely rare in Egypt until at least the 19th Dynasty when they became much more prevalent. However, there must be some consideration given to the existence of bias in the figures leading to this interpretation. Firstly, no archaeological excavation has ever been conducted to deliberately seek horse remains; their discovery has always been incidental to excavation. As such, they have not been given a high priority and have, in some cases, been disregarded. Additionally, horse remains are difficult to separate from other equid remains and without trained examiners many may have been misidentified. Thirdly, the age and context of the remains may have resulted in the deterioration or disappearance of many of them, even if they had not been used as food sources or disposed of in other

⁴³⁶ The recent discovery of the tomb of king Senebkay dated to the Thirteenth dynasty containing the skeleton of the king showing muscle attachments possibly from consistent riding of horses may indicate a change to these ideas however not enough material is as yet available for much more than preliminary speculation. No horse remains were found in the tomb. See "New Forensic Evidence Confirms Violent Death of Pharaoh Senebkay" Penn Museum <http://www.penn.museum/press-releases/1180-senebkay-forensic-evidence.html> accessed 29/03/15.

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ways. Finally, most horses in Egypt would have been kept in rural settings. Excavations necessarily concentrate on settlement areas, and so it is possible that much evidence will remain undiscovered. The greatest numbers are found in sites where horses were used in the burial contexts of royalty and the elite. Here, care has been taken to preserve them so they may serve their masters in the afterlife. These factors provide possible reasons as to why horse remains do not occur in greater numbers earlier in history, but they do not provide any evidence to suggest that horses were indeed rare at this time.

3.2.2 DATING ⁴³⁷ (GENERAL)

The earliest example of horse remains occurs at Tell el-Daba [1] (a femoral bone), whilst the earliest whole or nearly complete skeleton was found at Buhen [2].⁴³⁸ The latest instances included in this work, more than two thousand years later, were excavated from the large cemeteries at Ballana [19] and Qustal [19] that Emery dated to between 350 and 600CE as well as the smaller Post Meriotic sites of Firka [20] and Gammai [21].

With the exception of the Buhen horse, the earliest horse remains (two sites: Tell el-Daba [1,3,4,5,6,8a,b,c] and Tell Heboua [7]) containing a total of nine horses (or partial horses) all occur in Egypt (Delta/Sinai) and cover a period of approximately two hundred years from 1750-1500 BCE.⁴³⁹ From 1500 BCE the distribution of sites spreads more evenly with six sites in Egypt containing eight horses and eight sites in Nubia containing one hundred and twenty-eight whole or partial horses.

If these remains can be regarded as representative of the situation occurring at the time, it could be suggested that there were very few horses in Egypt and Nubia in the period of the Hyksos hegemony (the 17th and early 18th Dynasties), and that over subsequent periods, the number of horses increased and they spread to the south. This is probably the case, however, there can be considerable doubt about whether these are, in fact,

⁴³⁷ The dates cited here and in the Table 3.1 are those suggested by the various excavators.

⁴³⁸ For a discussion of the dating of this find in light of challenges to its accuracy refer to Appendix 1.

⁴³⁹ At this point, the find made at Giza which is not datable, will be excluded from the discussion.

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representative. The small number of remains recovered to date and the difficulties associated with their preservation and detection confines this conclusion to logical possibility or assumption, until further discoveries are made.

3.3. ASSESSMENT OF EXAMINED REMAINS

Unfortunately, very few of the faunal remains have been examined in detail and often without the benefit of modern measurement criteria. However, this shortcoming has been gradually redressed since the publication of Driesch's *Guide to the Measurement of Animal Bones from Archaeological Sites* in 1976 that set out standardised measurement criteria⁴⁴⁰ together with the development of more meticulous techniques of excavation which gave increased importance to animal bone remains. Of the one hundred and forty-six sets of remains presented here by site, fifteen have been examined in varying degrees of detail. The criteria used to examine the remains has been relatively uniform and based on the physiological structures most likely to yield information, that is the bones and teeth as they often form the bulk of the deposits and they are diagnostic of features indicating gender, age, height, stature and use.

The examined remains follow:

[2] Buhen (1)

[5] Tell el-Daba (1)

[6] Tell el-Daba (1)

⁴⁴⁰

Measurement of animal remains has been invaluablely assisted by the publication of A. von den Driesch's seminal (1976) *A Guide to the Measurement of Animal Bones from Archaeological Sites*, Peabody Museum Bulletin 1. Peabody Museum of Archaeology and Ethnology. Harvard. With regard to horses there are two other main standards used conventionally today, V. O. Vitt (1952) *Die Pferde der Kurgane von Pasyryk*. Sovjetskaja Arch. Moskau 16: 163-205, and most importantly, especially for the determination of withers heights from long bone measurements, L. Kiesewalter (1888) *Skelettmessungen an Pferden als Beitrag zur theoretischen Beurteilungslehre des Pferdes*, Dissertation. Leipzig. More recent studies such as E. May (1985) "Wideristhöhe und Langknochenmaße bei Pferden-ein immer noch aktuelles Problem," in *Zeitschrift für Säugetierkunde / International Journal of Mammalian Biology* 50 (1985) 368-382, have re-examined the older systems of Kiesewalter and Vitt and have found that Vitt's system is still applicable.

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[7] Tell Heboua (1)

[8a] Tell el-Daba

[8b] Tell el-Daba

[8c] Tell el-Daba

[9] Sai (1)

[10] Thebes (Deir el-Bahri) (1)

[12] Soleb (1)

[13] Tell el-Borg (1)

[15] Saqqara (1)

[16] Hillat el-Arab (1)

[17a] Kurru

[17b] Kurru

Some of the fifteen sets of horse remains have been examined but not with the most recent methodologies and standardised criteria, however, there are so very few specimens extant, that this paper has included them, whilst acknowledging the limitations of the data. Fortunately in a few cases, remains that were discovered earlier in the Twentieth Century have been re-examined using more recent standardised criteria and methodology.

The core of the analysis will therefore be conducted on the basis of the examined sets of remains [2, 5, 6, 7, 8a, 8b, 8c, 9, 10, 11, 12, 13, 15, 16, 17a and 17b]. Remains sets [1, 3, 4, 11, 14, 18, 19, 20, 21 and 22] have been excluded as they have not been examined in detail, are only partial or minimal specimens, or they do not fit within the time frame concentrated on in this thesis.

(Data relating to the core sets of remains has been arranged in Vol. 2, Table 3.2).

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3.3.1 GENDER (EXAMINED) (VOL. 2 TABLE 3.3) (APPENDIX 6)

Of the fifteen horses that have been examined in some detail, gender determinations could be made in nine instances with six remaining undefined.

- a. Seven horses were identifiably male:⁴⁴¹ [5] Tell el-Daba, [8b] Tell el-Daba, [9] Sai, [12] Soleb, [15] Saqqara, and [17a] and [17b] Kurru.
- b. One horse was a mare: [6] Tell el-Daba.
- c. Two exhibited some female features: [7] Tell Heboua, [13] Tell el-Borg.
- d. One horse was possibly either a mare or a gelding. [10] Deir el-Bahri.
- e. One was a gelding: [2] Buhen.⁴⁴²
- f. Three were not identifiable because of the poor preservation of the remains: [8a] Tell el-Daba, [8c] Tell el-Daba, [16] Hillat el-Arab.

Gender Determinations			
Male	Female	Gelding	Undefined
7	1	1	6

Table. 3.3 Overview: Gender in Horse Remains.

The largest number (eight of the nine to which gender can be assigned) were male, that is seven stallions and one gelding constituting 89% of the total population of this study. The single female made up 11% of the population. Although, if the two that exhibit female features are included in the total of females, the males make up 73% of the total and the females 27%. Either way, it would appear that the majority of horses in the Egyptian archaeological record were male. However, the number of remains to which gender can be assigned is extremely small making conclusions statistically invalid. Still, the numbers that are available give rise to questions concerning how the horse was used.

⁴⁴¹ The presence of canine teeth in a mandible is a strong indication of male gender. “Canines are usually present only in the male, though small rudimentary ones are quite common in the female.” J. Tutt (1987) “The Examination of the Horse’s Mouth for Age,” in H. Hayes (2002) *Veterinary Notes for Horse Owners*, (18th ed.) New York, 828.

⁴⁴² J. Clutton-Brock (1979) “The Buhen Horse,” in W. B. Emery, H. S. Smith & A. Millard (1979) *The Fortress of Buhen*, 192. Discusses the problems associated with determining gender between mares and geldings, “the pelvis is found to be intermediate between male and female. This condition suggests that the horse may have been a gelding and that it was castrated at an age before the sexual differences in the pelvic bones were established.”

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Could there have simply been more males than females born? In horses the variation in birth sex ratios is small. Studies of variations reveal that they are primarily related to the condition of the mare at the time of conception. Cameron et. al. stated that: “Mares that had a female foal were in poorer condition at conception than those that had a male foal.”⁴⁴³ Environmental factors therefore play a part in the birth sex ratio. However these studies were conducted on wild horse populations of which there were none in Egypt. There horses were domesticated, managed and valued and the environment of the Nile Valley was relatively stable providing for mares to be in consistently better condition than wild mares, so that one would expect a more balanced birth sex ratio.

Or, could the sex ratio be an indication of the usage of horses? Given that possession of horses devolved from the king, it is reasonable to assume that horses were put to use in official or military contexts. The strongest and most aggressive stallions or geldings and those not used solely for breeding would have been allocated to these activities. Breeding mares would have been located in more rural areas with foals at foot.⁴⁴⁴ In this circumstance, then, the remains of mares would more likely be found outside settlement areas and thus be more difficult or impossible to discover in excavations that are necessarily focussed on towns, temples and tombs.

3.3.2 AGE

The examination of the teeth of a horse can give a relatively accurate estimation of its age.⁴⁴⁵ (Vol. 2, Table 3.4). This can be affected by the type of feed available to the horse, to genetics and also to activities such as “crib biting,”⁴⁴⁶ so the determination is

⁴⁴³ E. Cameron, W. Linklater, K. Stafford & C. Veltman (1998) “Birth sex ratios relate to mare condition at conception in Kaimanawa horses,” *Behavioural Ecology* 10 (1999) (5) 472-475.

⁴⁴⁴ P. Rosedale & D. M. Carson (2002) “The Oestrous Cycle,” in M. H. Hayes (2002) *Veterinary Notes for Horse Owners*, (18th ed.) New York, 386. Traditionally mares are bred each year with the purpose of conceiving annually so they are less likely to be suitable for work with chariots, which seems to have been the major use for horses especially in the early periods of the 18th Dynasty. Variations in the availability of adequate feed may extend this breeding cycle to two years. This will be discussed in more detail below.

⁴⁴⁵ H. Smith Thomas (2005) *The Horse Conformation Handbook*, North Adams, 50-65, gives a full discussion of the indicators of age in the horse through the examination of the teeth as does J. Tutt “The Examination of the Horse’s Mouth for Age,” in H. Hayes (2002) 825-837.

⁴⁴⁶ H. Smith Thomas (2005) *Horse Conformation*, 54-57, “changes are gradual and may not be the same for every horse. Tooth wear can vary, depending on his health and diet, how he is fed, and how abrasive the feed is.” The effects of “vices” such as “crib biting can be seen in J. Hedge &

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an approximation rather than a firm figure, (although with a young horse it will be more accurate). At 4.5 to 5 years of age, a horse is regarded as an adult and has all its permanent teeth, and its age can be determined by known patterns of wear on those teeth.⁴⁴⁷

It needs to be noted that the horses under examination here are often represented by poorly preserved or incomplete skeletons with, therefore, problematic mandibles. Thus, some of the ages attributed to them can only be regarded as estimates.

Ref No.	Site	Estimated age
[2]	Buhen	19 years
[5]	Tell el-Daba- stallion	6-7 years
[6]	Tell el-Daba - mare	5-10 years
[7]	Tell Heboua	5-8 years
[8a]	Tell el-Daba 1	4 years
[8b]	Tell el-Daba 2	13-15 years
[8c]	Tell el-Daba 3	Adult
[9]	Sai	3- 3.5 years
[10]	Deir el-Bahri	5-6 years
[12]	Soleb	9-10 years
[13]	Tell el-Borg	5+ mature
[15]	Saqqara 1	18 years
[16]	Hillat el-Arab	17-18 months
[17a]	Kurru 212	Adult
[17b]	Kurru 211	Adult-mature

Table 3.4. Horses by Site: Age Distribution

In the fifteen horses for which age has been assigned, the range is from seventeen months to nineteen years and adult/mature (ten+yrs). There appears to be no discernable pattern in that range over time. Several of the horses reached maturity and old age and others died as they reached maturity, with only the Hillat el-Arab and Sai horses

D Wagoner (eds.) (2004) *Horse Conformation*, Connecticut, 391 these significantly effect the estimation of age in horses.

⁴⁴⁷

H. Smith Thomas (2005) *Horse Conformation* 54; J. Tutt (2002) "Horse's Mouth," 830.

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regarded as sub-adults.⁴⁴⁸ As seventeen years of age is regarded as old in a horse,⁴⁴⁹ it is interesting to note that four of the fifteen horses for which age has been able to be assessed were adult-mature or old (26%). In addition, twelve of the animals were in their prime or close to it. Thus, 80% lived to maturity and beyond.

Care must be taken not to draw too much from such limited data, however, it seems clear that the Egyptians appear to have been quite capable of raising and caring for horses successfully in the period under examination. The burial of the youngest horse, at Hillat el-Arab, is interpreted by Chaix⁴⁵⁰ to be the result of a deliberate sacrifice. There is no cause of death evident on the skeleton but the context would suggest that this conclusion would be correct.⁴⁵¹ There is overall a full range of ages at death which would be anticipated in a population for which veterinary medicine would have been rudimentary and conditions for most, elemental. In the later periods which are culturally non-Egyptian, at Kurru as well as Firka, Gammal, Ballana and Qustal, the custom of sacrificing horses in royal or ruling families' burials results in large numbers of horses occurring in these contexts. At the post-Meriotic sites, horses occur six times more often than donkeys.⁴⁵² The adult, adult/mature age of the Kurru horse might indicate that older horses were especially chosen for this process.

⁴⁴⁸ The definition of maturity in horses can differ according to the varying physiological aspects under discussion. Regarding teeth, 4.5-5 years is the time when the horse will have the complete set of adult teeth. H. Smith Thomas (2005) *Horse Conformation*, 54. Sexual maturity occurs at 15-24 months, both the filly and the colt reach sexual maturity at approximately two years of age, J. Brega (2005) *Essential Equine Studies: Anatomy and Physiology*, London, 223 & 233 however "young stallions should not be expected to start covering mares until they are at least three years old," and the age of three is usual for breeding to begin in mares. J. Brega (2005) *Essential Equine Studies* 233. "The structural maturity of the horse can also be gauged by the closing of the epiphyseal plates which do so at varying times depending on the bones and can take place up to 42 months of age." J. Brega (2005) 107.

⁴⁴⁹ J. Tutt (2002) "Horse's Mouth," 825.

⁴⁵⁰ L. Chaix (2006) "The Animal Remains," 188.

⁴⁵¹ L. Chaix (2006) "The Animal Remains," 188. "During Napatan times these two animals (horses and dogs) often accompanied by camels, were frequently included in the funeral ceremonies and ritually slaughtered."

⁴⁵² L. Mallory-Greenough (2005) "Horse Burials of Nubia," 106-107.

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3.3.3 WITHERS HEIGHT

Withers height is one of the most informative factors in this discussion as it gives, more than the others, some indication of the appearance of the ancient Egyptian horse. (Vol. 2, Table 3.5).

The “withers height” of a horse is measured from the top of the withers (the highest part of a horse’s back - the area at the base of the neck between the shoulder blades).⁴⁵³ It is measured in hands from the ground to the top of the withers. (See a brief discussion of this measurement in the footnotes below.)

Reference Number	Site	Withers Height (metres)	Withers Height (hands)
[2]	Buhen	1.50m	14.3
[5]	Tell el-Daba stallion	1.38m	13.25
[6]	Tell el-Daba	1.38m	13.25
[7]	Heboua	1.40m (av)	13.3
[8a]	Tell el-Daba 1	1.38m	13.25
[8b]	Tell el-Daba 2	1.36m	13.15
[8c]	Tell el-Daba 3	1.34m	13.75
[9]	Sai	1.40m	13.3
[10]	Deir el-Bahri	1.43m	14.05
[12]	Soleb	1.32m	13.0
[13]	Tell el-Borg	1.50m (indication only)	14.3
[15]	Saqqara 1	1.46m	14.15
[16]	Hillat el-Arab	1.47m	14.2
[17a]	Kurru 212	1.55.m	15.1
[17b]	Kurru 211	1.52m	15.0

Table 3.5. Horses by Site: Withers Height.

In almost all of the examined horses a withers height has been able to be determined.⁴⁵⁴ This gives an idea of the stature of the horses. In some cases an average has been

⁴⁵³

M & H. Dossenbach (1983) *The Noble Horse*, Auckland, 439.

⁴⁵⁴

H. Smith Thomas (2005) *Horse Conformation*, 221. “Horse height is measured in hands from the ground to the top of the withers. A hand is four inches.” In metric terms a “hand” is regarded as 10 centimetres (see P. Huntington, J. Myers & E. Owens (2004) *Horse Sense, the Guide to Horse Care in Australia and New Zealand*, second edition, Collingwood, 102), however the writer has encountered variations in this determination of 10.2cm, 10.16cm, to 10.00cm. If four inches is measured out correctly, it does measure 10.16cm exactly. One difficulty which arises

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arrived at as for Heboua [7], where both 1.36m and 1.44m (or an average of 1.40m) have been indicated by the bones. Regarding the Deir el-Bahri horse [10], Chard estimated a withers height of 1.27m⁴⁵⁵ but Boessneck, using modern criteria, assessed the height at 1.43m⁴⁵⁶ and this has been the measurement accepted in this work. Similarly, Ducos' estimation of the height of the Soleb horse [12]⁴⁵⁷ has been revised by Bökönyi⁴⁵⁸ and this revised measurement of 1.33m has also been accepted here. Many variations in withers height have been encountered as a result of the poor quality of the preservation of the long bones from which the withers heights are determined.⁴⁵⁹ For example, the Tell el-Borg horse's [13] height is not a reliable figure as it has been calculated on the basis of only one measurable bone.

It is useful, at this point, to note that in modern terms, a horse of less than 1.47m (14.2 hands) is regarded as a pony and one of 1.47m (14.2 hands) and above is regarded as a horse.⁴⁶⁰ Reference to this standard enables a clearer understanding of the relative heights of the examined Egyptian horses.

The range of withers heights (Vol. 2, Graph 3.6) in the examined horses extends from 1.55m which is the height of the largest of the Kurru horses [17a], it is therefore considered to be a horse, down to 1.33m, the estimated height of the Soleb skeleton [12], which would be categorised today as a pony. Of the fourteen horses only four would be categorised as horses, the remainder would be regarded as ponies. The Hillat

when using 10.16cm, is that this level of accuracy is simply not possible given the condition of the remains found so far. For expediency's sake, 10cm will be used in this work.

⁴⁵⁵ T. Chard (1937) "An Early Horse Skeleton," 317.

⁴⁵⁶ J. Boessneck (1970) "Ein altägyptisches Pferdeskelett," *MDAIK* 26 (1970) 45.

⁴⁵⁷ P. Ducos (1971) "Le cheval de Soleb," 261 He gives a withers height as between 1.34m and 1.38m.

⁴⁵⁸ S. Bökönyi (1993) "Two Horse Skeletons," 309. He states that Ducos incorrectly measured the bones and that his own assessment is from 1.31-1.33 m.

⁴⁵⁹ The assessment of the withers height based on the measurements of the long bones is, today, usually conducted according to criteria set down in L. Kiesewalter (1888) *Skelettmessungen an Pferden*. J. Clutton-Brock kindly sent the writer the basic Kiesewalter factors for estimating the withers height of a horse. (Personal Communication. 4 Sept. 2008.) The criteria for the accurate and standardised measurement of long bones and others in horses and other animal remains are set out in A von den Driesch (1976) *Guide to the Measurement of Animal Bones*.

⁴⁶⁰ P. Huntington et al. (2004) *Horse Sense*, 102 and H. Smith Thomas (2005) *Horse Conformation*, 221.

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el-Arab skeleton is 1.47m and will be regarded as a horse giving a total of five out of fourteen or approximately 35.7% of the population of this study as horses.

The data (Graph 3.6 & Table 3.5) indicates that only five horses have a withers height at or above 1.47m. These are Buhen [2] 1.50m, Tell el-Borg [13] 1.50m, (this is not a well supported determination), Hillat el-Arab [16] 1.47m, Kurru [17a] 1.55m and Kurru [17b] 1.52m. Of particular interest, with the exception of the Buhen horse which will be discussed separately below, is that these horses are all from the very latest periods from which examined remains can be found (certainly from 1300 BCE onwards). Saqqara [15] is also very close to the pony/horse divide and together with the others may indicate a trend to larger animals over time. This may reflect either the effects of purposeful breeding for size, the importation of larger horses from outside Egypt, or a combination of both. Bökönyi states (while discussing the Kurru horses [17a, b]): “It may be said that they represented an unique, outstanding quality at that time, horses which could only be the result of conscious breeding.”⁴⁶¹

The animals from earlier periods with the exception of Buhen are small/pony-sized animals. The Buhen horse appears to be an anomaly. It was a comparatively large, adult horse of nineteen years and has been identified as a gelding.⁴⁶² The Buhen horse is truly an anomaly, one whose height was possibly the result of a known side effect of castration (Clutton-Brock suggests that “it is known that when an animal is castrated the fusion of the epiphyses is delayed and the bone continues to grow for a greater length of time than it does in the normal [uncastrated] male.”⁴⁶³), however, it could have merely been a larger variation from the norm. If this specimen is excluded, the stature of the early horses in Egypt is characterised as small and they remain so for some time. From approximately 1300 BCE, there is some evidence for a discernable increase in height that could be attributed to purposeful breeding, and/or the importation of larger animals.

⁴⁶¹ S. Bökönyi (1993) “Two Horse Skeletons,” 309.

⁴⁶² J. Clutton-Brock (1979) “The Buhen Horse,” 192. See also S. Olsen (2006) *Early Horse Domestication*, 85.

⁴⁶³ J. Clutton-Brock (1979) “The Buhen Horse,” 193. She quotes S. Bökönyi “Data on Iron Age Horses of Central and Eastern Europe,” in *Bulletin of the American School of Prehistoric Research*, Harvard, 25 (1968) 3-71. Bökönyi also mentions this phenomenon in S. Bökönyi (1993) *Two Skeletons*, 309 when he discusses the fact that the Kurru horses do not exhibit this feature. See also S. Olsen (2006) *Early Horse Domestication*, 85.

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The archaeological evidence does not provide any further clarification of the reasons behind this increase.

There are many variations in the size of horses even when they are from the same breed.⁴⁶⁴ There is no sexual dimorphism in horses other than qualitative dimorphism relating to the presence of canines in males and the fact that they are either not present at all in mares or are only rudimentary. Male and female horses are quantitatively monomorphic.⁴⁶⁵

Many factors influence the adult size of the horse including nutrition, early over-working, injury and such factors as being a mare's first foal, illness as a juvenile and neutering. It is, therefore, difficult to identify a distinctive "breed"⁴⁶⁶ as such on one or even a few distinguishing characteristics. Obviously, the range of withers heights apparent in the examined horses cannot provide even a general suggestion of distinctive breeds. They may, however, give some hints relating to the breeding practices of the Egyptians.

Reference number	Site	Withers height (metres/hands)	Age (years)
[8b]	Tell el-Daba 2	1.36m/13.15	13-15
[5]	Tell el Daba stallion	1.38m/13.25	6-7
[6]	Tell el-Daba	1.38m/13.25	5-10
[8a]	Tell el-Daba 1	1.38m/13.25	4
[8c]	Tell el-Daba 3	1.34m/13.75	Adult 5+
[7]	Heboua	1.40m/13.3	5-8

⁴⁶⁴ Any conclusion regarding what "breeds" may be represented is quite beyond the capacity of the available material to reveal.

⁴⁶⁵ B. J. MacFadden (1999) *Fossil Horses. Systematics, Paleobiology and Evolution of the Family Equidae*, Cambridge. 272-273 and 295 "body-size dimorphism is not discernable for hypsodont grazing horses (MacFadden 1984a): this condition has continued for the past 15 million years and is a characteristic of extant Equus."

⁴⁶⁶ S. J. Hall (2005) "The Horse in Human Society," in D. S. Mills & S. M. McDonnell (2005) *The Domestic Horse. The Origins, Development and Management of its Behaviour*, Cambridge, 26 "there is not a single definition for the term "breed". See also, "A breed that exists today can be seen as an expression of a history of genetic selection and genetic drift. Its genotype will include genes and gene combinations coding for particular characteristics and it will have lost from its genotype, due to the random genetic processes which accompany restricted mating, many of the genes which are present in other breeds."

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[9]	Sai	1.40m/13.3	3-3.5
[12]	Soleb	1.32m/13.0	9-10
[10]	Deir el-Bahri	1.43m/14.05	5-6
[15]	Saqqara	1.46m/14.15	18
[16]	Hillat el-Arab	1.47m/14.2	17-18 months
[13]	Tell el-Borg	1.50m/14.3	5
[2]	Buhen	1.50m/14.3	19
[17b]	Kurru	1.52m/15.0	Adult 5+
[17a]	Kurru	1.55m/15.1	Adult mature 10+

Table 3.6. Withers Height/Age

The age of an animal might be expected to influence its height, however, the Table 3.7 & Graph 3.8 (Vol.2) comparing withers height with age at death shows no such correlation. In the case of the two youngest cases, Hillat el-Arab [16] was 1.47m but only reached 17-18 months and Sai [9] was 1.40m at 3-3.5 years which falls in the middle of the height range. The oldest horses span the full range of heights: Buhen [2] at 1.50m at 19 years: Saqqara [15] at 1.46m at 18 years: Tell el-Daba [8b] at 1.36m at 13-15 years: and Kurru [15a] at 1.55m at 10 years plus. Apart from the anomalous Buhen horse there is still a discernable increase in height over time but that increase appears to have nothing to do with the age of the animals.

The increase in height can be explained by the specific biology of the horse:

“Quantitative inheritance produces continuous variation. ... The height of horses, for example is a characteristic demonstrating continuous variation.... In general, quantitative inheritance is attributed to by more than one gene i.e. it is a polygenic trait. Thus ... the height of horses will be controlled by skeletal development, muscular development and efficient use of nutrients by the gut. There are many genes involved in these processes, and some of the processes may be altered by environmental factors.”⁴⁶⁷

External/environmental factors, nutrition, workload, castration and other factors affect a horse's height.

In summary, the Egyptians appear to have been capable of managing horses well into their old age. There is a discernable increase in height over time, though they remain

⁴⁶⁷ J. Brega (2005) *Anatomy and Physiology*, London, 246-247.

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“small” in modern terms and there is no correlation between their height and their age. Additionally, there is no evidence to support a marked change of breed or type over time.

3.3.4 LEGS.

Reference Number	Site	Description
[2]	Buhen	Lengthened long bones/ fine limbed
[7]	Heboua	Robust distal limbs.
[9]	Sai	Lengthened legs, more marked for the back legs/ still gracile.
[12]	Soleb	Front legs are short and sturdy.
[15]	Saqqara	Large feet/limb bones fine and very sound.
[16]	Hillat el-Arab	Long slender bones.
[17a]	Kurru 212	Long extremity bones/ slender shafts/ large feet/ very slender limbs.
[17b]	Kurru 211	Long extremity bones/ slender shafts/ large feet/ very slender limbs.

Table. 3.9. Description of Legs.

Although a description of the slenderness of legs is available only for eight of the horses (Vol 2. Table 3.9), the comments, by a variety of examiners over a considerable period of time, are remarkably similar. With the exception of the Soleb horse, which was the smallest of all the animals, the long bones of all the legs are regarded as long and slender and quite fine. This includes the largest of the horses, the Kurru specimens. The conclusion that could be reached is that the Egyptian horse was consistently a relatively fine animal with long gracile legs.

3.4. SUMMARY

The archaeological evidence can reveal information about the morphology and contexts of the horses that existed in ancient Egypt from the time of the Hyksos. In a period stretching from approximately 1750 BCE to 600 CE, or over two thousand three hundred years, some indications do emerge from the examination of the few remains of horses to have been zoologically studied both generally and in detail.

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Firstly, it is most surprising that horse remains appear to be so rare. In an extensive time span, a horse (from one hundred and forty-six sets of remains) in the archaeological record for the period occurs statistically only once in every sixteen years. Given that the period includes times when massed chariot divisions existed (as well as the breeding programmes that must have supported them) this is extraordinary. Between 1750 and 1550 BCE only seven sets of remains can be identified to the present time. Between 1550 and 1373 BCE (another period of approximately two hundred years) there are only another seven. The period 1372 to 1120 BCE contains another seven and from 1120 to 690 BCE (around 300 years) another twenty-six remains have been found. The largest number (ninety-three) occurs in a narrow period 350 to 600 BCE. The numbers of horses discovered increase towards the later part of the time span covered by this survey.

From this, it seems that horses were rare early in the period, however there are other factors that need to be taken into consideration. The finding of horse remains has always been accidental in excavations. Earlier archaeological methodology did not always give a great deal of emphasis to the examination of animal bones especially in minimal finds, and so some instances of horse remains may have been missed. It is difficult to separate horse remains from other equid forms and lack of expertise in zooarchaeology may have resulted in horse remains being misidentified as other types of equids such as the donkey. Several of the remains were found in very poor condition, for example, remains from Tell el-Borg where the material in which they had been interred or the effects of later building have limited our ability to analyse them accurately. Quality preservation of horse remains would have to be seen as the exception, rather than the norm.

The contexts in which horses have mostly been discovered are settlement sites or cemeteries. Horses would have spent relatively little time in these places as they need considerable areas of pasture, especially if they are in numbers. These are not areas commonly excavated and so we may rightly expect that, at sites where excavations have taken place, horse remains would be limited. As mentioned previously, it would be natural for official and military activities to be carried out using male horses predominantly as it is probable that the earliest horses in Egypt were small and the

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strongest would have been necessary to draw chariots,⁴⁶⁸ thus requiring males. Mares would have been bred every year or second year and so could not be used as easily for these purposes. Given that average horses weigh approximately a half-ton, it would make sense for the males to be buried close to where they died, in settlement contexts or in relation to their owner's tombs, whilst more mares would have been buried (if at all) in the countryside making it impossible to identify their burials. This may explain their statistical near invisibility. Given that a healthy breeding population requires more mares than stallions,⁴⁶⁹ there is an expectation that there would have been at least as many mares as there were stallions. The material here would therefore suggest that male horses were more commonly present in settlement contexts and mares were outside them.

Gender has been assigned to only thirty-two of the one hundred and forty-six horses in the whole period 1750 BCE to 600 CE, and of them, twenty-one are stallions constituting 66% of the total. If these were primarily used as chariot horses, they would have spent more time in settlement contexts than mares (22%) only seven of which have been identified (Note: two others may have been mares). This numerical imbalance is spread over the whole period. As mentioned previously, the concentration of excavations on settlements and tombs may have been responsible for creating a bias in the numbers that may not reflect reality.

The range of ages attained by the fifteen examined horses indicates that the Egyptians were capable of caring for horses well into maturity and old age. Causes of death (where they are discernable) indicate the possible effects of war at Buhen [2] and Tell el-Daba [18.a, b, c], predatory animals at Soleb [12] and deliberate sacrifice at Kurru [17 a, b] and not necessarily an inability to provide adequately for the needs of the animals over a long life.

⁴⁶⁸ The use of horses to draw chariots is the most consistent in this period though there is some evidence for the riding of horses a clear example exists in the tomb of Horemheb. G. T. Martin (1989) *The Memphite Tomb of Horemheb Commander-in-Chief of Tutankhamun, The Reliefs, Inscriptions and Commentary*, Egypt Exploration Society, Excavations Memoirs 55, London, pl. 32 sc. 22.

⁴⁶⁹ L. Boyd & R. Keiper (2005) "Behavioural Ecology of Feral Horses," in D. S. Mills & S. M. McDonnell (eds.) (2005) *The Domestic Horse*, 55 ff. The natural band of horses is constructed of the stallion and several mares. This structure is mirrored to a degree in domesticated horse breeding programs.

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Within the examined group it appears that the earliest horses were especially small, equivalent to modern ponies and only slightly larger than donkeys⁴⁷⁰ with most not reaching 1.47m at the withers. The anomaly of the Buhen horse aside, (see above and Appendix 1) it seems that for at least the first two hundred years, horses in Egypt remained small. It would appear that from the end of the 18th Dynasty, horses began to increase in size, finally reaching a stature similar to modern horses by the Late Period.⁴⁷¹

Their legs were long, slender, fine and gracile generally, even the larger Kurru horses.⁴⁷² The few skulls that have been described are variously mentioned as “stocky, but not coarse, nicely formed,” and “like the horse head from Amarna”⁴⁷³ and “heavy”⁴⁷⁴ and “long.”⁴⁷⁵

The Soleb horse [12] was a very small but mature horse possessing a small skull a short muzzle and a strong jaw, the heaviest and stockiest of all the horses and was dissimilar to the others. Whilst there could be many explanations for this (including it being a “first foal”, a genetic variation or an import), there is simply not sufficient information for any real explanation to be suggested. It must remain atypical.

Overall, observations made by scholars summarise the early horses in these terms. As Clutton-Brock states: “These horses have all the looks of the present day Arab breed”⁴⁷⁶ and she goes on to point out that the Buhen horse [2] “is nearly identical with the Hittite horses from Osmankayasi.”⁴⁷⁷ Driesch and Peters indicate that the head of the Tell el-Daba stallion [5] they examined was “like the horse head from Amarna” and that the horse was “small and nicely formed”⁴⁷⁸ In Chard’s article on the Deir el-Bahri horse

⁴⁷⁰ Wisconsin Donkey and Mule Society. <http://www.widonkeymule.org/about.htm#Definitions> accessed 26/8/2012. Donkey sizes; miniature < 36” (0.91 m), standard 36+” – 48” (1.21 m), large standard 48 +” -56” > (1.40 m).

⁴⁷¹ S. Bökönyi (1993) “Two Horse Skeletons,” 305.

⁴⁷² S. Bökönyi (1993) “Two Horse Skeletons,” 303.

⁴⁷³ A. von den Driesch & J. Peters (2001) “Frühe Pferde,” 304.

⁴⁷⁴ L. Chaix (2000) “An Hyksos Horse,” 181.

⁴⁷⁵ T. Chard (1937) “An Early Horse Skeleton,” 319.

⁴⁷⁶ J. Clutton-Brock (1979) “The Buhen Horse,” 193. She mentions that the Buhen horse is similar to those depicted in the tomb paintings of post 18th Dynasty Egypt.

⁴⁷⁷ J. Clutton-Brock (1979) “The Buhen Horse,” 194.

⁴⁷⁸ A. von den Driesch & J. Peters (2001) “Frühe Pferde,” 304.

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[10], there are several comparisons made between some characteristics of this horse and those of the Arabian breed.⁴⁷⁹ In his discussion of the same horse Boessneck states that “it corresponds, if one disregards the idealizing exaggerations, to the type of horses shown in numerous wall paintings of the New Kingdom,”⁴⁸⁰ and he goes on to say that the horses are “virtually equal in size to the Hittite horses of the same period.”⁴⁸¹

It is tempting to make the comparison between the Arab and the early Egyptian horse on the basis of much of this information as well as the occurrence of five lumbar vertebrae in the Deir el-Bahri [10]⁴⁸² and Soleb [12]⁴⁸³ horses (a feature once considered consistent with the morphology of the Arab⁴⁸⁴) but there is far too little extant material, which is in too poor a condition, to allow any speculation concerning the “breed” to which it might belong or to which it may have been the progenitor.

What is discernable from the limited amount of archaeological evidence in existence, however, is that the early Egyptian horses were small (the size of a pony in today’s terms) and they were small for a long period with the exception of the Buhen horse until at least around 1300 BCE. After this time, there was an increase in their size due to factors that remain speculative. They were relatively fine boned with some features like having a short, refined head, a strong jaw and fine and slender limbs, which could be compared with those of the Arabian breed. Parallel to their increase in size was an apparent increase in numbers and in their proliferation throughout Egypt and Nubia.

⁴⁷⁹ T. Chard (1937) “An Early Horse Skeleton,” 319 “(the) measurements and description very strongly suggest the Arabian type.” and “the general appearance of the Egyptian skull was that of an Arabian.”

⁴⁸⁰ J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 45.

⁴⁸¹ J. Boessneck (1970) *Ein altägyptisches Pferdeskelett*, 47. He refers here to W. Herre & M. Röhrs (1958) *Die Tierreste aus den Hethitergräbern von Osmankayasi*, in K. Bittel *Bogazkoy-Hattusa 11. Die Hethitischen Grabfunde von Osmankayasi*. Veröff.d. Deutschen Orient. Ges.Berlin. 60-79, in which there is a long discussion of the nature of the remains of horses found at the site, one of which features a withers height estimated at 1.50m. 63.

⁴⁸² T. Chard (1937) “An Early Horse Skeleton,” 319.

⁴⁸³ P. Ducos (1971) “Le cheval de Soleb,” 265.

⁴⁸⁴ R. M. Stecher (1962) “Anatomical Variations in the Spine of the Horse,” in *Journal of Mammalogy*, 43/2 (May 1962) 205-219. However this is not considered to be definitive any longer. See Note 51 for a discussion of this feature.

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*“I have never seen such a perfectly formed animal. Beautiful and graceful like a gazelle, he burned hot and wild with the deserts of Egypt in his soul.”*⁴⁸⁵

4.1 PRELIMINARY CONSIDERATIONS: EGYPTIAN ART

The examination of the faunal remains disclosed information concerning the origins and morphology of the Egyptian horse, but there is another rich source of material concerning Egypt’s relationship with it in the period from the 17th Dynasty to the reign of Ramesses III in the 20th Dynasty and beyond. This is the corpus of horse images situated on the walls of tombs, temples and on artefacts originating throughout the country and spanning the whole period.

If conclusions are to be extracted from this iconographic material there must first be an understanding of the principles, methodologies and concepts underlying Egyptian art, taking the nature of the method of transmission of the information being conveyed within it into account.

It is crucial, at this juncture, to make the point that although this thesis relies heavily on an examination of horses illustrated in paintings and reliefs that are (by their very nature) manifestations of art, it is not a study of Egyptian art per se.⁴⁸⁶ The art provides a tool, a window through which it is possible to discover the place that the horse

⁴⁸⁵ L. V. Andrews quoted in Y. Grant (ed.) (2012) *The Little Red Book of Horse Wisdom*, New York, 68.

⁴⁸⁶ For an extremely useful summary of the historiography of Egyptian art see D. Bergman (2015) “Historiography of Ancient Egyptian Art,” in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester, 25-39.

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occupied in Egypt. Nonetheless, the themes, techniques and contexts of art must be understood too before it can be used effectively as historical data, here.

A survey of the publications of five hundred and ninety-two New Kingdom tombs (mostly from the Theban Necropolis), one hundred and twenty-eight temples and numerous artefacts from the Delta to Nubia was undertaken. Of the tombs, seventy-one contain images of horses, horses and chariots or chariot making.⁴⁸⁷ Of the temples, eleven have been found to incorporate images of horses.

4.1.1 ANIMALS IN EGYPTIAN ART

Animals have been a feature of Egyptian art since predynastic times.⁴⁸⁸ Mammals, reptiles, birds, fish, insects and parts of their bodies provided a substantial number of signs in the Egyptian hieroglyphic writing system that was in use for millennia. Additionally, animals feature large in the basic themes of Old Kingdom art,⁴⁸⁹ and this continued into later periods.

Animals occupied a fundamental position in religious iconography that featured therianthropic deities such as the jackal headed Anubis and the sphinx, kingly images such as the falcon Horus and architectural decorations in wall paintings and reliefs. This reflects the close association between nature and ancient Egyptian life. As they were domesticated, the animals were herded, used for food, husbanded, trained and humans even bonded with them as pets. They participated in every aspect of life and their images are represented in a great variety of forms.

⁴⁸⁷ Of these, 58 have images of horses (three have been unobtainable at this time and one comes from the tomb of Thutmose IV and is of the two sides of the chariot of the king found there.)

⁴⁸⁸ P. Houlihan (2002) "Animals in Egyptian Art and Hieroglyphs," in B. J. Collins (ed.) (2002) *A History of the Animal World in the Ancient Near East*, Leiden, 97. Also C. Aldred (1980) *Egyptian Art*, London, 33, gives a discussion of the profusion of animals depicted on predynastic palettes.

⁴⁸⁹ Y. Harpur (1987) *Decoration in Egyptian Tombs of the Old Kingdom: Studies in Orientation and Context*, London. These were, agriculture, marsh activities etc, see especially Chapters 6 and 7.

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Egyptians were able to observe closely, not only the detailed morphology of these creatures, but also their behaviour.⁴⁹⁰ They were able to “capture their essence”⁴⁹¹ and translate what was characteristic of the animals into art - a skill most recently illustrated and underlined by Linda Evans’ ground-breaking work on the depiction of the behaviour of animals in Egyptian art.⁴⁹² Whilst her study was confined to the period of the Old Kingdom, she makes certain points that remain valid for the periods included in this study. She found that “...the range of behaviour reproduced in wall scenes indicates that the Egyptians were acutely aware of the idiosyncratic postures and movements of animals.”⁴⁹³ Additionally, images such as the Old Kingdom Meidum geese,⁴⁹⁴ and the delightful mammals and birds in the New Kingdom tomb of Nebamun⁴⁹⁵ underline the extraordinary ability of the Egyptian artist to depict animals to a high degree of morphological accuracy when they wished, although contrastingly James points out that they were not always accurate, even in their finest works.⁴⁹⁶ This dichotomy can be explained by the fact that morphological accuracy was not entirely the main purpose of the representations. Egyptian art is more complex than this. Not only was the artist confined by the strictures of the canon of art, the compromises needed to suit the physical conditions, the various levels of technical excellence of the artists and the lack

⁴⁹⁰ J. Baines (2015) “What is Art?” in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester, “Individual pictorial images of the dynastic period- as opposed to whole scenes- were generally close to reality in outline and proportions; what they depicted could and can be easily identified.” 7.

⁴⁹¹ L. Evans (2010) *Animal Behaviour in Egyptian Art*, The Australian Centre for Egyptology: Studies 9, Oxford, 15-21 for a discussion of the nature of Egyptian animal images.

⁴⁹² L. Evans (2010) *Animal Behaviour in Egyptian Art*, Oxford.

⁴⁹³ L. Evans (2010) *Animal Behaviour*, 191.

⁴⁹⁴ J. Malek (2003) *Egypt. 4000 Years of Art*, London, 50-51. Also see T. G. H. James (1985) *Egyptian Painting*, London, for a discussion of this painting which James calls “one of the finest pieces of Egyptian painting.”²⁰ Interestingly, he quotes the opinion of Nina de Garis Davies: “She notes that the artist’s accuracy in depicting identifiable species of goose is far greater than that of his descendants in the great days of tomb painting at Thebes twelve hundred years later.”²¹ Geese aside, this writer would suggest that the animal representations in the scene of Nebamun hunting in the marshes were at least the equal of the Meidum geese and were most certainly executed with sufficient skill and accuracy to clearly identify the birds, cat, fish and indeed the plant species as well as the Meidum geese. R. Parkinson (2008) *The Painted Tomb Chapel of Nebamun*, London, 128-132 for a detailed discussion. James makes further comments on the Nebamun piece in T. G. H. James (1985) *Egyptian Painting*, 26. “The skills of the artist are apparent in every aspect of the painting: in the overall design, in the richness of the detail, but particularly in his exquisite use of paint to produce results unparalleled in any other Theban tomb.”

⁴⁹⁵ British Museum BM37977 and for a detailed study of the scenes see R. Parkinson (2008) *Nebamun*, 129.

⁴⁹⁶ T. G. H. James (1985) *Egyptian Painting*, 28.

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of modern perspective, the images themselves were imbued with much more than the need for a “photographic” rendering.⁴⁹⁷ Art in ancient Egypt was a complex interplay not only between these aspects but also of existing styles and the decorum of tomb decoration, suitable subject matter such as the demonstration of the contrast between order and chaos, indications of hierarchical status and the availability of pigments. In addition, there was a dimension that was even more metaphysical. Malek in his *Egypt. 4000 Years of Art*,⁴⁹⁸ expresses this complexity:

“The Egyptians believed that works of art and architecture were essential for the smooth functioning of society and, indeed, of the world itself. These ideas are very far from our own concepts of the role which art plays in our lives. They derived from the ability of art to convey fundamental ideological concepts in a visual and easily comprehensible form and, as the Egyptians hoped, to perpetuate them eternally (...). The mere expression of an idea by artistic means made it efficacious and capable of functioning in its own right through what, for want of a better term, we might describe as ‘magic.’”

Gombrich⁴⁹⁹ suggested that: “Once we have grasped these rules and conventions, we understand the language of the pictures in which the life of the Egyptians is chronicled.”⁵⁰⁰ But Schäfer contradicts this view in his eloquent appreciation of the uniqueness of Egyptian art when he says that one cannot “...make the arrogant assumption that he has found the key to a strange art in what he is thus able to perceive and appreciate of it ... it is completely impossible for us to transport ourselves into the mind of a strange people.”⁵⁰¹ This is not to say that he suggests abandoning efforts to understand this art. Rather, he goes on to encourage research as it will cause scholars to

⁴⁹⁷ H. Schäfer (1919) *Principles of Egyptian Art*, E. Brunner-Traut (ed.) Leipzig, translated and edited with an introduction by J. Baines (2002) with revisions of the 1974 edition, Oxford. See Chapters 1 and 2 for a discussion of the formation, character and concepts of Egyptian art.

⁴⁹⁸ J. Malek (2003) *Egypt*, 4.

⁴⁹⁹ E. H. Gombrich (2006) (16th ed.) *The Story of Art*, New York.

⁵⁰⁰ E. H. Gombrich (2006) (16th ed.) *The Story of Art*, New York, 53.

⁵⁰¹ H. Schäfer (1919) *Principles of Egyptian Art*, Leipzig, translated and edited with an introduction by J. Baines (2002) Oxford, 7. See also M. Hartwig (2015) “Style” in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester, 53. Also V. Angenot (2015) “Semiotics and Hermeneutics” in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester, 117.

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“draw an even richer, more living and more accurate picture of the whole,”⁵⁰² even if a complete understanding of such foundational works such as the Narmer Palette and Egyptian art in general may continue to elude us.

The kings and the elite controlled the resources, commissioned images, had access to the most skilled artists and the world around them filled the images. Almost all the depictions featuring horses or material associated with them analysed for this study originate in the tombs and temples of the kings and the elite in Thebes, and as such fundamentally reflect the specific world view of this social stratum.⁵⁰³

Analysis of art must be contextualised in terms of social class, alongside aspects such as image placement, technical ability, the level of biological understanding and others if information regarding horses in Egypt is to be gleaned from these sources. To a very great extent, these are the only sources from whence the information comes.

4.2 THE ICONOGRAPHIC EVIDENCE: CATALOGUE OF IMAGES OF THE HORSE

The faunal remains contributed information concerning the morphology of horses in Egypt and the iconography does too but it also provides evidence of the animal’s place in the economic, social, cultural and military spheres of New Kingdom Egypt.

The sources of evidence that follow form a corpus of depictions of horses and horse related material collected from tombs, temples and selected artefacts, arranged in chronological order from the earliest images available dating from the late Second Intermediate Period to the reign of Ramesses III. These sources are inherently artistic in that they follow the standard Egyptian principles of representation and image composition and the horse conforms to the depictions of humans and animals in general.

⁵⁰² H. Schäfer (1919) *Principles of Egyptian Art*, Leipzig, translated and edited with an introduction by J. Baines (2002) Oxford, 7.

⁵⁰³ J. Baines (2015) “What is Art?” in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester. Baines notes that the “ideal audience extended further to all the groups that constituted Egyptian society- deities, the dead, the king and humanity.” He extends involvement in image making to all strata either through the commissioning, production, observation or inclusion in the process.

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They also fit into the existing hierarchy in that they are represented against a social framework where only certain levels could possess and use horses, namely, royalty and the elite.

A chronological approach has been adopted as the most effective system to demonstrate the changes observable in the numbers, usage and representation of the horses over this period.

4.2.1 LATE SECOND INTERMEDIATE PERIOD AND THE REIGN OF AHMOSE I

AH I (1) AHMOSE TEMPLE COMPLEX (FRAGMENTS)

(Figs. 4.1, 4.2, 4.3)

Site: Abydos.
Reference: *PM* 5, 92.
Source: Harvey. S. (1998) *The Cults of King Ahmose at Abydos*, University of Pennsylvania, Philadelphia, *figs.* 76A, 78A.
Dating: Ahmose I: Harvey
Scene/Context: Battle scenes.

The earliest images of horses found in Egypt to date are among over three thousand fragments from the Ahmose pyramid complex at Abydos⁵⁰⁴ belonging to the architectural decoration of the limestone pyramid temple. Harvey has interpreted them as “depictions of Ahmose’s conquest of the Hyksos occupiers.”⁵⁰⁵ They are especially significant not only for providing the earliest horse images in Egypt, but because they add to the “understanding of the composition of royal battle scenes.”⁵⁰⁶ Three fragments (ATP 4057/2487 and ATP 1941/1944)⁵⁰⁷ are the most relevant to the current study as they clearly depict bridled horses (Figs. 4.1, 4.2, 4.3). However, on account of their

⁵⁰⁴ S. Harvey (1998) *The Cults of King Ahmose at Abydos*, Philadelphia, 150. “Yet more significant are a smaller group of fragments executed in a wholly different style which appear to date to the reign of Ahmose and seem to derive exclusively from a scene of triumphant battle against an Asiatic enemy, including a depiction of horse and chariot warfare, the earliest such scene yet known in the history of Egyptian art.”

⁵⁰⁵ S. Harvey (1998) *King Ahmose*, xi.

⁵⁰⁶ S. Harvey (1998) *King Ahmose*, 303.

⁵⁰⁷ S. Harvey (1998) *King Ahmose*, 529.

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damaged condition, no comments regarding the nature of the horses themselves are possible. What can be understood, however, is that at the time of Ahmose I (1550-1525 BCE)⁵⁰⁸ horses featured as a dominant element in a major depiction of the triumph of an Egyptian king on a funerary and memorial monument and as such they comprise a feature in the iconographic repertoire of the king from this time onwards.

AH I (2) BATTLE AXE (BM 36766)

(Fig. 4.4)

Site:	Thebes. ⁵⁰⁹
Reference:	British Museum 36766.
Source:	Wilkinson. J. G. (1878) <i>Manners and Customs of the Ancient Egyptians</i> , London 1. 406. Hall. H. R. (1931) "The Oldest Representation of Horsemanship (?)." <i>Annals of Archaeology and Anthropology</i> 18 (1931) 3-5. Leclant. J. (1960) "Astarté à cheval d'après les représentations égyptiennes," <i>Syria</i> 37 (1960) 36-38.
Dating:	Ahmose I: British Museum (the date is uncertain see below.)
Scene Context:	Horse and rider, ceremonial axe.

The blade on this axe in the British Museum (BM 36766)⁵¹⁰ is moulded in the image of a charging horse and rider, and a lotus motif, (Fig. 4.4) and is attributed by Leclant to Ahmose I.⁵¹¹ The British Museum assigns 1550-1285BC to the axe, however the dating of this object is open to debate.⁵¹² Apparently discovered at Thebes, it was purchased by

⁵⁰⁸ J. Baines & J. Malek (1993) *Atlas*, 36. The Theban Mapping Project lists the dates for Ahmose I as 1570-1546. <http://www.thebanmappingproject.com>

⁵⁰⁹ The first publication of this axe by J. G. Wilkinson (1878) *Manners and Customs of the Ancient Egyptians*, London, 1, 406 suggests Thebes as the site from which it came. H. R. Hall (1931) "The Oldest Representation of Horsemanship (?)" *Annals of Archaeology and Anthropology* 18 (1931) 3-5, suggests its date as "probably the first half of the XVIIIth Dynasty, between 1580 and 1450BC. Its provenance and history are unknown, as it was in the Museum collections certainly before 1835."

⁵¹⁰ British Museum 36766.

⁵¹¹ J. Leclant (1960) "Astarté à cheval d'après les représentations égyptiennes," *Syria* 37 (1960) 36.

⁵¹² Leclant bases the date on the work of H. R. Hall (1931) "The Oldest Representation of Horsemanship (?), an Egyptian Axe in the British Museum" *Annals of Archeology and Anthropology* 18 (1931) 3-5 and 11, A. R. Schulman (1957) "Egyptian Representations of Horsemen and Riding in the New Kingdom" *JNES* 16 (1957) 4, 263-271, dates them on the basis of stylistic similarities to the late 18th Dynasty 267. Rommelaere (1991) *Les chevaux* 160 supports the earlier date on the morphology of the horses depicted. The axe certainly resembles the one found in the tomb of Queen Ahhotep which is currently in the Egyptian Museum (Floor 2 Hall 4. 133.)

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the Museum in 1845.⁵¹³ The Museum states that it was “non functional” and “never fully sharpened”⁵¹⁴ and possibly never used and it resembles the ceremonial axe found in the tomb of Queen Ahhotep, mother of Ahmose I.⁵¹⁵ If the axe was contemporaneous with Ahmose I it would add to the corpus of material attesting to the Egyptian acquisition and use of the horse by that early time and possibly also for the riding of horses in Egypt.

AH I (3) TOMB OF SIPAIR (SAQQARA)

(Fig. 4.5)

Site:	Saqqara.
Reference:	<i>PM</i> 3, (2) 732.
Source:	Malek. J. (1989) “An Early Eighteenth Dynasty Monument of Sipair from Saqqara,” <i>JEA</i> 75 (1989) 61-76, fig. 2.
Dating:	AH I: Malek
Titles:	Head of the Stable of His Majesty. <i>PM</i> 3 (2) 732.
Scene/context:	Hieroglyph. Gardiner, E6.

The earliest attestation of the image of a horse as a hieroglyph was found in the tomb of Sipair⁵¹⁶ dated to the reign of Ahmose I,⁵¹⁷ (Fig. 4.5). Malek discusses the possible interpretations of the term *t-nt-ḥtr* and the readings of Gardiner and Schulman⁵¹⁸ as well as those resulting from Habachi’s restoration of the text and concludes that “the writing of Sipair’s epithet leaves no doubt that *ḥtr* in *t-nt-ḥtri* means “horses.”⁵¹⁹ If this is the

⁵¹³ Though this date does not align with the date mentioned by Hall, see 14 above, as he noted that it was in the Museum’s collection “before 1835.”

⁵¹⁴ http://www.britishmuseum.org/research/search_the_collection_database...arch%2fsearch_the_collection_database%2fmuseum_number_search.aspx accessed 21/10/12.

⁵¹⁵ Egyptian Museum, Floor 2 Hall 4, 133.

⁵¹⁶ J. Malek (1989) “An Early Eighteenth Dynasty Monument of Sipair from Saqqara,” *JEA* 75 (1989) 61-76. He bases his comments on the copies made by Hay and Wilkinson.

⁵¹⁷ J. Malek (1989) “Sipair” bases this dating on the owner’s name, his titles and the orthography of the name of his mother, 68-69.

⁵¹⁸ J. Malek (1989) “Sipair” 71. For an extensive examination of the Egyptian words for “horse” and horse related material see P. Vernus (2005) “Réception linguistique et idéologique d’une nouvelle technologie: le cheval dans la civilisation pharaonique,” 1-47 in M. Wissa (ed) (2005) *The Knowledge Economy and technical capabilities of Egypt, the Near East and the Mediterranean, 2nd millennium B.C.- 1st millennium A.D. Proceedings of a conference held at the Maison de la Chimie Paris, France, 9-10 December 2005*, Barcelona.

⁵¹⁹ J. Malek (1989) “Sipair,” 71.

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case, the Kamose stele ⁵²⁰ (according to Gardiner) when it refers to *t-nt-ḥtr* would then be an even earlier attestation of the term and thus it also refers to horses⁵²¹ (See Ch 2) or at least “the troop concerned with horses.”⁵²² The stele does not provide an image of the horse.

The Kamose stele, the fragments from the Ahmose pyramid complex, the biography of Ahmose son of Ibana, the battle axe and the epithet of Sipair, provide good evidence to conclude that by the time of Kamose and certainly by that of Ahmose I, his brother and successor, horses were known to the Egyptians (most probably and at least, by way of their continual association and contention with the Hyksos). The few faunal remains from the time and sparse iconographic evidence suggests the number of these animals may still have been quite minimal and most probably horses were reserved for the use of the king. The following periods were to change that.

4.2.2 THE REIGN OF AMENHOTEP I

AM I (1) AMENHOTEP I SCARABOID (BM 57929)

(Fig. 4.6)

Site/ Location: “From Egypt” (1925).

Source: From the collection of R. Bethell. British Museum BM57929

⁵²⁰ In which the horses are understood to be in the possession of the Hyksos and the Egyptians take them from them.

⁵²¹ Though certainly not to chariot divisions, as Schulman points out in A. R. Schulman (1964) *Military Rank, Title, Organization in the Egyptian New Kingdom*, Münchner Ägyptologische Studien 6, Berlin, 14ff. This is supported by the rarity of references of this type such as that of Ahmose Son of Ibana who states “Thus I used to accompany the Sovereign- life, prosperity, health! - foot, following his excursions in his chariot.” J. B. Pritchard (1955) *Ancient Near Eastern Texts*, Princeton, 233. See also A. Al-Ayedi (2007) *The Liberation War- the Expulsion of the Hyksos from Egypt*, Ismailia. 90, this idea is supported as well by the paucity of horse remains from this period.

⁵²² J. Malek (1989) “Sipair” 71, Malek quotes Gardiner’s definition of the term. “*t-nt-ḥtri* ‘chariotry’, lit. ‘the (troop) concerned with horses.’” A. Gardiner (1947) *Ancient Egyptian Onomastica*, 1, London. 113.

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The British Museum describes the scaraboid (BM57929; Fig.4.6),⁵²³ as made of glazed steatite and "...is decorated in the form of a couchant horse, longitudinally pierced, the base inscribed with the nomen of Amenhotep I."⁵²⁴ The image of the horse is very distorted, the legs and body are folded and the head placed unnaturally over the front legs.

Dating: Amenhotep I: British Museum (based on the name of the king.)

AM I (2) AMENHOTEP I SCARAB (BASEL 213.233)

(Fig. 4.7)

Site/ Location: Fraser 190.

Source: Hornung. E. & E. Staehelin (1976) *Skarabäen und andere Siegelamulette aus Baseler, Sammlungen, Ägyptische Denmäler in der Schweiz* 1, Mainz. No. 213.233 and plate 21.

This is a glazed steatite scarab depicting, on its base, Amenhotep I driving a chariot wearing the Blue crown and Uraeus, (Fig. 4.7). The image is quite distorted.⁵²⁵

Dating: Amenhotep I: Hornung & Staehelin

AM I (3) RENNI

(Figs. 4.8, 4.9, 4.10)

Site: El Kab 7.

Reference: *PM* 5, 183-184 (3-4).

Titles: Mayor, Overseer of Prophets.

Source: Tylor. J. J. (1900) *Wall Drawings and Monuments of El-Kab. The Tomb of Renni*. London. Plate 2.

Dating: Amenophis I: Tylor, PM.

Position in tomb: Long hall, west side.

Subject: "At one end (Plate 2) is figured a two horse chariot waiting for its master, who appears with his attendants at the other end."⁵²⁶

Horses: Two harnessed horses.

Comment: Tylor. "In the upper register Renni's chariot and pair of horses are represented: The groom walks behind, holding reins and whip in his right hand. The chariot and pair appear small in comparison

⁵²³ [www.britishmuseum.org/accessed 23/04/09](http://www.britishmuseum.org/accessed_23/04/09). In addition S. Harvey (1998) *The Cults of King Ahmose at Abydos*. Doctoral Dissertation: University of Pennsylvania, 309, note 683, mentions another scarab of Amenhotep I featuring the king in his chariot (see below).

⁵²⁴ www.britishmuseum.org Height:0.56 cm, Length: 1.38cm, Width: 1.06 cms.

⁵²⁵ E. Hornung & E. Staehelin (1976) *Skarabäen und andere Siegelamulette aus Baseler Sammlungen*, No. 213.233 and pl. 21.

⁵²⁶ J. J. Tylor (1900) *Wall Drawings and Monuments of El-Kab. The Tomb of Renni*, London, 2.

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with the man and he is of smaller and lighter build than the harvest labourer Aahmes.”⁵²⁷

“...in Plate II we have the earliest dated figure of the horse in Egypt, as well as that of the chariot.”⁵²⁸

Tylor regards the tomb as being dated to the early 18th Dynasty, “at that time the old art of the Middle Kingdom was passing away: novelties were already introduced into the scenes, but the typical art of the New Kingdom had not as yet begun to assert itself.”⁵²⁹

The fact that El Kab is in the provinces may have been a contributing factor to the quality of the images.

Unfortunately, this image is very badly damaged. There are two harnessed horses discernable (Figs. 4.9, 4.10). There is relief without colour. The images occupy half the register and are layered. The horse’s heads are at the driver’s shoulder level and their withers estimated to be at the height of his waist. Their conformation is impossible to estimate. They appear to be finely built. There are remnants of ears seemingly backwards orientated - the first time this has occurred. The heads, with only traces of eyes and noses are unusually long and thin. The mouth on the nearest horse is open. The control mechanism is interesting in that there is no indication of a bridle only what appears to be a jaw rope which is encountered later in the tombs of Amunedjeh (TT 84) and Amenemheb (TT 85). There is no trace of forelocks, manes or tails. The legs are short but in proportion and there is detail in the depiction of the hoofs and the fetlocks. The forelegs are extremely thin and the hind legs slightly thicker, given the distance between them the body appears to be of the typical elongated form. Whilst the driver is stationary the horses seem to be striding forward, perhaps the first step is recorded here as their hind legs are in contact with the bottom of the register.

⁵²⁷ J. J. Tylor (1900) *Wall Drawings*, 2.

⁵²⁸ J. J. Tylor (1900) *Wall Drawings*, 2.

⁵²⁹ J. J. Tylor (1900) *Wall Drawings*, 2.

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4.2.3 THE REIGN OF THUTMOSE I

TH I (1) THUTMOSE I SCARAB (BM 17774)

(Fig. 4.11)

Site: “Found in Egypt.”
Source: From the collection of R. Hay.

A jasper scarab acquired in 1867 in the British Museum (BM17774) with the “base inscribed with the prenomen of Thutmose I and decorated with a representation of the king in a chariot firing an arrow at a falling Nubian soldier.”⁵³⁰ (Fig. 4.11).

The scarabs and scaraboid are not adequately provenanced and cannot be reliably dated. The images are distorted because of the size and shape of the artefacts and so they cannot contribute to an understanding of the nature of the horses depicted. However it is significant that scarabs were used as seals⁵³¹ and appear to have the names of kings with depictions of horses on them. At this time it might have been significant that the kings revealed themselves through their seals as the owners of horses indicating the status that these animals enjoyed.

Dating: Thutmose I: British Museum (based on the prenomen of king.)

4.2.4 THE REIGN OF THUTMOSE II

TH II (1. A, B) TEMPLE OF THUTMOSE II- FRAGMENTS

(Fig. 4.12)

Site: PM 2, 456-457.
Source: Bruyère. B. (1952) *Deir el Medineh Année 1926, Sondage au Temple Funéraire de Thotmés II (Hat Ankh Shesept)*, FIFAO (1952) 4/4. Plates 2, 3, 4.
Gabolde. L. & M. Gabolde (1989) “Les temples ‘mémoires’ de Thoutmosis II et Toutankhamon,” *BIFAO* 89 (1989) 127-178.
Harvey. S. (1998) *The Cults of King Ahmose at Abydos*, Philadelphia, figs. 91 and 92.7.
Dating: Thutmose II: Bruyère and Gabolde.

Fifteen fragments were recovered in 1926 originating from the temple of Thutmose II (1492-1479 BCE) the “small temple” at Medinet Habu that was completed by Thutmose

⁵³⁰ www.britishmuseum.org/ accessed 23/04/09.

⁵³¹ I. Shaw & P. Nicholson (1995) *The Illustrated Dictionary of Ancient Egypt*, London. 253 and see also R. David (2002) *Religion and Magic in Ancient Egypt*, London, 175.

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III (1479-1425 BCE). These appear to show “two elaborate Asiatic-chariot melees in reverse orientation which graced the interior of the second-phase columned court toward the entrance. Most of the fragments contained elements of fleeing Asiatic chariotry put to rout by Pharaoh in his war chariot.”⁵³² (Figs. 4.12.1 a, b). Until the discovery of the Ahmose temple fragments in 1993,⁵³³ these were thought to be the oldest depictions of chariots in battle scenes.

One fragment (Fig.4.12.1a), features part of a scene containing the identifiable hind legs and tails of chariot horses - four horses in the foreground and another two in the background. These depictions are layered,⁵³⁴ resulting in the nearest horse being rendered in the greatest detail. The rump and hind legs of the horses are not drawn anatomically correctly though the images display a vague level of knowledge of the general outline of horses. This is continued in the fragment (Fig.4.12.1b,) listed by Harvey⁵³⁵ as fig. 92.7 that features two incomplete horses heads, showing the cheek-pieces and brow bands of bridles. Once again the image is layered and very much an outline, with the horses inexpertly rendered. Fragments one and four of Harvey’s fig. 92 show partial legs and chests only.

4.2.5 THE REIGN OF HATSHEPSUT

HAT (1) TT 73 AMENHOTEP (?)

(Figs. 4.13, 4.14, 4.15)

Site: Shaykh ‘Abd al Qurnah TMP Map V, D-4, e, 8.
Reference: *PM 1 (1) 143-144 (3)*.

⁵³² W. R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramesside Battle-Narrative Tradition*, Dissertation, University of Chicago. Illinois 96. Though the fragments have not been reconstructed, Johnson points out their probable inclusion in the developing battle scene narrative of the kings displayed on the walls of their temples.

⁵³³ See S. Harvey (1998) *The Cults of King Ahmose at Abydos*, Philadelphia.

⁵³⁴ See H. Schäfer (2002) *Principles of Egyptian Art*, Oxford, 177-189 for a comprehensive discussion of the development and nature of this technique.

⁵³⁵ S. Harvey (1998) *Ahmose*, 545, fig. 92, Fragment 7.

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Titles:	Overseer of Works on the Two Great Obelisks in the Temple of Amun, Chief Steward, Veteran of the King, Overseer of the Cattle of Amun, Warrior of the King.
Source:	Säve-Söderbergh. T. (1957) <i>Four Eighteenth Dynasty Tombs</i> , Private Tombs at Thebes, vol. 1, Oxford. Plate 3. Kampp. F. (1996) <i>Die thebanische Nekropole</i> . 306-307. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 99.
Dating:	Hatshepsut: PM, Säve-Söderbergh, Kamp, Wasmuth, TMP
Position in tomb:	Broad hall, west wall.
Scene Context:	The chariots form part of the presentation of gifts.

Plate 3. There are three chariots, without horses, on the northeast wall in the right part of the upper registers. Two are badly damaged; the top most is depicted in full (Figs. 4.14, 4.15) and described as “a great chariot of shendet wood from vile Kush, decorated with gold.”⁵³⁶

Note: The tomb owner’s name is not certain.

HAT (2) TT 67 HEPUSENEB

(Figs. 4.16, 4.17)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4, g, 8.
Reference:	<i>PM I (1) 133 (3)</i> .
Titles:	First Prophet of Amun.
Source:	Davies. Ni. (1961) “A Fragment of a Punt Scene,” <i>JEA</i> 47 (1961) 19-23. Plate 5. Kampp. F. (1996) <i>Die Thebanische Nekropole: Zum Wandel des Grabgedankens von der XVIII. bis zur XX. Dynastie</i> , Theben XIII, Mainz, 289-292. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen, ein Beitrag zur Architektur der thebanischen Beamtengräber der 18. Dynastie</i> , BAR Reports International series 1165, Oxford, 95.
Dating:	Hatshepsut: Davies, PM, Kampp, Wasmuth Hat/Thut III: TMP
Note:	This tomb is in fragments. The piece is very badly damaged,
Position in tomb:	Pillared hall, pillar, north west side of pillar.
Scene Context:	Parts of a chariot only (Fig. 4.17).

HAT (3) DJEHUTY-HETEP- DEBEIRA

(Fig. 4.18)

⁵³⁶ T. Säve Söderbergh (1957) *Four Tombs at Thebes*, 4.

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Site:	Debeira, (East) Nubia.
Reference:	<i>PM</i> 7, 128.
Titles:	Prince of Serra, Brave Leader of the Lady of the Two Countries, Prince, Son of a Prince, Excellent Heir. Prince of <i>thht</i> , Scribe.
Source:	Säve-Söderbergh. T. (1960) "Djehuty-hetep at Debeira," <i>Kush</i> 8 (1960) 25-44, fig.5.
Dating:	Hatshepsut: PM, Säve-Söderbergh
Tomb:	This is one of the few provincial tombs to contain a depiction of horses and it is even more significant because Säve-Söderbergh states: "No instance of a decorated tomb from the XVIIIth Dynasty is known to me from Nubia." ⁵³⁷ Even more interesting is that Djehuty-hetep appears to have been a Nubian. ⁵³⁸ Säve-Söderbergh goes on to point out that when discussing the decorations in the tomb it is particularly difficult because of the lack of other provincial tombs, to compare this one with other than Theban tombs. ⁵³⁹
Position in tomb:	On the southern side of the west wall of the shrine there is a scene of the deceased hunting in a chariot pulled by galloping horses, ⁵⁴⁰ immediately to the right of the entrance. (No tomb plan available.)
Note:	It is a hunting scene that is badly damaged and has to a large extent been reconstructed in the text.
Horses:	Depiction of two harnessed horses in the "Flying Gallop."

What can be seen is the depiction of two harnessed horses in the "Flying Gallop" orientation (Fig. 4.18). They are layered and seem to be elongated in the first and second thirds, though it is difficult to be certain because of their action. They appear gracile in form and compared to the size of the tomb owner (if it is he who is in the chariot) and the chariot, to be relatively small. The excavator makes no mention of colour and there is virtually no detail visible excepting that the mouths appear to be open.

⁵³⁷ T. Säve-Söderbergh (1960) "Djehuty-hetep at Debeira," *Kush* 8 (1960) 25.

⁵³⁸ T. Säve-Söderbergh (1960) "Djehuty-hetep," 30-31, for a discussion of his origins.

⁵³⁹ T. Säve-Söderbergh (1960) "Djehuty-hetep," 26.

⁵⁴⁰ T. Säve-Söderbergh (1960) "Djehuty-hetep," 31.

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4.2.6 THE REIGN OF THUTMOSE III

TH III (1) TT 121 AHMOSE

(Fig.4.19)

Site:	Shaykh ‘Abd al Qurnah. TMP Map. V, D-4, e, 7.
Reference:	<i>PM I(1) 235 (8).</i>
Titles:	First Lector of Amun.
Source:	<i>PM I (1) 235.</i> Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 410-412. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 114.
Dating:	Thutmose III (?): PM Thutmose III: Kampp, Wasmuth, TMP
Position in tomb:	Long hall, north wall.
Subject:	Funeral procession.
Horses:	No image available. PM mentions a chariot but not horses.

TH III (2) TT 123 AMENEMHET

(Figs. 4.20, 4.21, 4.22)

Site:	Shaykh ‘Abd al Qurnah TMP Map VI, E-4, g, 3.
Reference:	<i>PM I (1) 236-237 (10, 11).</i>
Titles:	Scribe, Overseer of the Granary, Counter of Bread.
Source:	Davies. N. de Garis. (1932) “The Work of the Graphic Branch of the Expedition.” <i>Metropolitan Museum of Art Bulletin</i> 27, 3 (1932) 51-62, fig. 8. Wegner. M. “Die Stilentwicklung der thebanischen Beamtengräber” <i>MDAIK</i> 4 (1933) 38-164. Plate 5. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 412-413.
Dating:	Tuthmosis III: Wegner, PM Thutmose III: Kampp, TMP
Position in tomb:	Long hall, north wall.
Scene Context:	Procession of domestic animals.
Horses:	There are two unharnessed mares, two foals and five stallions.

This is a relief depicting a procession of domestic animals containing two mares, two foals and five stallions (Fig. 4.21, 4.22). It is in more complete condition than those mentioned previously and is one of only two remaining depictions of foals.

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Davies notes that in this delightful scene the adult animals are depicted very much in line with traditional methods, but the young animals are represented in an entirely different fashion. The foals and calves leap into the air, some facing the opposite direction to their parents, filling the spaces between them and by so doing “the artist readily abandons the canons which forbid any confusion of lines and objects, as well as those that keep his figures on terra firma and in slow movement.”⁵⁴¹

There are two unharnessed mares, two foals and five stallions in this image, the mares being the only ones wearing halters. The relative proportion of the foals to the adults appears realistic.⁵⁴² The figures of the mares and stallions are layered. The horse’s heads are at the same height as the person in the scene and their withers are at approximately waist height. They occupy nearly the whole height of the register. Both groups of horses are excessively elongated⁵⁴³ and in conformation with the stallions depicted, slightly more heavily built than the mares. This is interesting in that there is no sexual dimorphism in horses.⁵⁴⁴ When measured in accordance with standard norms (see below) both the mares and the stallions are twice as long in the body as they are in either the hind or fore sections (which ideally should be equal to it, or almost so). In reality this would result in an animal with an extremely weak back which could not be ridden and which would also experience a series of leg problems.⁵⁴⁵ It is tempting to suggest this as the reason so few horses are seen being ridden in ancient Egypt, but these horses are not anatomically correct in these proportions. A horse’s back is not necessarily strong and one this long would not support the horse itself much less the weight of a rider or the strain of supporting or pulling a chariot. Why then are they

⁵⁴¹ N. de Garis Davies (1932) “The Work of the Graphic Branch of the Expedition,” *Metropolitan Museum of Art Bulletin* 27 (Mar, 1932) 54.

⁵⁴² The tiny horse fitted into the space beneath the bellies of the mares is a later graffito. N. de Garis Davies (1932) *Work of the Graphic Branch*, 54.

⁵⁴³ H. Smith Thomas (2005) *The Horse Conformation Handbook*, North Adams, M.A. 194. This provides an extremely clear explanation and demonstration of horse conformation. This is the ideal and there are variations in breeds but the differences are minor. “The ideal horse can be visualized in thirds. His body should be one-third shoulder area (the front part of the horse that is measured from the point of the shoulders to a line dropped from where the withers meet the back), one-third body (the section of his body measured from the withers to the point of the hip), and one-third hip area (from the point of the hip to the point of the buttock). This standard thus makes the horses in this tomb extremely elongated in the middle section of their bodies.

⁵⁴⁴ B. J. MacFadden (1992) *Fossil Horses. Systematics, Paleobiology and Evolution of the Family Equidae*, Cambridge, 272-272 and 295.

⁵⁴⁵ H. Smith Thomas (2005) *Conformation*, 194.

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depicted in this way? Certainly the need exists for them to be shown as large animals, yet horses standing or walking with heads up are more upright animals than cattle. It would seem there has been a compromise in this scene. The mare's heads are raised yet their backs are low, the stallion's heads are low but their backs are raised giving the impression of greater size, both groups fit neatly into the register. Perhaps this is an indication of the effects of the canon requiring that the male be depicted as larger than the female?

The overall impression is of a gracile form. The ears are in proportion and orientated forwards, eyes, noses and mouths are visible and the mouths are closed. Forelocks seem to be indicated. No mention is made of the remains of colour.

In this image both male (genitalia are clearly present) and presumably female (with foals at foot) horses are depicted as are two foals displaying typically foal-like behaviour in a domestic scene; the mares occupying the top register are the only animals under direct control of a person. There is much less detail preserved in the foals than in the adult horses. The legs of the horses seem short in proportion to their bodies and there is a small amount of hoof detail. Neither tails nor manes are filled in and tails are carried at a high angle.

The scene is a peaceful pastoral one with the horses and the person relaxed (he is turned away from the horses he leads). The horses appear to have a "happy" expression and the foals are playing happily.

The artist is, at this early date, clearly comfortable with the depiction of horses in a general sense and the image exhibits features common to Egyptian artistic tradition with the exception of the foals. Aside from the excessive elongation, the horses are shown recognisably with manes and tails (which are shown particularly highly set, a feature consistent with the modern day Arab breed). They do appear to be relatively small compared to the man (given the considerations of the space available and the discussion above). Their legs, similar to the description of the remains (see Chapter 2), are slender and long and the animals themselves are gracile. In this tomb the faunal remains and the images depicted are in agreement.

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TH III (3) TT 155 ANTEF

(Figs. 4.23, 4.24, 4.25)

Site:	Dra Abu el Naga. TMP Map 1, C-7, c, 7.
Reference:	<i>PM I (1) 263-265 (3, 10).</i>
Titles:	Great Herald of the king, The Seigneur, The Companion, The Great Favourite, The Herald Antef of the Thinite Nome, The Great Herald Antef.
Source:	Säve-Söderbergh. T. (1957) <i>“Four Eighteenth Dynasty Tombs.”</i> Oxford, Plates 13, 16. Davies. N. de Garis. (1932) “The Work of the Graphic Branch.” <i>Metropolitan Museum of Art Bulletin</i> . Pt ii. March 1932. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 441-443. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 118.
Dating:	Thutmose III: Säve-Söderbergh Hat/Thutmose III: PM, Kampp, Wasmuth, TMP
Note:	TT 155 Antef’s tomb is badly damaged.
Position in tomb:	In the Pillared hall ⁵⁴⁶ (3) (west side) there is an image of foreigners bringing tribute ⁵⁴⁷ one item of which is a chariot and in the Long hall (10), on the right (north) wall ⁵⁴⁸ only the legs of the horses and the lower half of a chariot’s wheels remains.
Scene Context:	A hunting scene.
Horses:	A team of two.

Säve-Söderbergh has interpreted this as a “hunting scene.”⁵⁴⁹ It is significant that a chariot is deemed to be an appropriate tribute from foreign peoples and that Antef, a man of importance in the court, is already in possession of both a chariot and the team of horses to power it. Additionally, if it is Antef himself mounting the chariot it appears he was in a position to use it for his leisure pursuits.

Whilst there is little remaining of the image, it is clear that the horses are in a team of two and that they are of slender legged appearance (Fig. 4.24). There is no mention of colour but there is an indication of the detail of hair on the tail. There is also some detail

⁵⁴⁶ T. Säve-Söderbergh (1957) *Four Tombs*, plate XIII. This image is on the left back wall: left half, upper registers.

⁵⁴⁷ N. de Garis Davies (1932) *Graphic Branch*, fig. 12. PM identifies them as Syrian. 263.

⁵⁴⁸ T. Säve-Söderbergh (1957) *Four Tombs*, plate XVI.

⁵⁴⁹ T. Säve-Söderbergh (1957) *Four Tombs*, 20.

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in the hoofs and the fetlocks. Compared to the damaged figure of the person behind the chariot, the horses appear to be quite small in stature.

TH III (4) TT 11 DJEHUTI

(Figs. 4.26, 4.27)

Site:	Dra Abu el Naga TMP Map II, D-6, j, 1.
Reference:	<i>PM I (I) 21-24 (7)</i> .
Titles:	Overseer of the Treasury, Overseer of Works
Source:	Säve-Söderbergh. T. (1958) "Eine Gastmahlszene im Grabe des Schatzhausvorstehers Djehuti," <i>MDAIK</i> 16 (1958) 281-291. Plate 5. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 190-192. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford.
Dating:	Thutmose III: Säve-Söderbergh Hat/Tuthmosis III: PM Thutmose III: Kampp, Wasmuth, TMP
Position in tomb:	On the left front wall of the Broad hall, south-east wall.
Scene Context:	Damaged image of a hunting scene.
Horses:	Horses walking.
Note:	Säve-Söderbergh comments, "Die beiden vorgespannten Pferde sind mit einer für diese Zeit seltenen Eleganz und Naturtreue gezeichnet, was trotz der weitgehenden Zerstörung des Reliefs noch klar zu erkennen ist." ⁵⁵⁰

This is a damaged image of a hunting scene⁵⁵¹ containing most of the chariot and the lower portions of the horses with what may be two attendant grooms (Fig. 4.27). Apparently Djehuti was in possession of a team that he could use for his leisure some of the time. Säve-Söderbergh outlines the typical association of this type of scene and those of burial and agriculture in tombs at this time.

The image is badly damaged and there is no indication of colour. The horses do not look as elongated in their conformation as previous horses. They have long, fine legs with no detail of hoofs, but an indication of fetlocks. The horses are layered and have a

⁵⁵⁰ T. Säve-Söderbergh (1958) "Eine Gastmahlszene im Grabe des Schatzhausvorstehers Djehuti," *MDAIK* 16 (1958) 287.

⁵⁵¹ T. Säve-Söderbergh (1958) "Eine Gastmahlszene," 287.

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very high tail carriage. They are accompanied by one or two persons and seem to be walking calmly.

TH III (5) TT 86 MENKHPERRASONB

(Figs. 4.28,4.29, 4.30,4.31, 4.32)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4, e, 9.
Reference:	<i>PM I (1) 175-178 (5, 8).</i>
Titles:	First Prophet of Amun, Superintendent of Craftsmen and the Treasury.
Source:	Davies. N. de Garis. & Nina de Garis Davies. (1933) <i>The Tombs of Menkheperasonb, Amenmose and Another, (Nos. 86, 112, 42 and 226)</i> The Egypt Exploration Fund, The Theban Tomb Series, 1st Memoir, London, Plates 1,7,12. Wreszinski. W. <i>Atlas zur altaegyptischen Kulturgeschichte</i> . 2 vols. (Leipzig 1923), (reprint 1988) Geneve. 1. Plate 276. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 338-340. Dorman. P. (1995) “Two Tombs and One Owner” in J. Assman, Dziobek. E., H. Guksch & F. Kampp (eds.) (1995) <i>Thebanische Beamtennekropolen: Neue Perspektiven archäologischer Forschung, Internationales Symposium Heidelberg 9–6.1993, Studien zur Archäologie und Geschichte Altägyptens 12</i> , Heidelberg, 141-154. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 104
Dating:	Tuthmosis III: Davies, PM Thutmose III: Dorman, Kampp, Wasmuth, TMP
Note:	TT 86 (he has another tomb (TT 112) but there are no horses or chariots in that tomb.)
Position in tomb:	Chariot making is in the Broad hall, east wall, north side. (5) A chariot is being presented disassembled in the Broad hall, west wall, north side. In the Broad hall, west wall north side (same as the chariots), four horses are being presented. (8)
Scene Context:	Workshop and presentation.
Horses:	Detailed image of four horses in two pairs.
Comment:	Davies points out that TT 86 is a later tomb than TT 112. ⁵⁵²

⁵⁵² N. de Garis Davies (1933) *The Tombs of Menkheperasonb, Amenmose and Another (Nos. 86, 112,42 and 226*, London. 20.

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On the east wall, north side of the cross hall of the tomb there is a scene of a workshop which, amongst other things, is producing weapons, bows, arrows and chariots (Fig. 4.29). Davies identifies this as: “An inspection of the workshop of the temple of Amun and the activities of the craftsmen”⁵⁵³ (plates XI and XII “Temple Craftsmen at Work”). The stages of manufacture of chariots are depicted. As Menkheperasonb was Superintendent of Craftsmen and the Treasury this would seem to be appropriate.

There is another chariot featured on the west wall, north side of the cross hall (Fig. 4.30).

In the top register of this wall two unharnessed and two harnessed horses are being presented (plate VII) (Fig. 4.31). Davies comments that the bearers can be identified as Syrians, “their gifts which now include horses, are mostly of military equipment and this is just what a conqueror would naturally demand.”⁵⁵⁴

There are four horses in two pairs, of the two being led the front one is white and the rear is red (Fig. 4.32). The harnessed horses are also white (front) and red (rear). The horses are very finely illustrated in considerable detail. They are layered. They fill three quarters of the height of the register; they have elongated conformation and are small; the tops of their heads are aligned with the shoulders of the Syrians and their withers with the waists of the men. They are gracile in form. Their ears are orientated forward and are in proportion to their heads and they are also layered. Eyes are finely shown as are the noses and the mouths are open. Manes and tails are filled in detail and the tails are carried at a high angle. There is some detail in the depiction of the hoofs. There is no indication of gender. They appear alert and the attendant seems to be calming them with a raised hand.

⁵⁵³ N. de Garis Davies (1933) *Menkheperasonb*, plates XI and XII.

⁵⁵⁴ N. de Garis Davies (1933) *Menkheperasonb*, 5. The text above reads, “Receiving the tribute of the victories [of his majesty...] turquoise and all costly stones which the victorious sovereign presented to his father [Amun...] of the northern and southern foreign lands by the Prince and Count, [Chief priest of Amun...], effective con[fidant] of his lord, [...Men]kheper[re]-seneb. Justified.” *Urk IV*, 930. 11-13.

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TH III (6) TT 145 NEBAMUN

(Figs. 4.33, 4.34, 4.35)

Site:	Dra Abu el Naga. TMP Map II, D-6, g, 1.
Reference:	<i>PM I (I) 257-258 (2).</i>
Titles:	Head of Bowmen.
Source:	Davies. N de Garis. (1932) "The Work of the Graphic Branch of the Expedition." <i>Metropolitan Museum of Art Bulletin</i> . 27. No. 3. Part 2 "The Egyptian Expedition 1930-1931." 51-62, fig.9. Capart. J. (1927-1931) <i>Documents pour servir à l'étude de l'art égyptien</i> . Paris, 2, Plate 69. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 430.
Dating:	Dyn XVIII: PM Hat/Thutmose III: Kampp, TMP
Position in tomb:	Long hall, north wall.
Scene Context:	Typical pastoral scene.
Horses:	Two horses in a rural scene.

The image is of a pastoral scene that Capart states is typical of traditional themes in Egyptian art from the Old Kingdom to the beginning of the New Kingdom.⁵⁵⁵ *PM I (I) 257* identifies this as "Recording horses, cattle."

There are two horses depicted with no indication of colour (Figs. 4.34, 4.35). They are layered and appear to be wearing halters (the heads have been damaged) but are not harnessed. They fill three quarters of the register in height and appear to be depicted as of a similar height to the cattle and the donkeys in the scene. Their heads are in line with the person in the register and their withers are at his waist height. The bodies are elongated, the barrel seems very shallow and the legs short in proportion, though they appear quite fine. Their ears are clearly shown and are orientated forward there is no trace of facial features remaining. The mane is full but not in-filled nor is the tail which is carried at a high angle. There is no indication of gender and some attempt has been made to indicate hoofs and fetlocks. The forelegs are raised indicating movement but the hind legs are firmly grounded. The horses appear as a part of a calm and typical rural scene.

⁵⁵⁵ J. Capart (1927-1931) *Documents pour servir à l'étude de l'art égyptien*, Paris. Vol 2.

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TH III (7) PAHERI

(Figs. 4.36, 4.37, 4.38, 4.39, 4.40)

Site:	El Kab 3.
Reference:	<i>PM 5, 177- 182 (5-6).</i>
Titles:	Mayor of Nekheb and of Inyt, Scribe, Tutor of the Hereditary Prince Uadjmes, Uppermost of the Priests of Nekhbet.
Source:	Tylor. J. J. & F. L. Griffith (1895) <i>Wall Drawings and Monuments of El-Kab: The Tomb of Paheri at El Kab</i> . London, plate. 3. Osirisnet, (date unknown) http://www.osirisnet.net/tombes/el_kab/pahery/e_pahery1.htm Nile Musings. http://www.nilemuse.com/muse/sailorHorses.html
Dating:	Thutmose III: Tylor & Griffith Dyn. XVIII: PM
Comment:	“Work in the tomb is of a beautiful quality.” “All figures and hieroglyphs are sculpted in raised relief and are painted.” Osiris.net.1.
Position in tomb:	Long hall, west wall, south end, third register, showing Paheri’s official functions. Same location, fourth register boats carrying horses.
Scene Context:	1. Paheri’s official inspections. His chariot and team await him. 2. Horses and chariot on boats.
Horses:	1. Two horses. 2. Four horses.
Note:	This is the first instance of horses occurring on boats. The quality of the image is not to the standard of those in the tomb of Menkheperasonb. This may be explained by the fact that this tomb is a provincial one.

1. There is red/brown paint adhering to the bodies of the chariot horses and the horses on the boats are red. There are two horses, layered and harnessed to a chariot (Figs. 4.38, 4.39, 4.40). They are approximately half the height of the register. Their heads are neck height compared to the men in the scene and their withers at approximately waist height. The heads are badly damaged but ears are present and are orientated forward. There are no remaining facial features excepting one minimally present eye. There are traces of a thin in-filled mane and the tails are also filled in. The bodies are elongated and the legs are long and fine with some indication of hoofs and fetlocks. The tails are

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held almost horizontally. There is no indication of gender. The horses appear to be striding forward but are at the same time under the restraint of the groom. They are calm. The passage above the team states: “Stand (still), do not make ‘trouble’, excellent chariot team of the ‘mayor’, beloved of its lord, that the mayor boasts of to everyone.”⁵⁵⁶

2. The images are damaged but at least one horse can be made out on each of the two lower boats (Fig. 4.37). Given that there are two chariots (one on each boat) there are most likely two teams i.e. four horses. They are red in colour but more is difficult to ascertain.

TH III (8) TT 39 PUYEMRE

(Figs. 4.41, 4.42, 4.43)

Site:	Khokha TMP Map IV, D-5, d, 7.
Reference:	<i>PM I (1) 71-75 (3, 8-9).</i>
Titles:	Second Prophet of Amun, Superintendent of Hatshepsut's Temple, Count, Royal Chancellor, Temple Father, Friend of the God, Great Chief in the South East, Chief of Nekhen and He of Nekhen, Judge and Administrator of the Town of Dep, Superintendent of the Cattle and the Fields of Amun.
Source:	Davies. N. de Garis. (1922-1923) <i>The Tomb of Puyemre at Thebes</i> . Publications of The Metropolitan Museum of Art Egyptian Expedition, Robb de Peyster Tytus Memorial Series: II and III, 2 vols, New York, Plates 12, 23. Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve 1, Plate 146. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 230-233. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 83.
Dating:	Tuthmosis III: Davies, PM Hatshepsut/ Thutmose III: Kampp, Wasmuth, TMP
Position in tomb:	Broad hall, north wall.

⁵⁵⁶ Author's translation. See J. J. Tylor (1895) *Wall Drawings and Monuments of El-Kab: The Tomb of Paheri at El Kab*, London. 13, pl. 3. “Stand still, don't be restless, you excellent team of the mayor, the beloved of its lord, about which the mayor boasts to everyone.” Osirisnet.net translates this as, “Remain calm, don't be disobedient, excellent horse, beloved of his master, with whom the prince can rely on no matter what.”
http://www.osirisnet.net/tombes/el_kab/pahery/e_pahery1.htm

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Scene Context:	Chariot making. ⁵⁵⁷ “ On the edge of the breach in the wall a horse is being led forward.” ⁵⁵⁸
Horses:	Davies plate XII.
Note:	Davies states, “on the edge of the breach in the wall a horse is being led forward. It is very badly drawn for the Egyptian artist had not yet learned to represent it passably, not finding it among his ancient models. The animal, reared in Syria or from Syrian stock is perhaps being acclimatized in the Delta before being taken south.” ⁵⁵⁹

] Davies plate XII contains the image of a single horse being led by a groom that fills half the register with no layering apparent (Figs. 4.42, 4.43). No colour is mentioned. Its head is at the groom’s chest height but the image is too damaged to reveal any more of the animal. The withers height might be assumed to be at hip height given its other dimensions. The ears are present and in proportion and orientated forward and there seems to be a trace of a forelock. The eyes and nose are minimal the mouth is open and the tongue is protruding. The horse’s legs are very short and curved and there is some indication of a hoof and fetlock. These are minimal compared to the hoofs of the cattle in the same register. The animal appears to exhibit the same calm and obedient demeanour as the other species in the scene.

TH III (9) TT 99 SENNEFERI

(Figs. 4.44, 4.45, 4.46, 4.47)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, VI, E-4, d, 1. LÄ V: 856-857.
Reference:	<i>PM I (1) 204-206 (5).</i>
Titles:	Overseer of the Seal, Overseer of the Gold-Land of Amun.
Source:	Strudwick. N. (1997-2010) <i>The Tomb of Senneferi: Theban Tomb 99</i> . Cambridge Theban Tombs Project. http://www.fitzmuseum.cam.ac.uk/ online resource, accessed 7/2/2010.
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole: 368-370</i> . Tuthmosis III: PM Thutmose III: Kampp, Strudwick, TMP

⁵⁵⁷ N. de Garis Davies (1923) *The Tomb of Puyemre at Thebes*, Publications of The Metropolitan Museum of Art Egyptian Expedition, Robb de Peyster Tytus Memorial Series: II and III, 2 vols, New York. Vol.1, plates XXIII and XXIV.

⁵⁵⁸ N. de Garis Davies (1923) *Puyemre*, 1, 63.

⁵⁵⁹ N. de Garis Davies (1923) *Puyemre*, 1, 63.

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Note:	The tomb is damaged and the horse's rears and the chariots are missing.
Position in tomb:	Broad hall, north wall, east side.
Subject:	Senneferi returning from Lebanon with tribute.
Horses:	Four horses harnessed to chariots.

There is still considerable detail in these images (Figs. 4.45, 4.46, 4.47). The proportions are interesting in that the heads and necks seem disproportionately high and somewhat "giraffe-like" compared to the body. The horse at the front in the first team is white and the rear is red. The second team appears in reverse, the front horse red and the rear white. The horses are layered. They take up three quarters of the register with their heads at shoulder height and their withers at hip height. The overall impression is of a fine and gracile animal. Conformation cannot be assessed because of the damage. Ears are present and are orientated forward. There are traces of forelocks that are filled in and painted. The eyes are the most detailed being very large, equipped with brows and irises as well as some extra detail below the eye. There is also the first indication of a jaw line on the front white horse. Noses are indicated with a swirl of red paint and the mouth is open on the second red horse, no teeth or tongues are visible. The two nearest horses display detailed manes that are filled in and coloured red. The legs appear to be very thin and there are detailed hoofs and fetlocks. The horses are harnessed and while seeming alert, are obedient and walking forward.

TH III (10) TT 342 THUTMOSE

(Fig. 4.48)

Site:	Shaykh 'Abd al Qurnah. TPM Map VI, E-4, g, 2.
Reference:	<i>PM I (1) 409-410 (4)</i> .
Titles:	Hereditary Prince, Royal Herald.
Source:	Hay MSS 29822, 69, 70, 72-4. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 581-582.
Dating:	Tuthmosis III: PM Thutmose III: Kampp, TMP
Position in tomb:	Broad Hall, south west wall.
Subject:	Deceased in chariot hunting wild bulls. (<i>PM I (1) 409 (4)</i>).
Horses:	NA.
Note:	No image available.

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TH III (11) TT 21 USER

(Figs. 4.49,4.50)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4, g.
Reference:	<i>PM I (I) 35-37 (10)</i>
Titles:	Scribe. Steward of Thutmose I (Hatshepsut- Thutmose III).
Source:	Davies. N. de Garis (1913) <i>Five Theban Tombs (Being those of Mentuherkhepeshef, User, Daga, Nehemaway and Tati)</i> The Egypt Exploration Fund: Archaeological Survey of Egypt, 21st Memoir, London. Plate 22.
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole: 203-205.</i> Thutmose I/Hatshepsut: Davies Tuthmosis I: PM Thutmose I/Hatshepsut/Thutmose III (?): Kampp, TMP
Position in tomb:	Long hall, north wall.
Subject:	Tomb owner in a chariot hunting in the desert. ⁵⁶⁰
Note:	The tomb is damaged and the only identifiable image is the bottom part of a chariot wheel (Fig. 4.50).

TH III (12) CALCITE TABLET⁵⁶¹

(Figs. 4.51, 4.52)

Site:	No provenance.
Reference:	“From the Theban necropolis.” ⁵⁶²
Source:	Baud. M. (1935) “Les dessins ébauches de la nécropole Thébaine.” Cairo. 55, fig. 10. Woldering. I. (1967) <i>The Arts of Egypt</i> , London.129.

⁵⁶⁰ N. de Garis Davies (1913) *Five Theban Tombs (Being those of Mentuherkhepeshef, User, Daga, Nehemaway and Tati)*, The Egypt Exploration Fund: Archaeological Survey of Egypt, 21st Memoir, London, 23, and plate XXII.

⁵⁶¹ I am grateful to Dr. C. Loeben of the Museum August Kestner for a photograph and information concerning this image (pers comm. 19.4.11). He notes that the object was acquired by the Kestner Museum before 1889 and there is no information available regarding its provenance. M. Baud (1935) *Les dessins ébauchés de la nécropole Thébaine*, Cairo 55 (fig.10) includes it in his discussion of the sketches in the Theban necropolis but does not mention its provenance and I. Woldering (1967) *The Arts of Egypt*, London, 129 states that it is made of limestone and dates it to the 18th Dynasty. There is no indication of the reason for this determination or for its inclusion in that text in the period of Thutmose III. The significant features of the object are the remaining construction lines that include the horses which may shed light on the methods used by the Egyptians to depict these animals.

⁵⁶² M. Baud (1935) *Les dessins ébauchés de la nécropole thébaine au temps du Nouvel Empire*, MIFAO 63, Cairo 55 (fig. 10)

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	Museum August Kestner, Hanover. (No. 2952) Limestone in black and red, Dynasty XVIII, c. 1500 BC. Height 39cm, width 27.5 cm, thickness 3 cm.
Dating:	Thutmose III: See footnote 69 below.
Horses:	Two horses and a chariot.
Note:	This object does not have a satisfactory provenance as it was acquired before the opening of the Kestner Museum in 1889 and no information exists relating to its find spot or circumstances. The dating of the tablet is that ascribed to it by Woldering who suggests circa 1500 BCE.

This is a calcite tablet currently held in the Museum August Kestner, Hanover. It is 39 cm high, 27.5 cm wide and 3 cm thick. It bears the image of a chariot and two (layered) horses moving forward under the direction of a driver (Fig. 4.51, 4.52). The image is in two colours, black and red. The heads of the horses correspond in height to the head of the driver and if he were standing on the ground, their withers would be at the height of his waist. The horses appear to be rather heavy in contrast to their fine legs and their barrels are elongated. Their ears are pointed forward and their manes draped. There is no discernible detail in the noses, eyes or mouths. The tail angle is low, there are hoofs, fetlocks and pasterns visible and they appear to be stallions. They are moving forward at an apparently fast pace. Unusually, the driver is in possession of a whip that he appears to be using.

The most intriguing feature of this artefact is that there are traces of construction lines on the image.

4.2.7 THE REIGN OF AMENHOTEP II

AM II (1) AMENHOTEP II (BLOCKS)

(Fig. 4.53)

Site:	Asasif
Reference:	
Source:	Brand. P. (1995) "A Thutmosid Battle Relief," in N. Thomas (ed.) (1995) <i>The American Discovery of Ancient Egypt</i> . Cat. No. 74, Los Angeles 271-275.

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	Metropolitan Museum of Art. No. 13.180.21.
	Winlock. H. E. (1914) “ The Egyptian Expedition 1912-1913, Excavations at Thebes,” <i>Bulletin of the Metropolitan Museum of Art</i> 9, (1914) 11-23.
Dating:	Amenhotep II: Winlock, Brand
Subject:	Conquest of Asiatics.
	Two large blocks from Asasif, Thebes contain very well preserved coloured images ⁵⁶³ of the conquest of Asiatics.
Horses:	Two stallions.

One block depicts a pair of chariot horses above the fallen bodies of Asiatics (Fig. 4.53). On the basis of costume, physiognomy, and elements of harness, Brand dates the blocks to Amenhotep II.⁵⁶⁴ Unfortunately all the blocks show are the undersides of the team though clearly there are two layered horses that are stallions.

AM II (2) TT 276 AMENEMOPE

(Fig. 4.54)

Site:	Qurnet Mura'i TMP Map VIII, F-3.h, 3.
Reference:	<i>PM I (I) 352 -353 (11).</i>
Titles:	Overseer of the Treasury of Gold and Silver, Judge. Overseer of the Cabinet.
Source:	<i>PM I (I) 352 (11).</i>
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole: 547-548.</i> Thutmose IV (?): PM Thutmose III/ Amenhotep II: Kampp, TMP
Position in tomb:	Long hall, north wall.
Subject:	Deceased in chariot hunting <i>PM 353.</i>
Horses:	NA.
Note:	No image available.

AM II (3) TT 85 AMENEMHAB (CALLED MAHU)

(Figs. 4.55, 4.56, 4.57)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4, d, 10.
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⁵⁶³ H. E. Winlock (1914) “Excavations at Thebes, 1912-1913,” *Bulletin of the Metropolitan Museum of Art* 9 (1914) 11-23.

⁵⁶⁴ P. Brand (1995) “Thutmoside Battle Relief,” in N. Thomas (1995) *The American Discovery of Ancient Egypt*, 74. See also The Metropolitan Museum of Art. No. 13.180.21.

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Reference:	<i>PM I (1) 170-175 (2).</i>
Titles:	Lieutenant Commander of Soldiers. Crewmember of the Divine Boat of Karnak “ Amun-Userhat.”
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve. 1. Plate 94. Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire égyptien</i> , Brussels, 165 (23) (Line drawing). Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 336-338. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 103.
Dating:	Tuthmosis III to Amenophis II: PM Thutmose III to Amenhotep II: Rommelaere, Wasmuth, Kampp, TMP
Position in tomb:	Pillared hall, south west wall.
Subject:	Registration and provisioning of troops, including standard-bearer and horse. <i>PM I (1) 170 (2).</i>
Horses:	Four horses – one restrained, possibly with rope.
Note:	There is a standard bearer carrying a standard over his shoulder which seems to bear the image of a horse.

There are four horses that appear not to be harnessed, though there is much damage to the wall (Figs. 4.56, 4.57). They seem to be as in the tomb of Senneferi, a mix of white and red (bay?), the near horse of the front team is white and the far, red, the near of the back two is red and the rear, white.⁵⁶⁵ Little detail remains but the images are layered, the heads of the animals seem just below the attendant's shoulder height and their withers at approximately waist height.

The horses occupy three quarters of the register. They appear to be slightly more robust in form than those previously examined although they continue to be overly elongated. No ears, forelocks or eyes are visible and the indication of a nose on the front of the second pair is minimal. Whilst the mouths in the first pair are missing that of the front horse of the second pair is definitely open and whilst there is no tongue illustrated the method of control that has only been seen once before this is a rope encircling the

⁵⁶⁵ C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, 164. She refers to P. Virey (1891) *Sept tombeaux thébains de la XVIIIe Dynastie* dans *Mémoires publiés par les Membres de la Mission Archéologique Française au Caire*, V (2), 197-379, Wreszinski, Vol 1, plate 94 a-b, seems to support this contention.

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lower jaw of this animal. No manes are visible but the front pair has at least one tail still indicated and that is held at a high angle. There is no indication of filling but some attempt seems to have been made to indicate fetlocks, the hoofs are damaged. The legs are slightly sturdier than previous examples. The horses appear alert but obedient which is reinforced by the minimal nature of their type of restraint.

AM II (4) TT 42 AMENMOSE

(Figs. 4.58, 4.59, 4.60, 4.61)

Site:	Shaykh ‘Abd al Qurnah TMP Map IV, V, D-4, j, 8.
Reference:	<i>PM I(1)</i> 82-83 (4, 5).
Titles:	Captain of Troops. Eyes of the King in the Two Lands of the Retenu.
Source:	Davies. N. de Garis. (1933) <i>The Tomb of Nefer-hotep at Thebes</i> , 2. Metropolitan Museum of Art Publications 9, New York. Baud. M. (1935) <i>Les dessins ébauchés a la necropole thébaine</i> . Cairo. Plate 6. Davies. Nina de Garis. & N. (1933) <i>The Tombs of Menkheperasonb, Amenmose and Another</i> . (Nos. 86, 112, 42 and 226) The Egypt Exploration Fund, The Theban Tombs Series, 5th Memoir, London. Plate 35. Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire égyptien</i> Brussels, 167, Plate 27. Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve. 1, Plate 42. Kampp. F. (1996) <i>Die thebanische Nekropole: 237- 239</i>
Dating:	Amenhotep II: Davies Tuthmosis III to Amenophis II: PM Thutmose III to Amenhotep II: Kampp, TMP
Position in tomb:	Pillared hall, north and west walls, west side.
Subject:	Presentation of Syrian booty. “Amenmose accepting gifts which the chiefs of Lebanon are presenting.” ⁵⁶⁶
Horses:	There are four unharnessed horses and two chariots in this scene.
Comment:	Davies mentions, “the poor drawing of the horses resembles closely that prevalent in the reign of Thutmose IV.” ⁵⁶⁷

The heads of the two horses in the lower register (Figs. 4.59, 4.60, 4.61) are damaged, but the head of the near horse in the upper register is present. Baud has illustrated some

⁵⁶⁶ Nina. & N. de Garis Davies (1933) *Menkheperasonb*, 30.

⁵⁶⁷ Nina. & N. de Garis Davies (1933) *Menkheperasonb*, 29.

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of the detail of the upper horses and has depicted the near horse as white and the rear one as red.⁵⁶⁸ The upper horses are layered but the lower ones are single. The horses fill the register to the top and this is the first instance of this. Their heads are above those of their attendants but their withers are on a level with the human's waists.

They are elongated and there are new features of their conformation that have not been noted previously. They appear more robust than any to date. The only horse with remaining facial features is the upper near horse. Neither ears nor forelocks are discernable owing to damage. Eyes are indicated by a minimal outline of paint. There is a discernable effort to depict a jaw line. Nostrils are not present but the mouth is open and no tongue is seen. There is a pale indication of a halter. Short upstanding manes appear in both groups of the horses and this is the first indication of this development.

Tails are present, not in-filled and held at a high angle. The necks on these animals are very thick indeed and not in correct proportion to their heads which appear small as a result. The barrels are proportionally small and their rumps are very rounded and lacking in physiological accuracy. They also are held at an odd angle necessitating the hind legs to be bent beyond normal conformation and to be shorter and rather "spindly." The front legs are also very fine. Hoofs and fetlocks are present in more detail than before. The general demeanour of these animals seems more active and spirited than to date and it is interesting that the attendants are all depicted in an attitude seemingly to placate or calm the animals.

AM II (5) TT 84 AMUNEDJEH

(Figs. 4.62, 4.63, 4.64, 4.65, 4.66)

Site:	Shaykh 'Abd al Qurnah. TMP Map V, D-\$, d, 10.
Reference:	<i>PM I (1) 167-170 (9,15).</i>
Titles:	First Royal Herald, Overseer of the Gate.
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve. 1. Plate 269. Davies. N. & Nina. de Garis. (1941) "Syrians in the Tomb of

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M. Baud (1935) *Les dessins ébauchés a la necropole thébaine*, Orientale. Cairo. plate VII (A).

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	Amunedjeh.” <i>JEA</i> 27 (1941) 96-98. Plate 13.
	Wegner. M. (1933) “Die Stilentwicklung der thebanischen Beamtengräber.” <i>MDAIK</i> 4 (1933) 38-164. Plate 9a.
	Virey. P. (1891) <i>Sept tombeaux thébains de la XVIII Dyn.</i> Caire.V (2) 197-379, fig. 5.
	Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire égyptien</i> Brussels, 167. Plate 10a.
	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 332-336.
	Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 102.
Dating:	Tuthmosis III: Wegner, Davies Tuthmosis III: PM (Partly usurped by Mery, tomb 95,temp. Amenophis II)
Position in tomb:	Thutmose III/ Amenhotep II: Kampp, Wasmuth, TMP (9) Broad Hall, east wall of the front hall, Syrians with tribute. (15) Long hall, east wall – Deceased hunting in chariot.
Subject:	1. Tribute paying. 2. Hunting.
Horses:	There are four horses depicted in this tomb, two unharnessed (Figs. 4.65, 4.66) and two harnessed to a chariot (Fig. 4.64).
Comment:	Davies juxtaposes a horse from Amunedjeh’s tomb (TT 84) with one from Rekhmire (TT 100) and makes the following comment, “Moreover, when we observe that the artist who is responsible for the figure in question (the Syrian) derived his pictures in large part from the tomb of Rekh-mi-Re and pitifully altered them for the worse, as the horse, among other borrowed elements shows, we shall be inclined to judge that slovenliness may have affected his memory as well as his outlines.” ⁵⁶⁹ Virey’s drawing ⁵⁷⁰ (Fig. 4.64) contains more features than the copy published by Rommelaere.

1. In the hall there is a scene of tribute paying (Figs. 4.65, 4.66). The tribute consists of two unharnessed horses and a chariot amongst other things, including exotic animals.

2. The deceased is seen hunting in a chariot harnessed to horses (Fig.4.64). The scene is badly damaged and the tomb owner and chariot remain but only the hindquarters of the horses are visible.⁵⁷¹

⁵⁶⁹ N. de Garis Davies (1930) “The Egyptian Expedition, 1929-1930.The Work of the Graphic Branch of the Expedition,” *Metropolitan Museum of Art Bulletin* 25. (12), Part 2, 36.

⁵⁷⁰ Virey’s drawing of the chariot scene is more complete than Rommelaere’s, the charioteer’s head is still present and there is more detail in the chariot itself. *Sept tombeaux*, 355.

⁵⁷¹ M. Wegner “Die Stilentwicklung der thebanischen Beamtengräber,” *MDAIK* 4 (1933) plate IXa.

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Although the images of the horses are damaged, there is some detail preserved. Of the two unharnessed horses the first (left) appears to be white and the second (right) seems to be red.⁵⁷² They are depicted singly and fill three quarters of the register. Their heads are at the shoulder height of their attendants and their withers at their waists. They are extremely elongated and their barrels are very thin resulting in a disproportion between their bodies and their legs. They are extremely gracile in form. Their ears orientated forward and forelocks are present with in-filling. One horse has the remains of a simple eye indicated by a line of paint. The noses and mouths are damaged but the rear horse seems to have its mouth open. Their manes are long and filled in and seem to be depicted as contrasting to their bodies, the white horse's mane is darker and the dark horse's is lighter. Both have in-filled tails held at a high angle. Both hoofs and fetlocks are indicated and their legs are short and very thin. There is no indication of gender.

Each is under the control of a Syrian by means of what might be halters, although there is no clear evidence of these, they could equally be being controlled by a rope around their lower jaws, a method which has been seen before. The horses are walking calmly and obediently and no effort is being used to address them directly.

The chariot scene is badly damaged but some detail of the horses can be gleaned. They are harnessed and seem to be coloured, the front horse white and the rear red. They are layered and their tails are held at a high angle. They are galloping forward, possibly in the "Flying Gallop" configuration, and they seem relatively small if comparing their backs to the chariot wheel. They do appear to have similar dimensions to the other horses in the tomb.

AM II (6) TT 143 NAME LOST (ANONYMOUS B)

(Figs. 4.67, 4.68, 4.69, 4.70)

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W. Wreszinski (1988) *Atlas*, plate 269.

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Site:	Dra Abu el Naga. TMP Map 1, C-6, J, 10.
Reference:	<i>PM I (I) 255-257 (4,6).</i>
Titles:	
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve. 1, Plate 347. Davies. N. de Garis. (1935) "The Egyptian Expedition. 1934-1935. The Work of the Graphic Branch of the Expedition." <i>The Metropolitan Museum of Art Bulletin</i> . Vol. 30, No. 11. Part 2. 46-57, fig. 3. Baud. M. (1935) <i>Les dessins ébouchés de la nécropole thébaine</i> . 1, Cairo, fig. 76. Capart. J. (1927-1931) <i>Documents pour servir à l' etude de l'art égyptien</i> . Paris 2. Plate 67. Schott Photo: 8708. Kampp. F. (1996) Die thebanische Nekropole: 428-429.
Dating:	Tuthmosis III/Amenophis II (?): Davies, PM Thutmose III/ Amenhotep II: Kampp, TMP
Position in tomb:	Both images are in the north section of the Broad hall. The image at 6 is on the north-west side, image 4 is on the north east side.
Subject:	1. Arrival of official. 2. Sketched scene.
Horses:	1. Two realistic, energetic chariot horses. 2. Three men, two horses.
Comment:	Capart comments, "Quant au jeune cheval du tombeau 142, effarouché par le geste que fait devant lui un homme, il est vraiment merveilleux et rappelled ces dessins jetés sur le papier en quelques traits de pinceau par les prodigieux animaliers de l'Extrême Orient. Cette figure, de même que quelques autres, espeinte à un endroit qui, normalement, n'appelait aucune décoration. On n'hésiters pas, étant donnée cette circonstance, à reconnaître vraiment là un passe-temps d'artiste." ⁵⁷³

M. Baud also notes, "...mais le dessin du cheval pose un problème très intéressant. Il est établi sans repère ni carreaux, très vite, avec une verve et une vie que nous ne voyons jamais quand les Égyptiens dessinent les chevaux. Les chevaux représentés dans la nécropole thébaine (tombeaux 42, 56, 90) sont raides et cabrés, avec un cou é norme et une ensellure exagérée, dans une pose forcée et très peu naturelle; ici la pose est souple, la ligne d'échine á peine concave, le cou normal.

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J. Capart (1927-1931) *Documents pour servir à l' etude de l'art égyptien*, Paris. Vol 1. 49.

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La disproportion dans les jambes est déjà corrigée (la jambe antérieure droite a deux sabots l'un au-dessus de l'autre, et la jambe antérieure gauche est allongée par quelques traits.)⁵⁷⁴

1. "The upper register of figure 3 represents the arrival of the official at the coast to receive the merchandise due from Punt."⁵⁷⁵ This image contains a harnessed chariot team and driver accompanying the official (Fig. 4.68, 4.69).

2. There is a sketched scene of men and horses at the bottom of six registers (Fig. 4.70). There are three men and two horses. One horse image is of a head only and the other is of a horse nearly complete except for the head.

1. The image is badly damaged obscuring much of the hindquarters of the horses and the chariot (Figs. 4.68, 4.69). There are two horses in the scene (relying here on the Wresinski photograph⁵⁷⁶ and the Davies line drawing⁵⁷⁷, which provide some of the detail) the horses are layered and both are dark in colour this time with a darker horse at the back and the lighter of the two at the front. Their height extends to two thirds of the register their heads at the same level as the head of the driver and their withers at his waist but they come only to the shoulder of the tomb owner with withers at his hip. They are more robust than average so far and demonstrate a much more natural conformation in terms of length. They are more evenly portrayed through the body although the chest is exaggerated and the head held at an impossibly upright angle. Damage has obliterated the ears, eyes and most of the manes although there are indications that the manes are of the upright type. Nostrils are present and the mouths open. The remains of the tails show that they were filled in and were held at a high angle the legs are in proportion to the bodies and fetlocks and hoofs are present. The photo and the drawing indicate some male genitalia. Whilst under control these animals demonstrate a more spirited demeanour, seeming to possess a high degree of pent up

⁵⁷⁴ M. Baud (1935) *Les dessins*, 167. Baud goes on to suggest that this depiction was made by a skilled scribe, not an apprentice and that he was attempting to produce an image that was perhaps new to Egypt and which was not a continuation of the "clichés" of the time.

⁵⁷⁵ N. de Garis Davies (1935) "The Egyptian Expedition, 1934-1935," *The Metropolitan Museum of Art Bulletin* 30 (1935) no. 11, Part 2, 48.

⁵⁷⁶ W. Wreszinski (1988) *Atlas*, plate 347.

⁵⁷⁷ N. de Garis Davies (1935) "The Egyptian Expedition, 1934-1935," 48.

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energy and restlessness. This is conveyed mainly through the high angle of the head and the more compressed body than has been apparent to date. It is a more realistic portrayal of a team of energetic chariot horses.

2. The second scene is found at the bottom of six registers and is a series of sketches only. They are of three men and two horses. One is of the head of a horse with an oddly dipped profile and extended muzzle, some features of the face remain but seem only to be represented by small lines and dots. The most interesting is that of the horse without the head (Fig. 4.70). This is, with the exception of the foals in the tomb of Amenemhet TT123, the only other “free form” image so far encountered. The image is an outline only but imbued with an atypical flexibility and vitality. Additionally with the exception of a slight elongation, it is remarkably natural in its ability to convey the normal appearance and functioning of a horse in motion.

AM II (7) TT 93 KENAMUN

(Figs. 4.71, 4.72)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V,VI, E-4, c,1.
Reference:	<i>PM I (1) 190-194 (9).</i>
Titles:	Chief Steward of the King.
Source:	Davies. N. de Garis. (1930) “ <i>The Tomb of Ken-Amun at Thebes.</i> ” The Metropolitan Museum of Art Egyptian Expedition Publications 5. 1930. Plate 22. Kampp. F. (1996) <i>Die thebanische Nekropole: 352-365.</i> Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 106.
Dating:	Amenophis II: Davies, PM Amenhotep II: Kampp, Wasmuth, TMP
Position in tomb:	Broad hall, west wall, south side.
Subject:	Presentation of New Year’s gifts to king.
Note:	No horses. Two chariots without teams (Fig. 4.72).

AM II (8) TT 95 MERY

(Figs. 4.73, 4.74, 4.75)

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Site: Shaykh ‘Abd al Qurnah. TMP Map. V, VI, E-4, c, 1.
 Reference: *PM I (I) 195-197 (5)*.
 Titles: First Prophet of Amun.
 Source: Wreszinski. W. (reprint 1988) *Atlas zur altaegyptischen Kulturgeschichte*. Geneve. 1. Plate 307.
 Wilkinson. J. G. (1878) *The Manners and Customs of the Ancient Egyptians* (S. Birch ed.) Vols. 1, 2, 3. London.
 Kampp. F. (1996) *Die thebanische Nekropole*: 358-360.
 Wasmuth. M. (2003) *Innovationen und Extravaganzen*, Oxford. 107.
 Dating: Amenophis II: PM
 Amenhotep II: Kampp, Wasmuth, TMP
 Position in tomb: Pillared hall, north east wall right side.
 Subject: Chariot making (Figs. 4.74, 4.75).
 Horses: None.

AM II (9) TT 172 MENTU-IUI

(Figs. 4.76, 4.77)

Site: Khokha. TMP Map IV, D-5,b, 7.
 Reference: *PM I (I) 279-280 (5-6)*.
 Titles: Royal Butler, Child of the Nursery.
 Source: *PM I (I) 279*.
 Schott Photograph 5800.
 Kampp. F. (1996) *Die thebanische Nekropole*: 459-461.
 Dating: Tuthmosis III/ Amenophis II (?): PM, Kampp
 Thutmose III/Amenhotep II: Kampp (she favours Thutmose III),
 Thutmose III/ Amenhotep III), TMP
 Position in tomb: Long hall, west side.
 Subject: Funeral procession (Fig. 4.77).
 Horses: None.

AM II (10) TT 72 RE

(Figs. 4.78, 4.79)

Site: Shaykh ‘Abd al Qurnah. TMP Map V, D-4,e,7.
 Reference: *PM I (I) 142-143 (4)*.
 Titles: First Prophet of Amun in the Mortuary Temple of Thutmose III.
 Source: Davies. N. de Garis. (1935) “The Egyptian Expedition. 1934-1935. The Work of the Graphic Branch of the Expedition.” *The Metropolitan Museum of Art Bulletin* 30, No. 11. Part 2. 46-57, fig. 3.

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Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 303- 306. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 98. Amenophis II: Davies, PM Amenhotep II: Kampp, Wasmuth, TMP
Position in tomb:	Broad hall, west side, end wall.
Subject:	“On a back wall burnt to almost impenetrable blackness in Tomb 72, a scene can still be detected in which Amenhotep II is pursuing wild animals in his chariot and drawing his bow against them..” ⁵⁷⁸
Horses:	Harnessed chariot team.
Comment:	Davies explains the image of the king in a private tomb.

“The accompanying text, which is fragmentary, seems to place the scene of the hunt on the west of the Nile and goes on to speak of the booty being counted by thousands and presented by the king for sacrifices in the mortuary temple of his father. As the owner of tomb 72 was a high priest of that sanctuary, this reference supplies some reason for the appearance of the picture in the tomb. Otherwise it would have exemplified the misuse of private tombs for the glorification of the royal house that is so observable at el ‘Amārneh.”⁵⁷⁹

Davies states that the scene in the tomb is “exactly paralleled by that in Figure 4.” This image contains a harnessed chariot team being driven by Amenhotep II while firing his bow (Fig. 4.79). Davies identifies this as a hunting scene like the comparable image of the king shooting at a target.⁵⁸⁰ This seems to be the first inclusion of a scene containing a king’s team in a private tomb. There are two horses whose colour is indiscernible owing to the accumulated soot in the tomb. They are layered and fill three quarters of the height of the register. If Amenhotep was standing on the ground and the horses standing instead of galloping it is estimated that their heads and his head would be level with each other and their withers at his waist. The horses are again elongated with thin barrels and extended and incorrectly drawn chests. Their front legs are short and spindly and drawn too high. Whilst they appear finely constructed overall they give an impression of robustness. Ears are present, orientated forward, the forelock being a continuation of the mane and as such it appears to stand upright. The eyes are more detailed than to date, nostrils are minimal as are the closed mouths. The manes are full

⁵⁷⁸ N. de Garis Davies (1935) “Graphic Branch,” 49.

⁵⁷⁹ N. de Garis Davies (1935) “Graphic Branch,” 50. I cannot find any copy of this text.

⁵⁸⁰ N. de Garis Davies (1935) “Graphic Branch,” 50.

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and upright and the tails are held at a very high angle. Hoofs and fetlocks are depicted on extremely thin legs. Male genitalia are shown. The horses are moving in the “Flying Gallop” attitude, full of energy and strength and since the king has their reins wrapped around his waist their complete obedience to him is implied.

AM II (11) TT 100 REKHMIRE

(Figs. 4.80, 4.81, 4.82, 4.83)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, VI, E-4, d, 1.
Reference:	<i>PM I (I) 206-214 (4).</i>
Titles:	Vizier, Governor of the Town.
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve, 1, Plate 310. Davies. N de Garis. (1935) <i>Paintings from the Tomb of Rekh-Mi-Re’ at Thebes</i> , The Metropolitan Museum of Art Egyptian Expedition Publications: X, New York. Plate 23. Davies. N de Garis. (2002) [c.1944] <i>The Tomb of Rekh-mi Re’ at Thebes</i> . North Stratford. N.H. (Metropolitan Museum of Art II). Siliotti. A. (1996) <i>Guide to the Valley of the Kings</i> . Vercelli. 148-152. Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire égyptien</i> Brussels, 167, Plate 2. Kampp. F. (1996) <i>Die thebanische Nekropole: 370-373</i> . Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 110.
Dating:	Thutmose III/Amenhotep II: Davies Tuthmosis III/Amenophis II: PM Thutmose III/Amenhotep II: Kampp, Wasmuth, TMP
Position in tomb:	Broad hall, north west wall, 4 th bottom register.
Subject:	Syrians with tribute.
Horses:	Detailed image of two unharnessed horses.
Comment:	Davies: “As the Egyptians had Asia to thank for the horse, this picture enshrines history. The early portrayals of the animal in Egypt were want to give it an unduly long and little figure. Here it is of the light Arab build with an arching tail. We need not take the colouration too seriously, it is likely to have been adopted for effect.” ⁵⁸¹

There are two unharnessed horses in the tomb preceded by a chariot being pulled (Fig. 4.81, 4.82). There is a great amount of detail in this image owing to the relatively good

⁵⁸¹ N. de Garis. Davies (1935) *Paintings from the Tomb of Rekh-Mi-Re’ at Thebes*, New York, plate XI.

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preservation of the tomb itself. The horses are layered and the front horse is painted white with a darker tan mane and tail and the rear horse is chestnut (red) with a darker tan mane and tail (Fig. 4.83). The horses fill three quarters of the register, their heads at the shoulders of the Syrians and their withers at their waists. These are elegant and gracefully painted figures exhibiting again the elongated conformation of many previous instances. The barrels are thin and overly extended and the necks long and relatively thin resulting in heads that are rather too heavy for the necks. These are gracile rather than robust animals. The ears are large and orientated forward and the forelocks are draped, filled in and appear to have been cut short above the eye. This is the first indication of detailed grooming and trimming of a horse. The eyes are very detailed. They are emphasised by being surrounded by a contrasting paint colour, the rear in a lighter colour than the coat and the fore by a slightly darker colour. The eyes are outlined and the irises are very round and dark, the expression is of a very clear and intelligent appearance. Unfortunately, the noses and mouths have suffered damage but on the rear of the two horses there appears to be an irregular stripe or partial blaze running down the centre of the horses' face. This is the first time that this has been seen. The manes and tails exhibit a great amount of detail. The draped manes are filled in with fine lines to give the impression of hair and thicker lines indicate the folds of the manes. The tails show an elaborate cross hatching at the base which might indicate plucking or plaiting of the tails, again this has not been shown in past instances. The tails are held at a high angle and are also filled in to indicate strands of hair. The legs are fine with little regard to physiological accuracy, but are in proportion to the bodies of the horses. Hoofs and fetlocks are shown and the hoofs are painted a different colour to differentiate them from the fetlocks which are shown with slight "feathering" or hair hanging from their lower surfaces which again is the first appearance of this. Damage has made it impossible to assess gender. These horses are walking under the control of a Syrian who raises his hand in a calming gesture. They display an elegant, alert and intelligent demeanour.

These horses are the most detailed and competently portrayed horses so far. That would not be difficult to explain considering the rank that Rekhmire attained and held for so long. He had access to the best and most skilled artists and large financial reserves and his tomb profoundly reflects this. The contrast between physiological inaccuracies in the

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depiction of the horses together with such a high degree of detail is difficult to understand.

AM II (12) TT 92 SUEMNUT

(Figs. 4.84, 4.85)

Site:	Shaykh ‘Abd al Qurhah. TMP V, D-4,c, 10.
Reference:	<i>PM I (1) 187-189 (5).</i>
Titles:	Royal Butler Clean of Hands.
Source:	Capart. J. (1927 -1931) <i>Documents pour servir à l’ etude de l’art égyptien</i> , Paris, 2, 67, Plate 2. Wegner. M. “Die Stilentwicklung der thebanischen Beamtengräber,” <i>Monumenta Aegyptiaca X, MDAIK 4</i> (1933) 38-164. Kampp. F. (1996) <i>Die thebanische Nekropole: 350-352.</i> Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 105.
Dating:	Amenophis II: Capart, Wegner, PM Amenhotep II: Kampp, Wasmuth, TMP
Position in tomb:	Pillared hall, east side, south wall.
Subject:	The sketch is from an unfinished register. Scribes recording produce before the deceased.
Horses:	Single horse.
Comment:	Capart suggests that the artist may have had several attempts at getting this horse right. “Le cheval de B provident du tombeau de Souemnut (No. 92). On ne sait si les deux croupes appartiennent au même animal; le dessinateur, ayant mal calculé ses proportions, a-t-il cherché à corriger sa maladresse? Le trait définitif de l’encolure, du dos et de la croupe est si ferme qu’on a peine à supposer une telle erreur.” ⁵⁸²

There is a single horse depicted (Fig. 4.85). Unfortunately the only image available is from Capart⁵⁸³ and it is shown devoid of connections to the wall from which it was copied. There is no way to estimate how much of the register it occupied, if there were ever any features to compare. No layering is detected. There are no ears and only a slight indication of a forelock, which might be angled forward. The eye is a circle of

⁵⁸² J. Capart (1927) *Documents*, 49.

⁵⁸³ J. Capart (1927) *Documents*, plate 67.

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paint and the nose and mouth are missing. The mane appears to be of the draped type and the neck is very thick. The barrel is very thin and elongated. No withers are indicated. The tail is at a very high angle and there seems some attempt at filling it in. The back legs are obscured and the front legs are short and thin but there is some attempt at depicting the real shape of the legs. The horse is alert and walking forward with some trace of a halter. This image has none of the life and elegance of the horse in tomb 143 and it seems to belong to the school of the “normal” images of horses to this time. The most unusual feature of this image is the existence of grid lines.

AM II (13) TT 239 PENHET

(Figs. 4.86, 4.87)

Site:	Dra Abu el Naga. TMP Map 1, C-7, a, 9.
Reference:	<i>PM I (1) 330 (2-3).</i>
Titles:	Governor of all Northern Lands.
Source:	<i>PM I(1) 330.</i> Hartwig. M. (2004) <i>Tomb Painting and Identity in Ancient Thebes, 1419-1372BCE</i> . Monumenta Aegyptiaca X, Fondation Égyptologique Reine Élisabeth. Belgium, fig. 44.
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole: 516-517.</i> Tuthmosis IV to Amenophis II? (Note: this is a possible typographical error- the reign probably intended is Amenhotep III): PM Thutmose IV / Amenhotep III, based on decoration):Kampp, TMP.
Position in tomb:	Broad hall, west side, north end.
Subject:	Syrians with tribute before the king.
Horses:	Two horses.

There is not much of this scene remaining. What can be discerned from the copy cited in Hartwig⁵⁸⁴ is there are two horses, of the heavier robust style with filled, hogged manes, eyes, nostrils and open mouths (Fig.4.87). They have very thick necks and appear to be very alert.

⁵⁸⁴ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes. 1419-1372BCE*, Belgium, 244. fig. 44.

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AM II (14) TT 80 THOTNEFER (DJEHUTINEFER)

(Figs. 4.88, 4.89, 4.90)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4, d, 9.
Reference:	<i>PM I (I) 157 (10)</i> .
Titles:	Overseer of the Treasury, Royal Scribe.
Source:	Shedid. A. G. (1988) <i>Stil der Grabmalereien in der Zeit Amenophis’ II</i> . Mainz. Plates 2.4 and 2.4b. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 320-323.
Dating:	Amenophis II: Shedid, PM Amenhotep II (first half): Kampp, Thutmose III/ Amenhotep II, TMP
Position in tomb:	Long hall, right side, north wall.
Subject:	Funerary procession.
Horses:	Two harnessed horses.

They have sustained damage to their heads, obliterating them and to their tails leaving only a small section visible (Fig.4.89, 4.90). They are layered, the near horse being white and the far red/brown (the colour of the male figure of the groom). The horses, if intact, would take up the whole height of the register, their heads being at the same height as that of the groom and their withers at his waist height. They appear to be more robust than those previous to this instance, with heavier chests and rumps. The barrel is still thin and out of proportion with the rest of the body and it is also elongated. The chests are oddly rendered almost face-on. The tails indicate some attempt at portraying hair and are held at a high angle. Hoofs are present but fetlocks cannot be seen. The hind legs are extremely bent but the legs are more in proportion than previously. There is no indication of gender. The horses are under control but do seem to be very energetic. The tension on the reins in the groom’s hands is high and he seems to be brandishing/holding a whip. The horses give an impression of restrained energy.

AM II (15) TT 88 PEHSUKER CALLED THENENU

(Figs. 4.91, 4.92)

Site:	Shaykh ‘Abd al-Qurnah. TMP Map V, D-4,d,9.
Reference:	<i>PM I(I) 179-181</i> .
Titles:	Lieutenant of the King. Standard-Bearer of the Lord of the Two Lands.
Source:	Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire</i>

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	<i>égyptien</i> Connaissance de l'Égypte Ancienne. Brussels, Plate 24.
	Note: The image referred to here comes from Rommelaere who has sourced it from Virey. P. (1891) <i>Sept tombeaux thébains de la XVIIIe Dynastie</i> , dans Mémoires publiés par les Membres de la Mission Archéologique Française au Caire, V (2), 197-379.
	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 342-344.
Dating:	Tuthmosis III /Amenophis II): PM, Rommelaere Thutmose III/Amenhotep II: Kampp (favours Amenhotep II), TMP.
Position in tomb:	Unknown. Virey makes no mention of the position of this image in the tomb (289).
Subject:	Virey indicates two horses being brought, he makes no mention of a chariot (289).
Horses:	One horse.

There is an outline of the partial head of a horse only (Fig. 4.92). The ears are vertical and well drawn and the mane is draped and shows the mane as full and quite long. There are no ears visible and there is a muzzle complete with nostrils and an open mouth. There are parts of a bridle or halter visible. The head is very elongated but might have been in proportion had the damaged parts of it remained.

AM II (16) AMENHOTEP II

(Fig. 4.93)

Site:	Karnak.
Reference:	Luxor Museum J 129.
Titles:	Amenhotep II Akheperure. King.
Source:	Schulz. R. & M. Seidel (eds.)(1998) <i>Egypt: World of the Pharaoh</i> , Cologne, 324, Plate 23. Luxor Museum. Gallery J. Der Manuelian. P. (1987) <i>Studies in the Reign of Amenophis II</i> . Hildesheimer Ägyptologische Beiträge 26, Hildesheim.
Dating:	Amenhotep II: Der Manuelian, Schulz & Seidel
Position:	Used as a filling block in the Third Pylon at Karnak.
Subject:	Amenhotep II standing in a chariot shooting arrows at a copper target.
Horses:	Two royal horses.

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There are two horses in the royal chariot team, the image of the king, his chariot and the team take up two thirds of the block (Fig.4.93). Their proportions are not in balance, the chest is strangely truncated with the neck over exaggerated. The barrel is thin and extended and the hind-quarters much more heavily built than the barrel. There is no colour remaining. The horses are layered. If they were on a level with the king their heads would be approximately at his shoulders and their withers at his waist.

Whilst their bodies can be described as fine they have a very robust appearance. Their ears are forward pointing and pricked, their eyes are pronounced and oval in shape, there is detail in the nose and the mouths and although damaged would seem to be open. Their manes and forelocks are hogged. The tails are held at a very high angle. Their legs are fine with hoofs, fetlocks, pasterns and canons visible. The team is male with both penis sheaths and testes visible, indicating stallions.

They are in the “Flying Gallop” orientation with the hind legs almost in contact with the ground and the forelimbs thrusting forward. They seem highly energized and powerful. The king has the reins tied around his waist indicating his total control of this spirited team.

AM II (17) STELE OF BETU

(Fig.4.94)

Site:	Tell el-Borg.
Reference:	
Titles:	“Overseer of Horses, Betu, the Justified.”
Source:	Hoffmeier, J. K. & K. A. Kitchen (2007) “Reshep and Astarte in North Sinai: A Recently Discovered Stela from Tell el-Borg,” <i>Egypt and the Levant</i> 17 (2007) 132, fig. 1b.
Dating:	Amenhotep II: Hoffmeier
Position:	Tell el-Borg, (2006) Field II, Area 2, Square C.
Subject:	The stela contains two sections the topmost showing two deities, one Reshep and the other Astarte, seated on a chair which rests on the back of a horse.
Horses:	One. There is one horse illustrated on the stela (Fig. 4.94) which appears to be standing though its front legs seem to be elevated slightly. It is extremely elongated probably in an effort to place

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both the legs of the chair and those of Astarte in the available space. Because of this it is not possible to compare the size of the horse with the deities. It is a robust type of animal featuring upraised ears, tear-shaped eyes and an open mouth. The mane and forelock are hogged and the tail is held at a high angle. Hoofs, pasterns and fetlocks are indicated and there is no direct indication of gender though the near hind leg is towards the back giving rise to the possibility that the horse is a mare. Hoffmeier dates the stela to the reigns of Thutmose III and Amenhotep II.⁵⁸⁵

4.2.8 THE REIGN OF THUTMOSE IV

TH IV (1) KV 43 THUTMOSE IV- CHARIOT

(Figs. 4.95, 4.96, 4.97)

Site:	Valley of the Kings (Biban el-Muluk). TMP Grid Coordinates: N99509.211, E94300.75, 201.71msl.
Reference:	<i>PM 1 (2) 560 (Finds)</i> TMP Grid Coordinates: N99509.211, E94300.75, 201.71msl.
Title:	Menkheperure. King.
Source:	Carter. H. & P. Newberry, G. Maspero & G. Smith (1904) <i>The Tomb of Thoutmosis IV</i> . London, Fig. 2, Plates 10, 11.
Dating:	Thoutmosis IV: Carter & Newberry Tuthmosis IV: PM Thutmose IV: TMP
Position in tomb:	Chariot found in the burial chamber.
Subject:	Chariot with scenes of the king in his chariot, trampling foes on both the left and right exteriors of the chariot.
Horses:	Twelve horses.
Note:	This is the first instance of horses being depicted on a chariot. (Later they occur on the chariots of Tutankhamun). The area available (the chariot sides) and the metal surface will have impacted on the nature and composition of the images.

⁵⁸⁵ J. K. Hoffmeier & K. A. Kitchen (2007) "Reshep and Astarte in North Sinai" *Egypt and the Levant* 17 (2007) "When all these factors are weighed, a date in the reigns of Thutmose III and Amenhotep II is likely," 136.

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Right exterior of chariot. Two royal horses, seven enemy horses:⁵⁸⁶

Eight of the nine horses are harnessed to chariots (Figs. 4.95, 4.96) with the exception of the horse on the bottom right side of the image (Fig. 4.97). This seems to be a single horse with no harness, except a rein and bridle. It is difficult to identify its rider, perhaps the individual whose falling body is superimposed over the back of the horse, although there are several other possible candidates in the close vicinity. It is not associated with a chariot and the one to its left seems to belong to the team immediately above it. All of the horses are depicted in the “Flying Gallop” orientation. The only deviation from the normal depiction is the team in the middle right whose legs have been contracted, as the structure of the chariot did not allow for their normal stretching forward. All the enemy horses have been struck by the king’s arrows although none of them are shown as falling.

Left exterior of chariot. Two royal horses, ten enemy horses:⁵⁸⁷

All of the horses are harnessed to chariots, the upper left and lower right have been struck with arrows and the lower right are depicted as falling. The team in the centre under the king’s team’s front hoofs are falling but there is no sign of arrows striking them and four of the six teams are in the “Flying Gallop” orientation.

Carter and Newberry’s photographs, although themselves sepia coloured, seem to indicate no existing paint on the chariot. With the exception of the single horse on the Right Side (Plate X) all the images are layered with the near horse shown in detail. In both images the king’s horses are depicted as at least twice the size of the enemy horses. The only exception is the team on the Left Side (Plate XI), immediately in front and under Thutmose’s team which are approximately one and a half times larger than the rest. In accordance with the Canon, this would seem to indicate a person of some importance in the enemy chariotry whom the king is also putting to flight.

⁵⁸⁶ H. Carter, P. Newberry, G. Maspero & G. Smith (1904) *The Tomb of Thoutmosis IV*. Theodore M. Davis, *Excavations, Biban el-Moluk*. 1. London. pl. X.

⁵⁸⁷ H. Carter, P. Newberry, G. Maspero, & G. Smith (1904) *The Tomb of Thoutmosis IV*, London. pl. XI.

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All the horses in both images can be described as of the gracile form, fine limbed and athletic.

The conformation of these horses appears to be slightly more realistic in its depiction than previously. The “Flying Gallop” illustrates the horses at maximum stretch from hind legs to front hoofs; in this situation the barrel which has hitherto been proportionally too thin is shown more correctly in the flank, although once again it is too thin at the chest.

Very fine, upright, forward pointing ears are present on every horse and forelocks stand up and join the manes. Eyes are depicted with considerable detail on every animal with those of the king being given added detail imbuing them with more expressive faces - on the Right Side, stern and aggressive and the left with a more detached calm.

Again, nostrils are present on all the horses with mouths closed on the Left Side excepting the falling horses in the centre. There is what might be an attempt to provide added detail in the muzzle of the near horse in the king’s team. This could be interpreted as a continuation of the centre band of the bridle (which would not really be possible) or the depiction of the whiskers on the muzzle of the horse. On the Right Side all the mouths are open.

Every horse is shown with a hogged mane and forelock and very highly placed full tails that are filled to indicate hair. There is detailed depiction of hoofs and fetlocks showing an attempt at the anatomical rendering of the lower limbs.

All the horses are identifiably male and are depicted not only with a penis sheath or prepuce but also with a visible scrotum.

All the horses excepting the falling ones are shown galloping forward very energetically even the ones which appear to have been struck by arrows. The images of the falling horses have been achieved by taking the basic shape of all the teams and altering them in their angle to the ground and in one feature such as their front legs, folded under in the case of the lowest team on the Left Side and their heads which are shown as separate in those immediately under Thutmose’s team.

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The crowding of the scenes, the implication of speed and actions and the disorganised jumbling of the enemy forces produces an image of great vitality and power.

TH IV (2) TT 75 AMENHOTEP SISI

(Figs. 4.98, 4.99, 4.100)

Site:	Shaykh ‘Abd el-Qurnah. TMP Map V, D-4, e, 8.
Reference:	<i>PM I (I) 146-149 (2,4).</i>
Titles:	Second Prophet of Amun at Karnak.
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve. 1. Plate 240. Davies. N. de Garis. (1923) <i>Tombs of Two Officials of the reign of Thutmose the Fourth (nos. 75 and 90)</i> Egypt Exploration Society, The Theban Tombs Series, 3rd Memoir, London. Plates 6, 18.
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 310-312. Tuthmosis IV: Davies, PM Amenhotep II/ Thutmose IV: Kampp (favours Thutmose IV), TMP.
Position in tomb:	Broad hall, north wall, western (4) and eastern side (2).
Subject:	Amenhotep Sisi “guiding a pair of high stepping steeds.” ⁵⁸⁸
Horses:	Two harnessed horses.
Comment:	Davies remarks, “Both chariot and driver may have been attached to the department in which the official served.”

There are two harnessed horses although damage obscures the muzzles of both animals the majority of their bodies are present (Figs. 4.99, 4.100). The near horse is white and the far one possibly red based on the practice to this time. The horses are layered, the variation in colour being the tool used to differentiate them.

The image of Amenhotep Sisi occupies two registers. The tomb owner standing in his chariot (although there is damage here) would reach nearly to the top of the two registers and the tops of the horses heads reach to about three quarters of the register. If

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N. de Garis Davies (1923) *Tombs of Two Officials*, 8.

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he were standing on the base line the head of the horses would be at the same height as his head and their withers at the level of his waist.

These horses are certainly not of the gracile form often shown in tombs to this date, they are far more solidly built through the head neck and body, although strangely the legs still appear to be rather fine, similar to those of Amenmose TT42. The rump is considerably larger than the thoracic region, the barrel very short and thin and the neck very thick. Ears are clearly shown, upright and forward and the forelock is standing up between them. The eye is large and quite detailed with upper and lower eye lids as well as the eyeball and pupil. The muzzle is damaged and the mouth and nostril missing.

The manes are hogged and shown filled, the tails placed high and held high and are also in-filled. Hoofs and fetlocks can be seen and there is an attempt to depict the anatomical structures of the lower limbs, such as the pastern and cannon bones. The legs are disproportionately fine and the hind legs are shown so exceptionally contracted that they could not be considered accurate or capable of supporting the animal. There is no external indication of gender as the artist seems to have been confused in his layering in that he has erroneously shown the hind leg of the far horse extending into the abdomen of the near one.

The horses are obediently under the firm control of their master but the way in which they are shown gives the impression of a coiled spring - the excessive contraction of their bodies, the high head carriage and the compression of the hind legs reveals barely constrained energy and power and the separation of the front legs likely implies prancing.

TH IV (3) TT 66 HEPU

(Figs. 4.101, 4.102)

Site: Shaykh 'Abd al Qurnah. TMP Map V, D-4, g, 8.
Reference: *PM I (1) 132-133 (2)*.
Titles: Vizier.

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Source:	Nina de Garis Davies. (1963) <i>Scenes from Some Theban Tombs Tombs nos. (38, 66, 162, with excerpts from 81)</i> , Oxford, Plate 8. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 287-289.
Dating:	Tuthmosis IV: Davies, PM Thutmose IV: Kampp, TMP
Position in tomb:	Broad hall, south west wall.
Subject:	Chariot making (Fig. 4.102).
Horses:	None.
Note:	Although no horses are shown in this tomb, the making of chariots would imply that they were available to the tomb owner.

TH IV (4) TT 74 TJANUNI

(Figs. 4.103, 4.104, 4.105, 4.106)

Site:	Shaykh'Abd al-Qurnah. TMP Map V, D-4, e, 8.
Reference:	<i>PM I (I) 144-146 (10)</i> .
Titles:	Count, Seal Bearer of the King of Lower Egypt, Sole Companion, Scribe of the King.
Source:	Brack. A & A. Brack (1977) <i>Das Grab des Tjanuni. Theben Nr. 74</i> , AV 19, Mainz. Plates 1, 39. Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire égyptien</i> Brussels, 167, Plate 4. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 307-310.
Dating:	Tuthmosis IV: Brack & Brack, PM Thutmose III/Amenhotep II/Thutmose IV: Kampp, TMP
Position in tomb:	Broad hall, north-west wall.
Subject:	Registration of the produce of the whole land.
Horses:	Six unharnessed horses being presented to the tomb owner.
Note:	There were several bones belonging to an equid found in the tomb which the excavators suggest might have been buried with the tomb owner. ⁵⁸⁹ It has not been possible to determine if they belonged to a horse.

There are six unharnessed horses being presented to the tomb owner (Figs 4.104, 4.106). The large section of the wall that has fallen away probably contained more as there is a trace of the top of a mane behind the last horse. There are no chariots depicted in this tomb. The colour of the horses alternates between red-brown, pink, (that may have resulted from oxidisation, (Fig. 4.105) and black. The horses fill the register their

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A. Brack. & A. Brack (1977) *Das Grab des Tjanuni. Theben Nr. 74*, Mainz, 65.

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heads at the same height as the scribe's and their withers at his waist. These horses are only partially layered with their front halves depicted singly but their rear halves layered. (The missing horse/s at the back of the scene may have been seen complete originally).

These horses have small heads on overly long thick necks and barrel chests. Their legs are in proportion to their bodies that are of the robust type. The ears are present, upright and forward and the forelocks hogged as part of the manes. The eyes are detailed, shaped and containing an eyeball and there is a curve of paint indicating the nostril. The mouths are open (much of this is based on the "pink" horse as others are variously damaged in part) and there is an attempt at accurate depiction on the muzzle and chin. The horses are not harnessed but there is evidence of a bridle and lead rope. Manes are hogged and there has been an effort to show the "clumping" of the hair in the mane but no tails are shown. The forelegs are in relative proportion and there is an attempt at anatomical depiction, although the hind legs seem thin and plain. Hoofs and fetlocks are indicated. The hind legs are bent. There is no evidence of gender. Whilst following the groom obediently, the high head carriage, apparently lower hindquarters and bent hind legs give an impression once again of barely restrained energy, perhaps prancing.

TH IV (5) TT 56 USERHAT

(Figs. 4. 107, 4.108, 4.109)

Site:	Shaykh 'Abd al-Qurnah. TMP Map VI, E-4,f,3.
Reference:	<i>PM I (I) 111-113 (13, 14, 15, 16, 17, 18).</i>
Titles:	Royal Scribe.
	Child of the Nursery, Great Confident of the King.
	Overseer of the Herds of Amun, Deputy of the First Herald Imunedjeh, Accountant of the Bread.
Source:	Beinlich-Seeber. C. & A. G. Shedid (1987) <i>Das Grab des Userhat. (TT 56)</i> Archäologische Veröffentlichungen 50, Mainz. Plates 14, 15.
Osirisnet.net.	
	Davies. N. de Garis. (1922) "The Work of the Expedition." <i>The Metropolitan Museum of Art Bulletin</i> . 17. No. 12 Part 2. "The Egyptian Expedition." Dec 1922. 50-56.
	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve. 1. Plate 183.

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Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 262-267. Amenhotep II: Davies, Beinlich-Seeber Amenophis II: PM Thutmose III/Amenhotep II/Thutmose IV: Kampp (favours Amenhotep II/Thutmose IV) Thutmose III/Amenhotep II/Thutmose IV): TMP
Position in tomb:	Long Hall- (hunting) East Wall. Long Hall- (funeral procession) West Wall.
Subject:	East wall: deceased hunting in the desert in a chariot. West wall: bringing funeral outfit with chariot and led horse.
Horses:	Two horses in a hunting scene and two horses in a funeral procession.
Comment:	In relation to the chariot scene Davies remarks, “The action, however is spirited, and the horses are drawn in the improved style which came with better acquaintance with this exotic animal.” ⁵⁹⁰

Hunting scene:

There are two harnessed horses (Fig. 4.108), the near horse is red/brown and the far horse is white. They are in the “Flying Gallop” orientation. Their necks are thick and their barrels quite thin. They are layered and fill three quarters of the register. If Userhat were standing on the base line the horse’s heads would be at his head height and their withers at his waist. These are gracile horses depicted in a robust style. Their ears are upright and forward and their forelocks hogged. There is damage to the area but there is an eye discernable with a pupil and the nostril is present as is a bulge in the muzzle to show the nostril. The mouths are open. The manes are hogged, filled in and in the near horse painted in a lighter red/brown than the coat colour. The tails are also filled and coloured in this way and are held at a very high angle. The legs are long and there is detail in the fetlocks and hoofs that are painted a lighter colour. Male genitalia are indicated. Userhat controls these animals with the reins about his waist as they leap forward in the chase. The image is one of immense energy and power and an excellent working relationship between master and team.

Funeral Procession:

⁵⁹⁰ N. de Garis Davies (1922) *Work of the Expedition*, 54.

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There are two unharnessed horses (Fig. 4.109) in this scene however it is very difficult to make out the second horse as the wall seems either not to have been finished and the horse done only in outline or it has been damaged over time. Certainly the near horse appears not to have been painted by the same person as the horses in the cross hall as this (these) horses are very badly disproportionate and rather clumsily shown compared to the others. They may be the same team as they are the same colours, the near being red/brown with the lighter mane (but the tail is the same as the coat) and what is probably a white horse behind it visible only in outline. They are layered and fill three quarters of the register, their heads at the head height of the persons shown and their withers at their hips. Whilst they are of the more robust style they are very badly composed with excessively thick necks and chests, tiny barrels and distorted rumps. They are also very compressed in length. Their ears are upright and forward and forelocks hogged. Both horses have indications of eyes represented by round blobs of paint and there is no clear evidence of nostrils on either horse. The mouth on the near horse is wide open. The visible mane is hogged and painted a lighter colour but not filled. The tail is at a very high angle, painted red/brown but not filled in. The legs are short and the hind legs very bent. There is damage to the hoofs so no detail is discernable. There is no gender indicated. Whilst the image is very poorly done it still gives an impression of contained energy.

THUTMOSE IV (6) TT 63 SOBEKHOTEP

(Figs. 4.110, 4.111, 4.112)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4, f, 6.
Reference:	<i>PM I (I) 125-128 (9,11,12).</i>
Titles:	Mayor of the Southern Lake and the Lake of Sobek. Treasurer of Egypt, Supervisor of the Palace Granaries. Guardian and Teacher of the Royal Princes. Mayor of the Fayum, Overseer of the Priests of Sobek.
Source:	Dziobek. E. & M. Abdel Raziq (1990) <i>Das Grab des Sobekhotep</i> . Mainz. Plate 33. Bryan. B. “The Tomb Owner and His Family,” in Dziobek. E. & M. Abdel Raziq (1990) <i>Das Grab des Sobekhotep</i> . Archäologische Veröffentlichungen 71, Mainz, 81ff. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 280-283.

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	Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 93.
	Block containing scene BM EA37987.
Dating:	Thutmose IV: Bryan, Dziobek Tuthmosis IV: PM Thutmose IV/Amenhotep III (?): Kampp, Wasmuth Thutmose IV /Amenhotep III: TMP
Position in tomb:	(9) Broad hall, west wall. (11, 12) Long hall, south side.
Subject:	(9) Tomb owner receiving foreign tribute. (11, 12) Funeral procession with chariot.
Horses:	Four unharnessed horses.

There are four horses in this scene but two of them are represented by only the partial images of tails, one white and one brown. The other two horses are nearly complete (Fig. 4.111, 4.112). They are unharnessed and being led behind a chariot which is being pulled by an Asiatic tribute bearer. The near horse is red and the far one white. They occupy three quarters of the register, their heads at the height of the shoulders of the Syrians and their withers at their hips. They are of the robust style but are quite small in height. Their proportions are slightly unbalanced with the chest and barrel even but the hind third shortened. Their necks and chests are thick, their barrels thin and the hindquarters heavy and bunched.

Although damaged, there is an indication that the ears are upright and forward and that the forelocks are hogged. Their eyes are outlined in contrasting colour and there is a pupil set on a light background in both horses. There is damage to the muzzle.

The manes are hogged and the same colour as the coat (red). The tails, red and white, are filled and the red horse's tail is darker than its coat. Both tails are held at a high angle. There is no indication of gender. The legs are thin and the hind ones very contracted. Damage has removed any evidence of hoofs. The horses are obedient whilst appearing alert and high spirited.

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4.2.9 THE REIGN OF AMENHOTEP III

AM III (1) TT 297 AMENEMOPET (CALLED TJANEFER)

(Figs. 4.113, 4.114, 4.115)

Site:	Al ‘Asasif. TMP Map Iv, D-5, a,7.
Reference:	<i>PM I (1) 379 (3).</i>
Titles:	Scribe who counts the Grain of Amun. <i>ss ḥsb it n Imn</i> Overseer of the Fields of Amun. <i>imy-r 3ḥt (n Imn).</i>
Source:	Strudwick. N. (2003) <i>The Tomb of Amenemopet Called Tjanefer at Thebes. (TT 297)</i> Abhandlungen des Deutschen Archäologischen Instituts Kairo, Ägyptologische Reihe 19, Berlin, Plate 3.
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole: 567-568.</i> Early Dyn XVIII: PM Hatshepsut: Kampp (1996) (indicates a time of “early 18 th Dynasty” p 567) Amenhotep III: Strudwick (2003) “Amenemopet thus probably built his tomb sometime after the middle of the 18 th Dynasty, perhaps within a few years of the transition between the reigns of Thutmose IV and Amenhotep III” (p 13). Strudwick’s date has been accepted here as it comes from a more recent detailed examination of the tomb.
Position in tomb:	Dyn XVIII: TMP Broad hall, north wall, west side.
Subject:	Measuring the grain.
Horses:	Two harnessed horses.

This image is now very badly damaged, however, Strudwick has used Davies’ notebooks (Davies. MSS 11.2 p85)⁵⁹¹ to reconstruct them.

There are two horses harnessed to a chariot (Figs. 4.114, 4.115) however, little detail has been preserved. The near horse is red, the far, white.⁵⁹² They fill three quarters of the register, their heads at the same height as the persons in the image and their withers at the height of their waists. The horses are of the robust style. Davies has reconstructed upright ears, eyes, open mouths and hogged manes. Some tail remains show in-filling

⁵⁹¹ N. de Garis Davies (1865-1941) *Notebooks (MSS)* Griffith Institute, Ashmoleon Museum, Oxford.

⁵⁹² N. Strudwick (2003) *The Tomb of Amenemopet Called Tjanefer at Thebes. (TT 297)* Berlin, 49.

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and the reconstructed tail tops are highly placed. The hind legs (all that remain) are quite thin and bent and there seems to be indications of hoofs and fetlocks. There is no indication of gender and the whole image is once again that of alert, spirited but obedient horses waiting and perhaps prancing on the spot.

AM III (2) TT 89 AMENMOSE

(Figs. 4.116, 4.117, 4.118, 4.119)

Site:	Shaykh ‘Abd al-Qurnah. TMP Map V, D-4,c, 10.
Reference:	<i>PM I (I) 181-183 (14, 15).</i>
Titles:	Steward in the Southern City, Seal Bearer of Upper Egypt. Sole Companion of the King, King’s Retainer of Foreign Expeditions, Noble.
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve, 1. Plate 284. Davies. Nina. & N. de Garis. “The Tomb of Amenmose (No. 89 at Thebes.” <i>JEA</i> . 26. (Feb 1941) 131-136. Plate 25. Shaw. R. L. (2006) “The Tomb of Amenmose: Almost Done.” <i>Archaeological Newsletter. Royal Ontario Museum</i> . Series III. No. 18 March 2006. (The author wishes to acknowledge the generosity of Roberta Shaw in sending colour images of the horses in this tomb. Personal Communication 9/1/2010). Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 344-348.
Dating:	Amenophis III: Davies, PM Amenhotep III: Shaw, Kampp, TMP
Position in tomb:	Pillared hall, north-east side.
Subject:	Amenmose receiving the tribute of Punt, Syria and Nubia.
Horses:	Two harnessed horses.

There are two harnessed horses in this tomb, with much of the coloured image (Figs. 4.117, 4.118) preserved, but damage to certain parts of it. The near horse is white and the far, red/brown. The chariot and team occupy a double register filling it approximately to three quarters of its height. The tomb owner is not visible in the chariot, however, Shaw⁵⁹³ indicates that he was originally in it. If so, it is likely that the horses and the tomb owner were in the same proportions in previous similar images- that is, heads at the same height and withers at the waist. The hindquarters of these animals are too large and out of proportion, the barrels very thin, suggesting “sway-back,” and the chests too pronounced. They are of the robust style. Their ears are

⁵⁹³ R. Shaw (2006) *Amenmose*, 3

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upright and forward and the forelocks hogged. There is an indication of eyes but no nostrils can be seen. What remains of the mouths indicates they were open. The manes are filled, hogged and show distinct hairs and are the same colours as the coats. The tails are coloured in a like manner, filled and at a very high angle. There is no indication of gender. The legs are in reasonable proportion, although the hind legs are bent and there are indications of hoofs and fetlocks. These horses are under control and are obedient but very lively, probably prancing and impatient.

AM III (3) TT 91 ANONYMOUS A

(Figs. 4.120, 4.121, 4.122)

Site:	Shaykh ‘Abd al Qurnah. TMP Map V, D-4,b,10.
Reference:	<i>PM I (1) 185-187 (5).</i>
Titles:	Captain of Troops, Overseer of Horses.
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve, 1. Plate 290. Schott photo 6793.
Dating:	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 349-350. Tuthmosis IV/Amenophis III: PM Thutmose IV/Amenhotep III: Kampp, TMP
Position in tomb:	Broad hall, east side, north wall.
Subject:	Nubian soldiers and men with horses.
Horses:	Four horses, unharnessed.

There are four horses visible in this tomb, they are unharnessed and being led (Figs. 4.121, 4.122). There are no colour images available, but they are probably red/brown and white. The colours enable the individual horses to be made out clearly in the standard layering of the bodies. The horses fill three quarters of the register and their heads are at the height of the persons and their withers are at their waist height. There is layering, and although damage obscures several details, there is enough of the group to identify various features. These are robust horses, although they seem better conformed than others, their hindquarters, barrels and chests are more evenly proportioned, but the barrels are still quite thin. There are no ears visible, there are round marks for eyes, some nostrils exist in little detail and the mouths are open. The manes and forelocks are hogged. The tails are painted and held at a high angle but not filled. The legs are in

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proportion to the bodies with the hind legs bent and there is an attempt at anatomical detail in the canons, fetlocks and hoofs. No gender is discernable. These horses are in a group moving forward and prancing, although obedient. In the centre of the image there is a groom, presumably patting or calming one horse.

AM III (4) TT 151 HETI

(Fig. 4.123)

Site:	Dra Abu el Naga TMP Map 1, c-7,d,6.
Reference:	<i>PM I (I) 261-262 (8).</i>
Titles:	Scribe. Counter of the Cattle of the God's Wife of Amun, Steward of the God's Wife.
Source:	Porter. B & R. Moss (1927-1952) (1994 reprint) <i>Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings</i> , 7 vols (2nd editions 1960-1981), Oxford. <i>Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs, and Paintings</i> . Griffith Institute, Ashmolean Museum. Oxford. (Second Edition.) <i>I (I) 261</i> . Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 439-440.
Dating:	Tuthmosis IV: PM Thutmose IV/Amenhotep III: Kampp (Note: Though PM dates the tomb to Thutmose IV the date indicated by Kampp has been adopted here). Thutmose IV/Amenhotep III: TMP
Position in tomb:	Long hall, east side.
Subject:	Carrying chariot in a funeral procession.
Horses:	There are no horses depicted in this tomb.

AM III (5) TT 78 HAREMHEB

(Figs. 4.124, 4.125, 4.126, 4.127, 4.128)

Site:	Shaykh 'Abd al Qurnah. TMP Map V, D-4,d,9.
Reference:	<i>PM I (I) 152-156 (8,9).</i>
Titles:	Royal Scribe, Scribe of Recruits, Superintendent of the Sacred Cattle, Captain of Archers, Master of Horse, Tutor of Princess Amenipet.
Source:	Brack. A. & A. Brack (1980) <i>Das Grab des Haremheb. Theben Nr. 78</i> . AV 35, Mainz. Plates 9, 54, 61, 87. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 316-318.
Dating:	Tuthmosis III/Amenophis III: PM

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	Amenhotep II/ Thutmose IV/Amenhotep III: Brack & Brack, Kampp
	Thutmose III/Amenhotep III: TMP
Position in tomb:	(8) Broad hall, north-east side, (tribute). (9) Long hall, west side. (funeral procession including boat).
Subject:	Scene 8 Plates, 9, 48, 87. Bringing of horses and tribute. Scene 11 Plates, 54, 61, 88. Funeral procession.
Horses:	Scene 8: twelve horses: Scene 11: two horses.
Note:	Although the line drawings in the report do not contain them it is possible to discern two more horses depicted in this tomb (Fig. 4.124). In Scene 11 the funeral procession, on the deck of the first boat on the left is the faint outline of two horses possibly occupying a structure on the boat's deck in Scene 11.1.

Scene 8:

There are twelve horses in this scene (some obscured by damage)(Fig. 4.125, 4.126). They are not harnessed and are being led, four at a time by grooms. (The excavator's line drawings do not include as much detail as can be discerned from the photographic plates.) In the three visible rows of animals there are several of each colour. The excavator lists them as "red, beige, as well as beige-white and blue-white mottled."⁵⁹⁴ This would indicate red/brown, a dun or perhaps strawberry roan, white with mottled blue, a piebald and a pale skewbald. These colours are repeated in each of the three rows. The rows are layered and because of this together with damage there is unfortunately not one complete horse shown. All the horses fill three quarters of the register and they reach the height of the heads of the grooms but their withers are at the hip level of these people, lower than has been the case before. They have the thick chests and necks and thin barrels seen to this time and are of the robust type. Many exhibit "swayback."⁵⁹⁵

Their ears are upright and forward and forelocks hogged. The visible eyes are outlined and have a pupil and the nostrils are indicated by a swirl of paint. Mouths are closed. The manes are hogged and in some cases painted the same colour as the coat of the

⁵⁹⁴ A. Brack & A. Brack (1980) *Das Grab des Haremheb. Theben Nr. 78*, Mainz, 38.
⁵⁹⁵ See Horse Terminology.

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horse and in other instances they are a different and unnatural contrast as in the piebald horse having a red mane. This might be an instance of maximising materials. There is a very clear effort to depict the hair of the manes in many cases. There are no tails visible. The legs are thin and there has been an effort to show hoofs, fetlocks and canon bones and the hind legs are extremely bent. No gender indicators are visible. The overall impression is of order and obedience but also of restrained energy.

Scene 11:

There are two horses in this scene harnessed to a chariot controlled by a driver behind the vehicle (Fig. 4.127). The image is badly damaged leaving only the bodies of the red/brown horses visible. From what can be seen they seem to be of the same description as the horses in Scene 8.

In Fig. 4.128 there seems to be two horses drawn faintly in red housed in a construction on the deck of Haremheb's ship. They are very hard to discern but seem to be of robust form.

AM III (6) TT 162 KENAMUN

(Figs. 4.129, 4.130, 4.131)

Site:	Dra Abu el Naga. TMP Map II, D-6,f,3.
Reference:	PM 1 (1) 275-276 (7).
Titles:	Mayor in the Southern City, Overseer of the Granary of Amun.
Source:	Davies. Nina de Garis. (1963) <i>Scenes from Some Theban Tombs</i> (Nos. 38, 66, 162, with excerpts from 81) (Private Tombs at Thebes, 4) Oxford. Plate 18. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 452.
Dating:	Dyn. XVIII: PM Amenhotep III: Kampp
Position in tomb:	Long hall, north wall.
Subject:	Davies, p.16 "two ships are returning from the pilgrimage to Abydos." (Plate XVIII) "On board the farther ship, two horses are being fed by a groom." "Funeral procession to Anubis and Hathor including Abydos pilgrimage with boats containing horses." PM 1 (1) 276.

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Horses: Two unharnessed horses on boats, being fed.

There are two horses in this most unusual scene (figs. 4.130, 4.131). It is only the second instance of horses depicted on boats (see TT 78 Haremheb, above). Additionally, it is the first scene of horses being fed. They are not harnessed appearing to wear only halters and are attended directly by a groom who is supervising their feeding. Davies makes no mention of the colour of the animals but there is a distinct shading difference between the near and the far horses. The legs, tail and mane of the far one are darker than the near. This parallels the standard layering of images. The horses are being carried in a boat that fills the register. They appear to be quite small compared to the figure standing below the sail, however the space available to the artist must be taken into consideration here. Apart from a small amount of elongation these horses are conformed relatively normally with no real over sized sections, the barrels and legs are in proportion, although the neck and chest are thick. They are fine but still of the robust style.

Their ears are upright and forward and their forelocks hogged. There is no evidence of eyes, nostrils or mouths. Their manes are hogged and their tails are at a normal angle. The hoofs are hard to discern, but there are fetlocks. The legs are in proportion and not nearly as bent as previous images, although there is a lack of detail regarding the hind legs. There is no indication of gender. The image is one of calm. The near horse seems alert but not alarmed and the far horse is calmly feeding with its head down. They seem to be either minimally or completely unrestrained and appear to be perfectly obedient. They are feeding from a rectangular trough on deck.

AM III (7) TT 57 KHAEMHAT CALLED MAHU

(Figs. 4.132, 4.133, 4.134, 4.135)

Site: Shaykh ‘Abd al Qurnah. TMP Map VI, E-4,g, 3.
Reference: PM 1 (1) 113-119 (13, 21-22).

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Titles:	Royal Scribe. Overseer of the Granaries of Upper and Lower Egypt.
Source:	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve, 1. Plate 189. http://www.nilemuse.com/muse/KhaemhatBarq.html#towboat Rommelaere. C. (1991) <i>Les chevaux du Nouvel Empire égyptien</i> , Brussels, Plate 55a. Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 267-269. Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 91.
Dating:	Amenophis III: PM Amenhotep III: Kampp, Wasmuth, TMP
Position in tomb:	Supervising the fields- Broad hall, east wall. (13). Abydos pilgrimage to tomb- Long hall, north wall. (21-22).
Subject:	A. Deceased inspecting the crop with waiting chariot. B. Abydos pilgrimage to tomb with horses on board boat.
Horses:	A. There are eight horses in this scene, all harnessed to chariots with drivers holding whips. B. Two horses on boat.
Note:	This is the second instance of horses on boats. There is no indication of a structure to house them.

Scene A:

The scene is rendered in fine, detailed raised relief but is not painted (Fig. 4.134a). The horses are layered with only the nearest horse complete. The horses fill three quarters of the register. It is interesting to note that they are much taller than the person holding the bridle of one of the teams, but their heads are the same height as the drivers, if that is in fact what the two individuals immediately behind the chariots are and the more important official standing behind the last chariot is almost a head taller than the horses whose withers are at the height of his waist. These horses are certainly finer and better conformed than many to this point, but they still display some elongation, thin barrels, heavy necks and chests typical of the robust style.

Their ears are forward and upright, their eyes carefully defined with pupils, and they also have nostrils and open mouths. Their forelocks and manes are hogged and hair fibres are displayed in detail. The tails have no similar detail and are held at a more normal angle. Their legs are in proportion with hoofs, fetlocks and canon bones. Some of the legs are bent, but the legs of the near horse are quite relaxed, as if it was standing

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calmly. The near horse is male – there is a penis sheath visible. These animals give the impression of obedience but they are, at the same time, alert and spirited.

Scene B:

There are two horses standing on the foredeck of the boat and there is a chariot on the roof of the structure in the centre of the boat (Fig. 4.133). They are layered and depicted in raised relief with no paint. Given their small size in this scene there is still quite a high level of detail discernable. They are quite small which probably reflects the space available rather than the size of the horses. The nearest rower, who is seated, comes to their withers, which would make them the size of a very small Shetland pony if that were their real size. The rowers obscure much of the bodies of the horses leaving the heads and necks available for examination. In conformation they seem to be identical to the horse in the cross hall. They are fine but of the robust style. They have upright and forward ears, nostrils and open mouths, their forelocks and manes are hogged. Tails and genitalia are not visible nor are their legs. They do give an impression of an alert but obedient attitude.

AM III (8) TT 69 MENNA

(Figs. 4.136, 4.137, 4.138)

Site: Shaykh ‘Abd al Qurnah. TMP Map V, D-4, g, 9.
Reference: *PM I (1) 134-139 (2)*.
Titles: Scribe of the Fields of the Lord of the Two Lands.
Field Overseer of Amun.
Source: Wreszinski. W. (reprint 1988) *Atlas zur altaegyptischen Kulturgeschichte*. Geneve, 1. Plates 231 and 234.
Maher-Taha. M. (2002) *Le Tombeau de Menna*, Conseil Suprême des Antiquités, Cairo.
Hartwig. M. (2001) “The Tomb of Menna (TT69)”, in Weeks. K. (ed.) *Valley of the Kings: The Tombs and the Funerary Temples of Thebes West*. Vercelli, 398-407.
Hartwig. M. (2013) *The Tomb Chapel of Menna (TT 69): the art, culture and science of painting an Egyptian tomb*, Cairo.

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Campbell. C. (1910) *Two Theban Princes, Kha-em-Usat & Amen-Khepeshf, sons of Ramses III, Menna, a Land Steward, and Their Tombs*. Edinburgh.

Rommelaere. C. (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, Plate 3.

Kampp. F. (1996) *Die thebanische Nekropole*: 294-297.

Wasmuth. M. (2003) *Innovationen und Extravaganzen*, Oxford. 96.

Dating:	Tuthmosis IV (?): PM Thutmose IV/Amenhotep III: Kampp Thutmose IV: Wasmuth Thutmose IV /Amenhotep III: Hartwig, TMP
Position in tomb:	Broad hall, south end, east side.
Subject:	Menna superintending agricultural work.
Horses:	There are two harnessed horses in this scene.

The near horse is a skewbald and the far seems mostly red/brown, although the muzzle appears white (Figs. 4.137, 4. 138). They are layered and take up three quarters of the register. Their heads are at the height of the driver and their withers at his hip. These animals are poorly conformed being very thick in the neck and chest and the hindquarters with a thin, elongated barrel and very bent legs. They are of the robust type with hogged forelocks and upward and forward pointed ears.

There is detail in the depiction of the eyes: they are lined in red, are triangular and have a clear pupil and some care has been taken in their depiction. The nostrils are also detailed, the painter indicating the internal hollow of the nostril. The mouths are open. The manes are shown in red and white and are hogged and the tails are coloured in a similar way, the hair of the tails is detailed and the tails are held at a high angle. The hind legs are bent under the horses and there are hoofs and fetlocks and an effort especially in the front legs, to approximate natural structures as not only fetlocks are seen but pasterns as well. The near horse is male. The driver is holding the horses and is seen standing yet the demeanour of the horses indicates considerable movement which may indicate impatient prancing on the spot whilst remaining obedient to the driver. The faces show a great deal of expression and alertness. The overall impression is of energy and spirit.

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AM III (9) TT 90 NEBAMUN

(Figs. 4.139, 4.140, 4.141, 4.142)

Site:	Shaykh ‘Abd al- Qurnah. TMP Map V, D-4, c, 9.
Reference:	<i>PM I (I) 183-185 (3,9).</i>
Titles:	Standard-Bearer of the (Sacred Bark called) “Beloved of Amun” Captain of Troops of the Police on the west of Thebes, Commander of Marines, Commander of Bowmen, Head of many soldiers, Veteran of Soldierly.
Source:	Davies. N. de Garis. (1923) <i>The Tombs of Two Officials of the Reign of Thutmose the Fourth. (Nos 75 and 90)</i> Egypt Exploration Society, The Theban Tombs Series, 3rd Memoir, London. Plates 25, 28, 29. Manniche. L. (1987) <i>City of the Dead. Thebes in Egypt.</i> London. Baud. M. (1935) <i>Les dessins ébauchés a la necropole thébaine.</i> Cairo. Kampp. F. (1996) <i>Die thebanische Nekropole:</i> 348-349.
Dating:	Tuthmosis IV/Amenophis III: Davies, PM Thutmose IV/Amenhotep III: Manniche, Kampp, TMP
Position in tomb:	Syrians, captives and horses. Broad hall, west end. (3) Chariot and royal barge. Broad hall, east end, north wall. (9)
Subject:	Tribute scenes: (9) Chariot and Royal Barge.
Horses:	Plate XXIX, ⁵⁹⁶ two horses: Plate XXV: two horses.
Comment:	Davies comments, “the execution of the paintings is often bad.” ⁵⁹⁷

Plate XXIX:

This scene is of two horses, (Figs. 4.140, 4.141) led by a groom. The near horse seems to have been finished but the far one, whilst painted, is still mainly in outline. The near horse is a skewbald (red and white) and the far seems to be a dun or perhaps a strawberry roan, a cream colour. They fill three quarters of the register, their heads coming to the shoulders of the groom and their withers below his knees. They are of the robust style with thick necks and chests and large hindquarters. They are not so elongated but the barrels are still quite thin. They are layered, although in this case quite badly. There is a problem in that the head of the far horse appears on top (to the front) of the near horse. The ears on both are upward and forward and the forelocks are

⁵⁹⁶ N. de Garis Davies (1923) *Two Officials*, pl. XXIX.

⁵⁹⁷ N. de Garis Davies (1923) *Two Officials*, 20.

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hogged. There is detail in the eyes. They are outlined in red (near) and brown (far) and have a clear pupil. The noses are given nostrils and an attempt has been made at showing the outline of the muzzle. Both mouths are open. Both manes are hogged and the skewbald's colouring is continued in the tail, as it is in the dun horse. The tails are at a very high angle, filled and coloured. There is damage to the image and no remains of the lower legs can be seen however the hind legs seem very contracted. There is no evidence of gender. The image is one of obedient animals that are highly energetic, alert and possibly prancing in excitement.

Plate XXV:⁵⁹⁸

There is a chariot next to the royal barge that is almost obliterated (Fig. 4.142) but it does show two layered horses harnessed to a chariot with legs that are very contracted. They appear to be of the robust style.

AM III (10) NEBAMUN (LOST)

(Figs. 4.143, 4.144)

Note:	This tomb has been lost and is known only from the fragments in the British Museum.
Titles:	Scribe, Counter of Grain in the Temple of Amun in Karnak.
Source:	British Museum BM 37982. Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve, 1. Plate 424. Manniche. L. (1987) <i>City of the Dead, Thebes in Egypt</i> , London. Manniche. L. (1988) <i>Lost Tombs: A Study of Certain Eighteenth Dynasty Monuments in the Theban Necropolis</i> . London. Parkinson. R. (2008) <i>The Painted Tomb-Chapel of Nebamun. Masterpieces of Ancient Egyptian Art in the British Museum</i> , London. James. T. G. H. (1985) <i>Egyptian Painting</i> , London. Plate 32.
Dating:	Amenophis III: Manniche ("the reign of Tuthmosis IV or the earlier part of that of Amenophis III"). Thutmose IV/Amenhotep III: Parkinson (based on stylistic features).

⁵⁹⁸ N. de Garis Davies (1923) *Two Officials*, pl. XXV. See a clearer copy in M. Baud (1935) *dessins*, fig. 59, 135.

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Position in tomb:	The British Museum (in Manniche <i>Lost Tombs</i>) has an estimated reconstruction which places this image in the Broad Hall.
Subject:	The tomb owner inspecting the fields.
Horses:	There are two harnessed horses in this scene. (The lower team is comprised of onagers another type of equid.)

The near horse is black and the far horse is red and they are layered (Figs. 4.143, 4.144). They occupy the whole (of a split) register and their heads are at the head height of the driver and their withers at his waist. They are of the robust style with thick necks and chests, large hindquarters and slightly elongated thin barrels. Their ears are upright and forward, their forelocks hogged. There is some small damage to the image making details of the face and thus it is difficult to discern, but there seems to be detail in the eyes and nostrils with the mouths are open. The manes are hogged and of the same colour as the coats. The tails are painted similarly, filled and held at a high angle. Hoofs, fetlocks, pasterns and canon bones are visible and the hind legs are very contracted whilst the forelegs are almost straight. At least the near horse can be identified as male. The horses appear very energetic, prancing with pent up energy but under the control of the chariot driver.

AM III (11) TT 201 RE

(Figs. 4.145, 4.146)

Site:	Khokha. TMP Map IV, D-5,a,7.
Reference:	<i>PM I(1) 304-305 (7).</i>
Titles;	First Royal Herald.
Source:	Redford. S. & D. Redford (1994) <i>The Akhenaten Temple Project. 4, The Tomb of Re'a (TT 201).</i> Aegypti Texta Propositaque 4. Toronto. Society for the Study of Egyptian Antiquities. Plate 23. Kampp. F. (1996) <i>Die thebanische Nekropole: 487-488.</i>
Dating;	Tuthmosis IV/Amenophis III: PM Thutmose IV/Amenhotep III: Redford & Redford, Kampp, TMP
Position in tomb:	Pillared hall, north wall.
Subject:	Associated with soldiers.
Horses:	All that remains of this scene is a section showing the fore-limbs of two horses that cannot be discerned from the photograph. (Fig. 4.146).

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AM III (12) AMENHOTEP III BLOCK

(Figs. 4.147a, 4.147b)

Site:	Thebes.
Reference:	
Source:	Petrie. W. M. (1897) <i>Six Temples at Thebes</i> . London. Plate 10. Egyptian Museum CG 43026, JE 31409. Fletcher. J. (2000) <i>Egypt's Sun King. Amenhotep III: An Intimate Chronicle of Ancient Egypt's Most Glorious Pharaoh</i> , London. 63.
Dating:	Amenophis III: Petrie Amenhotep III: Fletcher
Position:	Funerary temple of Amenhotep III. Thebes, reused in the funerary temple of Merneptah.
Subject:	Limestone stele. King driving his chariot with bound Nubians on the backs of the horses.
Horses:	Four horses.

The stele contains what may be back-to-back identical images of the king in his royal chariot (Fig. 4.147a,b). There are two horses in each image. The right side image is the one most intact and will therefore be the subject of this discussion. The horse's heads would be approximately at the height of the king's shoulders and their withers at his waist. There seems to be some remnants of red paint on the horses matching that on the neck of the king. The horses are layered. Their bodies are very robust with the remains of the legs appearing out of proportion and extremely thin.

Their chests are large and protruding and the barrel is short and thick. The ears are pricked nearly vertically and the manes and forelocks are hogged. The eyes are very pronounced and round, noses are detailed and mouths are open. The tails are held at a very high angle. Damage to the stele precludes any discussion of the lower legs but the upper hind legs are very contracted and not anatomically correct. There is no indication of gender discernable. The horses are in full royal panoply, under the control of the king. He holds the reins tightly and the highly contracted posture of the horses indicates spirit and energy.

AM III (13) WHIP HANDLE IN THE SHAPE OF A HORSE

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(Fig. 4.148)

Site: "From Egypt." "Thebes possibly" (MMA)
Source: Metropolitan Museum of Art 26.7.1293 (E. Harkness-Gift 1926)
Dating: Dynasty 18, Reign of Amenhotep III ca. 1390-1353 (MMA).
Subject: A painted ivory handle of a whip or whisk in the shape of a horse.
Horses: One small horse in an extremely extended pose with fore and hind legs stretched straight out. There is detail in the colour which is a reddish brown with the hogged mane and tail in black. The eyes are large (inlaid with garnet) the nostrils are round and the mouth open.

4.2.10 THE REIGN OF AMENHOTEP IV - AKHENATEN

AM IV-AKH (1) AKHENATEN TEMPLE, KARNAK.

(Figs. 4.149, 4.150, 4.151, 4.152, 4.153, 4.154, 4.155)

Site: Karnak.
Reference: PM 2 (*Hypostyle – blocks*) 53.
PM 2 (*Ninth Pylon- blocks*) 182.
PM 2 (*Second Pylon- blocks*) 39-40.
Titles: King.
Source: Winfield Smith. R. (1967) "The Akhenaten Temple Project", *Expedition* vol. 10, issue 1, University of Pennsylvania Museum, online journal, viewed 17 October 2015, <<http://www.penn.museum/sites/expedition/the-akhenaten-temple-project/>>
Lauffray. J. (1979) *Karnak d’Egypte, domaine du divin*, Paris, fig. 140.
Redford. D. (1988) *The Akhenaten Temple Project. Vol 2: Rwd-mnw, Foreigners and Inscriptions*. Aegypti Texta Propositae, Toronto, 35-45, Plates 17, 18, 19, 20, 35, 37.
Dating: Amenhotep/Akhenaten: PM, Redford
Subject: Akhenaten in his chariot, Nefertiti in her chariot and multiple attendants in theirs.
Horses: Royal horses.

Whilst much of these images is missing, there are enough blocks to describe the chariot team of the king, the queen and the attendants, (Figs. 4.149, 4.150, 4.151, 4.152, 4.153, 4.154). These are Amarna style layered horses which appear to be very fine but robust in conformation. They have elongated barrels but otherwise are in proportion. They

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occupy approximately three quarters of the apparent registers and when measured against the king and the other persons their heads would be at their head heights and their withers at their waists. Their ears are upright and forward and as the king and queen's horses appear to be wearing a plumed bonnet there is no forelock in evidence nor are there any on the attendant's horses. The eyes appear to be oval or crescent in shape and blinkers are shown. The noses are semi-circular and the nearside king's horse in the Lauffray image has its mouth open with teeth showing in the lower jaw. The manes are hogged between the harness pad and the lower edge of the bonnet on the royal horses and completely hogged on those of the attendants. Tails are long, full and held at a very high angle. Hoofs, pasterns, fetlocks and canons are shown on thin legs. The damage to the blocks prevents any determination of gender with the exception of Plate 18: the queen's horses and Plate 37: the king's horses, which both appear to be stallions. They are proceeding at the "Flying Gallop" under the control of the king who has the reins in his hands and whilst he has a whip, it is not being used. The queen in Plate 35 also has a whip (as do the attendants) but they do not seem to be using them. Most significantly in these images are the first renderings of a king and queen riding together in a royal chariot (Fig. 4.155) a queen riding alone (Fig. 4.151 and 4.154) and the princesses in their chariots (Plates 42 and 43).

AM IV-AKH (2) TT 55 RAMOSE

(Figs. 4.156, 4.157, 4.158)

Site:	Shaykh 'Abd al Qurnah. TMP Map VI, E-4, g, 2.
Reference:	<i>PM I (1) 105-111 (4)</i> .
Titles:	Governor of the Town. Vizier.
	Hereditary Noble. Mayor.
	Superintendent of Royal Works. Judge.
	Overseer of Priests and Temples.
Source:	Davies. N. de Garis. (1941) <i>The Tomb of the Vizier Ramose</i> . Mond Excavations at Thebes I, London.
	Weeks. K. R. (2005) <i>The Treasures of Luxor and the Valley of the Kings</i> , Art Guides Cairo. 443-450.
	Germond. P. & J. Livet (2001) <i>An Egyptian Bestiary, Animals in Life and Religion in the Land of the Pharaohs</i> , London. Plate
	135.

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www.osirisnet.net/tombes/nobles/ramose/e_ramose.htm View 12.
Kampp. F. (1996) *Die thebanische Nekropole*: 262-265.
Wasmuth. M. (2003) *Innovationen und Extravaganzen*, Oxford.
90.

Dating: Amenophis IV: Davies, PM
Amenhotep III/Amenhotep IV/AKH: Kampp, Wasmuth, TMP
Position in tomb: Pillared hall, eastern wall, southern part.
Subject: Hieroglyph of a horse.
Horses: A fine very elongated single unharnessed horse with very short legs perhaps reflecting the space available. Apart from the very short legs this has some typical Amarna features with its tubular barrel, extensive elongation and attention to anatomical detail in the head, tail and hoofs (Fig. 4.157).

AM IV-AKH (3) HEAD OF A HORSE- SCULPTOR'S MODEL

(Fig. 4.159)

Site: Amarna.
Reference: Found at Hermopolis. Ägyptisches Museum Papyrussammlung, Berlin, 23717.
Source: Freed. R., Y. Markowitz & S. D'Auria (eds.) (1999) *Pharaohs of the Sun: Akhenaten, Nefertiti, Tutankhamen*, Boston, 241. Plate 124.
Dating: Amenhotep IV/AKH: Freed, Markowitz & D'Auria (based on stylistic features).
Subject: Sculptor's model of a horse's head with a princess on the reverse, (Fig. 4.159). This is contained on one block of limestone and depicts the head of a horse in the more naturalistic Amarna style. The ears are upright and forward and while there is no forelock the mane is hogged. There is considerable detail in the image. The eyes are round with upper lids and there is the indent of the supraorbital fossa above the eye. Veins run down the face from the eye to the nose and there is considerable definition in the angle of the mandible. The facial crest is visible and the wrinkles of the chin and muzzle can be seen clearly. The mouth is open and there are two teeth showing. The nostril is deep and round and is slit at the top and is open. This image clearly demonstrates the capacity of the Egyptian sculptor to accurately depict detailed anatomical structures as well as real life.

AM IV-AKH (4) AMARNA RELIEF

(Figs. 4.160, 4.161, 4.162)

Site: Amarna
Reference:

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- Source: Hanke. R. (1978) *Amarna-Reliefs aus Hermopolis: neue Veröffentlichungen und Studien*, Gerstenberg, 230-231. Plate 19.
- Dating: Amenhotep IV/AKH: Hanke
- Subject: The top scene in this relief is a highly unusual image of a group of horses (Fig. 4.156) running free and without constraints of any kind. The scene below is also unusual in that the horses are being calmed by their attendants but they again are under no methods of restraint such as bridles or halters.
- Horses: There is a rare scene of uncontrolled horses.

There are seven horses in the upper register, five of which might be interpreted as adult and two as foals. (Fig. 4.160). Egyptians did not use perspective in their art and as such the reduced size of these figures should be understood as indicting immature animals. The depiction is very free with only two of the figures in contact with the ground line and all stretched out indicating speed. One horse the top right one is larger than the others and this might indicate a male horse, although no genitalia are visible. All the horses in both scenes are well proportioned, gracile and in general not as elongated in the barrel which seems typical of Egyptian depictions of horses. The lower register has horses whose heads correspond in height to the heads of the grooms and their withers to the waist of the central figure. All of the ears are upright and forward, no forelocks are visible on any of them and all the “adult” horse’s manes are hogged. Eyes are round with lines extending from them, noses are lines and the mouths where visible are open. The tails are full and held at normal angles. There are indications of hoofs, pasterns and fetlocks and canons and no visible genitalia. The grooms appear to be calming the horses that seem to be behaving in an obedient fashion.

AM VI-AKH (5) AMENHOTEP IV-AKHENATEN (ROYAL TOMB AT AMARNA)

(Fig. 4.163, 4.164, 4.165)

- Site: El Amarna. Wadi Abu Hasah el-Bahri.
- Reference: *PM 4, 236 (7, 9-10).*
- Source: Martin. G. T. (1989) *The Rock Tombs of El ‘Amarna, Part VII. The Royal Tomb at El-‘Amarna, Volume II. The Reliefs, Inscriptions and Architecture*, Egypt Exploration Society

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	Archaeological Survey of Egypt Memoir 40, London, Plates 34, 53.
	Cooney. J. D. (1965) <i>Amarna Reliefs from Hermopolis in American Collections</i> . New York.
	Freed. R., Y. Markowitz & S. D'Auria (eds.) (1999) <i>Pharaohs of the Sun: Akhenaten, Nefertiti, Tutankhamen</i> , Boston, 241. Plates 123, 124, 223.
Dating:	Amenhotep IV/ AKH: PM, Martin
Position in tomb:	Room ALPHA, WALL A (9-10). Room ALPHA, WALL D (7).
Subject:	1. Room ALPHA Wall A. ⁵⁹⁹ (PM 9-10); 2. Room ALPHA Wall D. (PM7).
Horses:	1. There are twenty-two harnessed horses. 2. There are forty horses.

1. Room ALPHA Wall A. (PM 9-10)(Figs. 4.164).
This is a scene of the adoration of the solar disk by the royal family who have arrived at the temple with a chariot escort. There are twenty-two horses harnessed to chariots, ten are either all or in part reconstructions made by Martin and twelve are represented by copies of the remaining reliefs. Six horses appear to be royal judging by the plumes on their heads.

Martin notes that there is some red colour remaining on the cattle⁶⁰⁰ and this might have been the colour of the horses as well.

There is much damage to this scene which has obliterated a lot of the detail and examination has been made more difficult by the fact that the wall seems to have not only been reworked but hastily completed as “it is clear that the sculptor has in some instances merely sketched the scenes with his chisel in the roughest way.”⁶⁰¹

What can be discerned about the horses is that they fill the registers, their heads are at the heads of the drivers, and their withers at their waists. They are of the robust style and are generally well conformed and in proportion. Hoofs are discernable in some and their legs are contracted in some instances and more relaxed in others.

⁵⁹⁹ G.T. Martin (1989) *The Royal Tomb at El-'Amarna. The Rock Tombs of El 'Amarna, Part VII*, London, pl. 34. Martin points out that several of the previous recordings of this scene were “very inaccurate.” 28.

⁶⁰⁰ G.T. Martin (1989) *The Royal Tomb*, 32.

⁶⁰¹ G.T. Martin (1989) *The Royal Tomb*, 32.

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2. Room *ALPHA* Wall D.⁶⁰² (*PM* 7) (Fig. 4.165):

This is a continuation of a previous scene of the royal family performing the evening ritual.⁶⁰³ There are nine registers, six of which contain chariot teams. Martin's record has traces of 40 horses ranging from a pair of hoofs in the bottom right corner to almost complete images (third register from the top). The wall has been badly damaged and whole sections have been lost. Martin notes the copy made by Bouriant⁶⁰⁴ in the early 20th century which shows 40 horses, but failed to copy six in the top left corner that Martin could still identify in the 1980's. Most significantly Martin also shows that Bouriant did not indicate the two instances of full face depictions of horses in the second and fourth registers from the top (Fig. 4.165, similar to Fig 4.168 below). This is the first instance of this type of depiction so far. Aldred⁶⁰⁵ states: "The front view of one of the horse's heads is very unusual, although the pose now enters the repertoire and is sometimes found in subsequent Ramesside reliefs."⁶⁰⁶ The Bouriant copy is clearer but seems to indicate that the horses are all depicted in exactly the same way - they are carbon copies. The Martin record shows there are considerable differences other than the full face ones.

Whilst the horses all fall within the robust style, some are markedly larger than others, the top register alone shows four different sizes. The horses are all layered. Of the 40 horses, only two are featured in full-face orientation. There is variation in the contraction of the hind legs indicating a level of energy in some in the top register that is not equalled in others such as those in the fourth and eighth registers. There is some

⁶⁰² G.T. Martin (1989) *The Royal Tomb*, pls. 53-54.

⁶⁰³ G.T. Martin (1989) *The Royal Tomb*, 34.

⁶⁰⁴ U. Bouriant, G. Legrain & G. Jéquier (1903) *Monuments pour servir à l'étude du culte d'Atonou en Égypte*, Volume 1, Mémoires de l'Institut français d'archéologie orientale 8, Cairo 19. pl. 4

⁶⁰⁵ C. Aldred (1961) *New Kingdom Art in Ancient Egypt*, (2nd ed) London, 69-70.

⁶⁰⁶ See The Epigraphic Survey (1932) *Later Historical Records of Ramses III*, Medinet Habu vol. 2, The University of Chicago, Oriental Institute Publications IX, Chicago. There are two more examples of the full face horse from Medinet Habu dated to Ramesses III. In addition there is a limestone relief drawn by T.G.H. James and cited in J. Cooney (1965) *Amarna Reliefs from Hermopolis in American Collections, Brooklyn*, 52, showing what might be the only image of both horses facing front in an out of context discovery in the Archaic Cemetery at Sakkara North which Cooney states must have come from the New Kingdom cemetery at Sakkara. "The style of relief is clearly Dynasty XIX, very probably belonging to the reign of Seti I though a date within the reign of Ramesses II is possible."

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red colour being on the legs of one of the horses and some with yellow that Martin suggests may be a wash.⁶⁰⁷ Several of the horses are male.

AM IV-AKH (6) BLOCK

(Fig. 4.166)

Site: Unknown- El-Amarna
Reference: N. Schimmel (Private Collection)
Source: Cooney. J. D. (1965) *Amarna Reliefs from Hermopolis in American Collections*, Brooklyn, 49, fig. 27.
Time-Life (eds.) (1992) *Egypt: Land of the Pharaohs*, Alexandria, Virginia, 97.
Dating: Akhenaten/Amarna (based on style)
Subject: Two harnessed chariot horses.
Horses: An exceptional example of Amarna horses is contained in this block from Hermopolis⁶⁰⁸ (Fig. 4.166). The general conformation and depiction of the horses is consistent with that of Amarna horses studied thus far, however this image is far more realistic and less “formulaic.” The close observation of and familiarity with horses by the sculptor is obvious in his representation of the momentary action of the near horse biting his leg. This instills vitality and freshness in the image as well as indicating the skill of the artist and it that breaks with the “standard” image of Amarna chariot teams.

AM IV-AKH (7) RELIEF

(Fig. 4.167)

Site: El-Amarna
Reference: Charles Edward Wilbour Fund, Brooklyn Museum of Art, New York, 54.186 (Painted Plaster Relief, H.22cm, W 35.1cm).
Source: Freed. R., Y. Markowitz & S. D’Auria (eds.) (1999) *Pharaohs of the Sun, Akhenaten, Nefertiti, Tutankhamen*, Boston, 241, Plate 223.

⁶⁰⁷ G. T. Martin (1989) *The Royal Tomb*, 36.

⁶⁰⁸ J. D. Cooney (1965) *Amarna Reliefs from Hermopolis in American Collections*, Brooklyn, 49, fig.27.

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Dating: Dynasty 18: Brooklyn Museum (reign of Akhenaten “probably from Room Alpha, Wall D.”)
Subject: Two harnessed chariot horses.
Horses: Two almost complete horses harnessed to a chariot. They are layered and of the same brown colour throughout. They are gracile and typically elongated with disproportionately large hind quarters. The ears are pointed forward and there is detail in the face with both mouths open, a very clearly defined jaw line in the near horse and a definite dish profile. The manes seem to be hogged behind the royal bonnet and plumes and the tails are held at a very high angle. The near horse is clearly a stallion. The team is under tight control and though apparently not moving forward give the impression of barely restrained energy.

AM IV-AKH (8) RELIEF

(Fig. 4.168)

Site: Found at Hermopolis
Reference: Brooklyn Museum of Art, New York. 60.28
Source: Freed. R., Y. Markowitz & S. D’Auria (eds.) (1999) *Pharaohs of the Sun, Akhenaten, Nefertiti, Tutankhamen*, Boston, 241, Plate 123.
Dating: Dynasty 18: Brooklyn Museum (reign of Akhenaten)
Subject: Two harnessed chariot horses.
Horses: Two distinct harnessed chariot horses performing a very extended “Flying Gallop.” They are layered and coloured with the same slightly orange/ brown as they chariot and its occupants. They are gracile and very elongated with thin tubular barrels. Their manes are hogged and there is considerable detail in the depiction of their legs with hoofs, fetlocks, and pasterns clearly visible. The near horse is male. Their tails are held at a high angle. The detail in the face is remarkable in that the whole head of the near horse is facing forward which is most unusual (See Fig. 4.165 above for another in the Royal Tomb at Amarna). Both sets of ears, nostrils and eyes are visible and this has resulted in a very unnatural pose given the speed that is indicated by the posture of the team.

AM IV-AKH (9) SHERD

(Fig. 4.169)

Site: El-Amarna

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Reference: Ashmolean Museum 1924.74
Source: Egyptian Archaeology (2004) "Notes and News," *The Bulletin of the Egypt Exploration Society* 24 (2004) 13.
Dating: Eighteenth Dynasty (Ashmolean)
Subject: Sherd with galloping horse.
Horses: One extremely stylized horse, unharnessed, brown colour with upstanding mane of blue colour.

AM IV-AKH (10) AN 3 AHMOSE

(Figs. 4.170, 4.171)

Site: El Amarna North 3.
Reference: *PM 4, 214 (5-7)*.
Titles: Real Royal Scribe.
Fan-bearer on the Right of the King.
Steward of the House of Akhenaten.
Overseer of the Judgement Hall, Royal Chancellor.
Sole Companion and First of the Companions.
Source: Davies. N. de Garis. (1905) *The Rock Tombs of El-Amarna. Part III. Smaller Tombs and Boundary Stelae*, London. Plate 32a.
Dating: Amenhotep IV/AKH: Davies, PM
Position in tomb: Long hall, west wall, upper half.
Subject: A royal visit to the temple.
Horses: There are two horses harnessed to a royal chariot in this scene.
Comment: Davies observes, "The horses which draw the royal chariot have been sketched with great freedom, the head and the neck showing great superiority of outline over other designs."⁶⁰⁹

In this scene, of two horses harnessed to a royal chariot (Figs. 4.171).⁶¹⁰ Davies notes that "the initial sketch seems to have been in faint yellow ink, corrected and redrawn in red."⁶¹¹ This is a sketch only. The horses are layered and fill three quarters of the register. Their heads are at the same height as the king (with crown) if he were on the ground and their withers at his waist. They are well conformed although the barrel is thin their chests are not thick. Their necks are oddly drawn. They are unnaturally

⁶⁰⁹ N. de Garis Davies (1905) *The Rock Tombs III*, 28.

⁶¹⁰ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna. Part III. Smaller Tombs and Boundary Stelae*, London, pl. XXXI.

⁶¹¹ N. de Garis Davies (1905) *The Rock Tombs III*, 28.

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truncated and thinned in order to place the heads in an upright manner. They are of the robust style with ears that are upright and pointing forward.

The eyes are tapered and have a pupil. The nostrils are small outlined circles and the mouths are open. There is detail in the outline of the muzzle. The mane is hogged to about half way up the neck when it either disappears completely or is hidden under the bonnet of the plumed headdress. The tails are long and flowing and held at a high angle. The legs are fine, hoofs, pasterns, fetlocks and vague canons are visible and the hind legs are very contracted. The near horse is male. The horses are under the control of the king alert and prancing. The image is one of restrained excitement and power.

AM IV-AKH (11) AS 23 ANY – STELE OF THAY

(Figs. 4.172, 4.173, 4.174)

Site:	El Amarna South 23.
Reference:	<i>PM 4, 227-228 (1).</i>
Titles:	Royal Scribe, Scribe of the Offering Table of the Aten. Beloved of His Lord. Overseer of the Works of the Lord of the Two Lands. Steward of the House of Aakheperu-re.
Source:	Davies. N. de Garis. (1908) <i>The Rock Tombs of El-Amarna. Part V. Smaller Tombs and Boundary Stelae</i> . London. Ziegler. C. (2002) <i>The Pharaohs</i> , London. Plate 109.
Dating:	Amenhotep IV/AKH: Davies, PM
Position in tomb:	Six stellae were found in the Vestibule of the tomb. This was one of them. Davies comments that there is a space marked out in the shape of this stele in the centre of the right hand wall of the corridor. ⁶¹²
Subject:	Any being driven in his chariot accompanied by his charioteer Thay.
Horses:	Two harnessed horses.
Note:	This scene is a relief on the surface of a stele necessitating the fitting of the image to the available space. This might explain the small size of the horses.

⁶¹² N. de Garis Davies (1908) *Rock Tombs V*, 10.

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There are two harnessed horses in this scene (Figs. 4.173, 4.174). They are red⁶¹³ and they are layered. The horses are of the gracile style, small in stature and fill the lower half of the stele. If Any was on the same level as the horses, their heads would come only to his chest and their withers to his waist. Their ears are upright and forward and no forelock is visible.

The eyes are oval in shape with a pupil, nostrils are seen and the mouths are closed. There is some detail in the carving of the muzzle but no further detail in the paint. The chest and hindquarters are in proportion but the barrel is elongated. The neck is thick but the chest and hind sections are relatively thin. There is no evidence of a mane, indicating that they have been totally removed and as the pad on the harness is a long way up the neck, this would be somewhat expected. The tails are long and flowing and held at a normal angle. The legs are fine and well proportioned and hoofs, pasterns, fetlocks and canons are depicted. The gender of the near horse is difficult to discern but it could be male. These are alert, obedient horses proceeding at an energetic walk or trot.

AM IV-AKH (12) AS 25 AY

(Figs. 4.175, 4.176, 4.177, 4.178)

Site:	El Amarna South 25.
Reference:	<i>PM 4, 228-230 (6-8,9).</i>
Titles:	Father of the Divinity.
	Bearer of the Fan on the Right Hand of the King.
	Acting Scribe of the King, Beloved by Him.
	Overseer of all the Horses of His Majesty.
	Companion.
Source:	Head of all the Companions of the King.
	Davies. N. de Garis. (1908) <i>The Rock Tombs of El-Amarna. Part VI. The Tombs of Parennefer, Tutu and Ay.</i> London. Plates 25, 29, 35.
Dating:	Amenhotep IV-AKH: Davies, PM
Position in tomb:	Pillared hall. North wall.
Subject:	Two images contain horses. In the first Ay and his wife are being honoured by the king (Plate XXIX) and in the second, Ay is congratulated by his friends outside the palace, (Plate XXX.)

⁶¹³ N. de Garis Davies (1908) *Rock Tombs V*, 10, note 3.

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Horses: 1. Four horses. 2. Six horses.

Note: Davies points out that it is in this scene (Plate XXX) that the first depiction of gloves is found.⁶¹⁴ Since Ay was the “Master of Horse” for the king, gloves would have been a much appreciated gift if they were specifically meant for the protection of his hands whilst using reins, but we cannot know that this was the reason for his owning them.

1. (Plate XXIX):

There are four horses harnessed to royal chariots (Fig. 4.177). They are layered but colour cannot be determined. Davies mentions some remaining colour on other areas but not on the horses. The horses are of the robust style but are quite finely carved and their conformation is good and in proportion although the barrels are tubular. Given their small size (which Davies attributes to their being supposedly further back in the overall scene⁶¹⁵) there is a considerable amount of detail visible.

The size of the horses in relation to the persons around them is interesting. There are grooms standing in front of the teams, and the horse’s heads are above the grooms and their withers are at their chests, but the drivers of both chariots stand behind the cars and in relation to these individuals, the horses are tiny: their heads at the chests of the drivers and their withers at their hips. This is most likely a function of the need to present the drivers as more significant than the grooms but also at the top of the scene there is limited room and the image could be accommodated by shrinking the horses and increasing the angle of the bow made by the drivers.

There are ears visible but no forelocks. There are slight indications of eyes and nostrils and the mouths are open. The manes are hogged once again to about two thirds of their length and above that they disappear under the plume bonnet.

⁶¹⁴ Davies is incorrect here as they have been found in subsequent investigations of earlier tombs. This also, of course does not have very special significance as there are many reasons why gloves may have been used only one of which would be for the protection of the hands when using reins to control horses. Significantly they have been identified in the tomb of Hesi from the Old Kingdom when there is no evidence that horses were present in Egypt. Kanawati, N, and M. Abder-Raziq (1999) *The Teti Cemetery at Saqqara. Vol. V, The Tomb of Hesi*, ACE Reports 13, Warminster.

⁶¹⁵ N. de Garis Davies (1908) *Rock Tombs VI*, 22, note 3. “The top of the picture represents distance.”

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The tails are long and flowing and held at a high angle. The legs are fine, in proportion, and show hoofs, fetlocks, pasterns and canons. Both horses exhibit contracted hind legs, even although they are depicted as standing. Although the drivers face away from the chariots, the grooms are seen attending directly to the teams. The first on the left is holding them from the front and the second is doing the same but is also holding a calming hand up in front of their noses. The image again is one of restrained energy and power and does indicate an element of the horse/ human relationship. There does not seem to be an indication of whips and the interrelationship is active but benign.

2. Plate XXX:

There are three chariots in this scene with six horses harnessed to them (Fig. 4.178). Excepting the absence of the plume bonnet and plumes shown on the royal horses, these animals are exactly the same as the royal teams shown in the rewarding of Ay by the king in Plate XXIX. The grooms are smaller than the horses and the drivers larger than the grooms but on a level with the horses. All three chariots are equipped with whips, one groom is steadying the horses in his team which, once again, show spirit and seem to be prancing.

AM IV-AKH (13) AN 1 HUYA

(Figs.4. 179, 4.180, 4.181. 4.182)

Site:	El Amarna North 1.
Reference:	<i>PM 4, 211-112 (5-6, 8, 9-10).</i>
Titles:	Overseer of the Royal Harim.
	Overseer of the Two Treasuries.
	Steward of the Great Royal Wife Teye.
Source:	Davies. N. de Garis. (1905) <i>The Rock Tombs of El Amarna. Part III. The Tombs of Huya and Ahmes</i> . London. Plates 8, 14, 17.
Dating:	Amenhotep IV-AKH: Davies, PM
Position in tomb:	Pillared hall. (9-10) East Wall, (5-6) West Wall, (8) North Wall, east side.
Subject:	(9-10) Pillared hall, east wall- Akhenaten leading Tiy within the temple. Plate VIII.
	(5-6) Pillared hall, west wall- Bringing the Tribute of the Nations. Plate XIV.
	(8) Pillared hall, north wall, east side- Huya rewarded by the king. Plate XVII.

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Horses: (9-10): six horses; (5-6): six horses; (8): two horses.

(9-10) East Wall - Akhenaten leading Tiye within the temple (Plate VIII):

This image is in the fifth register in the centre and right side of the scene (Fig. 4.180). There are three royal chariots and six horses. Davies makes no mention of colour. The horses are layered. Not much detail is discernible as the wall has been damaged and the images are quite small. The horses occupy three quarters of the register and are taller than the grooms (the horses are at least another head higher than the grooms, their withers being at their shoulders) but much smaller than the drivers (their heads at their shoulders and withers at their waists). Again this would reflect the space available to the artist as well as the hierarchical depiction of these persons. The horses are of the finer robust style that now seems typical of the artists of Amarna. They are fairly evenly conformed again with the thin elongated barrels.

The ears are upright and forward with no evidence of forelocks. Nostrils and eyes are very difficult to discern but the mouths appear to be open. Two horses appear to have no mane at all, but the one on the far right has a hogged mane up to the plume bonnet. The tails are long and flowing and held at a normal height. The legs are fine, hoofs are evident as are pasterns and the hind legs are contracted. There is only one team in which it's possible to suggest male gender. They are standing but exhibit restlessness, perhaps stamping.

(5-6) West Wall, Bringing the Tribute of the Nations (Plate XIV) (Fig. 4.181):

There are three royal teams depicted in the third and fifth registers. The six horses conform to a fairly standard image seemingly common to the Amarna tombs so far. Davies makes no mention of colour. They are layered and take up to three quarters of the register. These horses are of the finer robust style exhibiting even conformation excepting the thin, extended barrels (in this case more extended than in the tombs examined so far) making them look quite tubular. Their heads are at the height of the persons around them and their withers at their waists.

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Their ears are upright and forward with no evidence of forelocks or manes. There are bare indications of eyes and nostrils and the mouths are open. The tails are long and flowing and held at a normal angle. Hoofs, pasterns, fetlocks and canons are visible and the legs are contracted indicating movement, although they are but not as exaggerated as in other instances. All appear to be male. Once again they seem obedient but the raised front legs and contraction of the hind ones indicates impatient or energetic stamping and prancing while they wait.

(8) North Wall, East Side- Huyu rewarded by the King: (Fig. 4.182):

There is only one chariot and two horses here that have been reconstructed by Davies from the remaining indications. Although the horses wear royal plumes Davies makes the note that these plumes were added in error.⁶¹⁶ The horses are identical to those in the other two scenes.

AM IV-AKH (14) AS 9 MAHU

(Figs. 4.183, 4.184, 4.185, 4.186a,b, 4.187a,b, 4.188)

Site:	El Amarna South 9.
Reference:	<i>PM 4</i> , 222-223 (8, 9-10, 11).
Titles:	Chief of Police- Commandant of the Mazau of Akhetaten.
Source:	Davies. N. de Garis. (1906) <i>The Rock Tombs of El-Amarna. The Tombs of Penthu, Mahu and Others.Part IV</i> . London. Plates 17, 19, (12c) 20, 22, 26.
Dating:	Amenhotep IV-AKH: Davies, PM
Position in tomb:	Outer hall, north wall, west side (8), east side (9-10), east side end wall (11).
Subject:	(1) Mahu and his attendants before the palace. (Back wall, north side.) (Rewards of Mahu), ⁶¹⁷ Plate17, Fig. 4.184. (2) Mahu visits the temple. (Back wall north side). (Rewards of Mahu), Plate 19, Fig. 4.185. (3) Royal chariot leaving the temple. (Back wall, south side.) (Duties of Mahu), ⁶¹⁸ Plates12c & 20, Figs. 4.186 a & b.

⁶¹⁶ N. de Garis Davies (1905) *Rock Tombs III*, 13, note 5.

⁶¹⁷ N. de Garis Davies (1906) *The Rock Tombs of El-Amarna. The Tombs of Penthu, Mahu and Others.Part IV*, London, 14.

⁶¹⁸ N. de Garis Davies (1906) *The Rock Tombs IV*, 14.

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(4) Royal chariot passing the sentries. (Back wall south side.)
(Duties of Mahu), Plates 41 & 22, Figs. 4.187 a & b.

(5) Mahu brings prisoners to the Vizier. (Front wall, south side.)
(Duties of Mahu), Plate 26, Fig. 4.188.

Horses: (1): two chariot teams; (2): two horses; (3): one team; (4): one team; (5): two teams.

(1) Mahu before the Palace (Fig. 4.184):

There are two chariots and teams here both severely damaged the centre one showing only the rear of the horses. They are layered and their comparative size is not able to be determined. They are of the finer robust style with heavy chests and hindquarters. No ears, forelocks or eyes remain but nostrils are indicated and the mouths are open. Their manes are damaged and Davies has reconstructed a hogged mane. Their tails are long and flowing, being held at a high angle. The remaining legs are fine, highly contracted in the rear and show hoofs, pasterns and fetlocks. At least one horse is male. Enough remains of the drivers to see that they are standing still bowing and the horses are restrained by them so the movement indicated must be no more than stamping or prancing.

(2) Mahu visits the temple (Fig. 4.185):

This is the lower part of the previous scene and is in much better condition. It is sketched in black ink and Davies makes very positive comments regarding the skill of the artist.⁶¹⁹ There are two harnessed horses which are layered and well conformed. They are in proportion but have the common tubular barrel. They are of the fine robust style and fill three quarters of the register with their heads at the head height of the drivers and grooms and their withers at their waists. Their ears are upright and forward but there are no forelocks. The manes are hogged for their full length, there are nostrils and the mouths are open. Their tails are long and flowing and held at a high angle. The legs are particularly fine and hoofs, pasterns, fetlocks and canons are shown. The front legs are only just raised and the hind very contracted. The near horse is male. Whilst

⁶¹⁹ N. de Garis Davies (1906) *The Rock Tombs IV*, 15.

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they are obedient and aren't moving forward there is an alertness and energy which is conveyed very clearly.

(3 and 4): The Royal Chariot leaving the Temple and passing the Sentries (Figs. 4.186a, b).

These scenes both contain almost identical images of the royal teams as the king and queen leave the temple (Plate XXII) and inspect the defences (Plate XX). The images most likely portray the same team of horses. The horses are layered. A large number of the Amarna horses display indications of “swayback.”⁶²⁰ The horses fill nearly one and one half registers, their heads at the same height as the king's if he were standing on the ground and their withers at his waist. The animals are well proportioned with tubular barrels (the team in Plate XXII have thinner barrels than those in Plate XX) and they are of the finer robust style with upright and forward oriented ears, but show no indication of having forelocks.

There are oval shaped eyes visible below a set of blinkers and the nostrils are long slits. There is a natural shape to the muzzle and the mouths are open. The mane is hogged and then removed completely under the plume bonnet (although this is not visible). The tails are long and flowing and held at a normal angle. Once again the hoofs, pasterns, fetlocks and canons are depicted and the gender is male. The king is busy in both scenes conversing with his queen and hardly concerned with the spirited but obedient team. The contracted hind legs and raised forelegs indicate an active forward motion. The king carries a whip in Plate XXII, and may have also in the other image but damage has obscured it. A delightful and very Amarna touch is the image of the little princess, identified by Davies as Merytaten⁶²¹ leaning out of the chariot in Plate XXII (Figs. 4.187 a & b) and poking the rump of the horses with a stick! This is the first time such playfulness with horses has been seen.

⁶²⁰ See Horse Terminology.

⁶²¹ N. de Garis Davies (1906) *The Rock Tombs IV*, 16.

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(5) Mahu brings prisoners to the Vizier (Fig.4.188):

In this scene of Mahu carrying out his official duties there are two teams depicted which may be interpreted as the same team as before, however there is a difference in the treatment of the manes of the teams which might indicate otherwise (although it might equally be a fault of the original artist who may have been the one who illustrated the royal horse teams and thus mistakenly included a space for the plume bonnet in the mane of the horses belonging to an official). The horses are harnessed and layered and well proportioned excepting the tubular barrels. They are fine / robust in style their heads at the height of the heads of the most important persons (including Mahu if he were on the ground) and their withers at their waists.

Their ears are upright and forward and neither shows the presence of a forelock. The eyes are oval and there are no blinkers. Their noses are long slits, which might indicate the practice of “nose slitting.” The muzzles are shaped and the mouths open. The manes are hogged with the upper horse’s manes hogged to about two thirds of the mane’s length and the lower hogged through the whole length. The tails are long and flowing and held at a normal angle. Again there are hoofs, fetlocks, pasterns and canons and the upper team is male but the lower one’s gender cannot be determined. The hind legs of both are contracted and the differing paces are indicated by the position of the legs. In the upper scene, all the legs are on the ground and the chariot is motionless with prancing and stamping of the horses conveyed by the contraction of the legs. In the second, the same applies but greater speed is shown by the raised position of the forelegs as Mahu travels during the execution of his duties. In all cases the horses, while spirited, are obedient and the drivers in both cases carry whips.

AM IV-AKH (15) AN 4 MERYRA 1

(Figs. 4.189, 4.190, 4.191, 4.192, 4.193, 4.194, 4.195, 4.196)

Site:	El Amarna North 4.
Reference:	<i>PM 4, 214-217 (20-21, 23, 24-26).</i>
Titles:	High Solar Priest of the Aten in the Temple of the Aten in Akhetaten. Fan-Bearer of the Right of the King. Chancellor of the King of Lower Egypt. Sole Companion. Friend of the King.

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Source:	Davies. N. de Garis. (1903) <i>The Rock Tombs of El-Amarna. Part 1. The Tomb of Meryra</i> . London. Plates 17, 19, 32.
Dating:	Amenhotep IV/AKH: Davies, PM
Position in tomb:	Pillared Hall, east and west sides.
Subject:	(1) Meryra rewarded by the king. South wall west side. Plate VI (Fig. 4.190) (2) Royal Visit to the Temple Pillared Hall west side. Plates XVII, XIX (Figs. 4.191, 4.192, 4.193) (3) Royal Family making offerings to the Aten. South wall, east side. Plate XXII. (Fig. 4.194) (4) Royal visit to the temple and the investiture of Meryra. Pillared Hall East side. Plate XXV, XXXII. (Figs. 4.195, 4.196)
Horses:	(1): Two horses; (20): Multiple horses; (3): Four horses; (4): Twelve horses.
Comment:	Davies is complimentary, "The drawing of the two tired animals at rest in their stalls is admirable; and it is instructive to note the capacity of the artist for severe realism, as well as for the depiction of impression such as he shows on the north wall, where he endeavours to suggest the elastic and curving form of the horse when in rapid motion." ⁶²² He goes on to make the point that "The legs show two animals, but the wall scarcely permits of the heads as given by Weidenbach. Probably they should more nearly resemble Petrie, T, A., Plate XI, which may be a study for this very picture." ⁶²³

(1) Meryra rewarded by the king. South wall west side, Plate VI: (Fig. 4.190.)

The team awaits the return of Meryra. There are two harnessed horses much damaged but restored by Davies.⁶²⁴ They are layered and red/brown, take up three quarters of the register with their heads at the same height as the head of the person in front of them and their withers at his waist. They are of the finer robust style with the elongated and tubular barrel and somewhat large hindquarters. Davies indicates a forelock, nose and

⁶²² N. de Garis Davies (1903) *The Rock Tombs I*, 39.

⁶²³ N. de Garis Davies (1903) *The Rock Tombs I*, 39. Note 7. William Flinders Petrie (1894) *Tell el-Amarna*, England. This image is of two horses feeding from a trough pl. XI. (1) and in pl. 1, (4 and 8) Petrie includes a sketch of a horse's head from a pot and a sculptor's trial piece. He states, "The execution of the horses is very slight and rough, but is true to nature; indeed it is remarkable how well the artists of Akhenaten succeeded with the horse, as in the two spirited rough heads pl. 1, 4 and 8. The Egyptians seldom drew the horse well, yet in these three examples, one from a wall, pl. 1. 4, sketched on a pot, along with a hawk and many other subjects, and pl. 1,8, from a sculptor's trial piece, it would be difficult to improve within the limitations of such work."

⁶²⁴ N. de Garis Davies (1903) *The Rock Tombs I*, pl. IX

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open mouth but the details are missing. The manes are hogged for their full length and the tails are long, flowing and at a normal angle. The legs are very fine and there are hoofs, pasterns, fetlocks and canons. There is no indication of gender.

This scene is the first instance where by the human/horse relationship is demonstrated as anything but benign. The individual immediately in front of the horses seems to be brandishing something in the direction of the horses in a menacing manner. There is a driver behind the chariot but another person in front of it. Davies states, “a *saiš* also holds the horses, threatening them with a bunch of fodder (?)” This appears to be more likely to be a curled whip, than fodder and shows a very different relationship with this team than seems to be the normal case.

(2) A Royal Visit to the Temple. Plates X, XVII, XIX, Pillared Hall west side (Figs. 4.191, 4.192, 4.193)

There are multiple horses in this scene, coloured red/brown and varying in size from the horses of the king, to those of Nefertiti, which are half the size of her husband’s team to the horses of the princesses and the escort which are one quarter the size of the king’s team. This is a typical reflection of the relative prestige of the occupants of the chariots. There has been much damage to the lower registers but the details of the royal horses are relatively clear. As Davies points out,⁶²⁵ with the exception of the plumes on the royal horses, the images of the chariots and their equipment are identical, this applies to the horses equally. The king’s team are red/brown and layered, filling three quarters of the register.⁶²⁶ If Akhenaten were on the ground the horse’s heads would be on a level with his and their withers at his waist.⁶²⁷

They are all rendered in the fine/robust style and are quite well proportioned, their barrels are still thin, but not excessively so. Their ears are upright and forward with no indication of forelocks as the plume bonnet would cover them. Their eyes are oval in

⁶²⁵ N. de Garis Davies (1903) *The Rock Tombs I*, 26.

⁶²⁶ Nefertiti’s horses fill half the register in deference to those of the king, but the princess’s and the escort’s occupy the normal three quarters of the registers in which they appear.

⁶²⁷ This again applies throughout the image.

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shape and they have blinkers, crescent shaped nostrils and open mouths in detailed muzzles. Their manes are hogged to the start of the plume bonnet that is shown attached around the neck and with a brow band and headband. The bonnet (of the king's horses) is made of a spotted material and seems to be closely fitted to the head and firmly held in place, necessitating the complete removal of the mane under the space it occupies. The tails are long and flowing and held at a normal angle. The legs are very fine, showing hoofs, pasterns, fetlocks and canons and the contraction of the hind legs and height of the forelegs indicates movement.

The king's horses are the most active⁶²⁸ with their forelegs raised very high and stretched out further than others in this scene. The horses are alert and very active, but under the control of the king. None of the individuals are making use of the whips with which they are equipped. The queen's horses and some of the horses of the princesses have an indication of their being male.

(3) Royal Family making offerings to the Aten. South wall east side. Plate XXII (Fig. 4.194)

There are two teams (four horses) in the bottom register in this Plate. The left team is badly damaged and restored by Davies in Plate XXII, but the next team is in good condition and it can be seen that they are, once again, copies of the horses described in previous scenes in the tomb. The horses are waiting for the royal couple and would normally have plumes on their heads but these appear to have been damaged. Both teams (at least the near side horses in both) are male.

(4) Royal visit to the temple and the investiture of Meryra. East side, Plate XXV, XXXII, (Figs. 4.195, 4.196):

⁶²⁸

There is one team as active at the bottom of the scene but it is badly damaged.

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There are twelve horses on the right side of this scene.⁶²⁹ They all conform to the standard depictions examined so far. Most appear to be royal horses (with the possible exception of the horses in the third register which appear to have no plumes, although parts of the plume bonnet seem to be present). They have charioteers who, in most cases, are facing away from the horses and towards the king and queen and there are grooms in three instances who are holding and steadying the horses. The horses in Davies' facsimile in Plates XXVI and XXIX (not shown) have their ears poking through the plume bonnets. Several of the horses are clearly male.

The most interesting aspect of this scene is in the far right in a structure that Davies identifies as the house of Meryra⁶³⁰ (Plate XXXII) outside of which is a stable with two horses feeding from a manger (Fig. 4.196). Not very much remains of these horses, only one head is visible but there are two sets of legs. It is a relaxed image and only the second image of horses feeding.

AM IV-AKH (16) AN 4 MERYRA 1

RELIEF (DETAIL)

(Fig. 4.197)

Source:	Davies. N. de Garis. (1903) <i>The Rock Tombs of El-Amarna. Part 1. The Tomb of Meryra</i> . London. Plate 19.
Dating:	Amenhotep IV-AKH: Davies
Position in tomb:	Plate 29 (Fig. 4.197) concentrates on a small part of the large-scale scene in Plate 25 - "The Royal Visit to the Temple and the Investiture of Meryra."
Subject:	Groom attending a chariot team waiting outside the gates of the temple.

⁶²⁹ There is a section just above the boats where the very fronts of horses can be seen, giving a total in this part of twelve.

⁶³⁰ N. de Garis Davies (1903) *The Rock Tombs I*, 38, "this I judge to be the house of Meryra himself; for some remaining fragments of an inscription in the court show that there was depicted here the home-coming of Meryra, his reception and congratulation by his household, or some similar scene."

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Horses: Two royal chariot horses are being restrained by a groom who is holding the reins of both horses. There is considerable detail in the heads of the horses. The mane is shaved and hogged and there is a bonnet and royal plumes. The ears are pointed forward, blinkers are present and the noseband and cheek pieces are clearly seen. The eyes are large and oval in shape and the nostrils seem to have been slit. The groom is restraining the team firmly and the horses are considerably taller than the groom.

AM IV-AKH (17) AN 2 MERYRA II

(Figs. 4.198, 4.199, 4.200, 4.201)

Site: El-Amarna North 2.
Reference: *PM 4, 212-214 (6, 7-8).*
Titles: Royal Scribe, Steward, Overseer of the Two Treasuries.
Overseer of the Royal Harim of the Great Royal Wife Nefertiti.
Source: Davies. N. de Garis. (1905) *The Rock Tombs of El-Amarna. Part II. The Tombs of Panhesy and Meryra II.* London. Plates 33, 37.
Dating: Amenhotep IV-AKH: Davies, PM
Position in tomb: Pillared hall.
Subject: (1) Rewarding of Meryra, South wall, east side. Plate XXXIII.
(2) Presentation of Tribute, East wall. Plate XXXVII.
Horses: (1): Eight horses, (2): Seven/eight horses?

(1) Rewarding of Meryra: Plates XXXIII, (Fig. 4.199)

There are eight horses in this scene all again drawn in similar fashion. Royal horses are shown as distinct from the rest by the addition of plumes, but with this exception, they are drawn in all other ways the same as the others when they are not transporting the king and queen.

Davies shows more details of this scene in Plates XXXV and XXXVI. Here the royal horses from the third and fourth registers and Meryra's team from the seventh and eighth are shown. The royal horses waiting for their royal passengers are layered and fill three quarters of the registers. Their heads are at the height of their attendants and their withers just above their waists. They are in reasonable proportion but have oddly sinuous chests - more a continuation of the tubular barrels and thin, dished heads. They are of the fine, robust style. They have no ears or forelocks and their blinkered eyes are

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thin and almond shaped. There are minimal noses and mouths (open) and no manes at all. They wear the plume bonnet. Their tails are long and flowing and held at a slightly elevated angle. Their legs are extremely thin but display attempts at depicting hoofs, pasterns, fetlocks and canons. No gender can be discerned. They are standing, waiting with the upper team restrained by a groom whilst the charioteer bows in the opposite direction. These horses are not well drawn.

The seventh and eighth registers show two chariots but it is probably the same team depicted twice. In the bottom register, Meryra returns home after his rewarding, and in the one above, his servants greet him. Much of the detail has disappeared but these horses seem similar to the royal horses, although their chests are better defined. In the seventh register whilst the driver and the servants are joining in the rejoicing, the grooms are only seen grooming and feeding the horses. This is the first scene of grooming thus far. The horses are still harnessed and seem quite tense and active so it is unusual to see grooming and feeding in this context.

(2) Presentation of tribute: Plate XXXVII, (Figs. 4.200, 4.201)

Davies describes this event as “the bringing of tribute” and Murnane translates it as, “the chieftains of every foreign land are presenting [products to the king] and begging peace from him,⁶³¹” (Fig. 4.200, 4.201). The first register holds images of two horses being led behind the gift of a chariot and Davies identifies their origin as Syria.⁶³² Amorites bring a layered pair and chariot in the fourth register.⁶³³ There is unfortunately not much detail to be discerned even in the enlargements Davies has provided (Plate XXXIX and XL). The Syrian horses are elegant but overly elongated and sinuous, the Amorite ones are more contracted but are more agitated. Interestingly, the Syrian horses

⁶³¹ W. J. Murnane (1995) *Texts from the Amarna Period in Egypt*, Atlanta, 162.

⁶³² N. de Garis Davies (1905) *The Rock Tombs of El-Amarna Part II*, 40.

⁶³³ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna Part II*, 40.

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appear to have hogged manes. The Egyptian royal horses, although much damaged, conform to the standard image present in the tombs so far investigated.

AM IV-AKH (18) AN 6 PANHESY

(Figs. 4.202, 4.203, 4.204, 4.205, 4.206)

Site:	El Amarna North 6.
Reference:	<i>PM 4, 218-219 (9, 10-11).</i>
Titles:	Chief Servitor of the Aten in the Residence of the Aten in Akhetaten. Second Prophet and Servitor of the Lord of the Two Lands Neferkheprure in the Temple of the Aten. Overseer of the Granary and of the Cattle of the Aten. Chancellor of the King of Upper and Lower Egypt.
Source:	Davies. N. de Garis. (1905) <i>The Rock Tombs of El-Amarna. Part II. The Tombs of Panhesy and Meryra II.</i> London. Plate 13.
Dating:	Amenhotep IV/AKH: Davies, PM
Position in tomb:	Outer pillared hall east wall.
Subject:	(1) Panhesy Rewarded by the King. South wall west side. Plate XI. (2) The Royal Family Driving Out. East wall Plates XIII to XVII, (Figs. 4.203-4.206).
Horses:	(1) Teams of horses (2) Royal horses.
Note:	This tomb has varying artistic abilities indicated in the depictions of the horses. Davies in his discussion of the horses comments, "The animals in these larger examples create a vivid impression of motion and the grace of strength, and if this stereotyped design is far from affording a correct study of the horse, it exhibits all the Egyptian power of proving triumphant, in spite and even by means of glaring inaccuracies. The artist is very much less happy when he shows the animal in slower movement." ⁶³⁴

(1) Panhesy rewarded. (Lower registers) Plate XI.

In the area of the scene occupied by the horses there is considerable damage resulting in the almost complete destruction of the images of the teams. Davies has made a reconstruction based on the remains. This reveals two images of Panhesy's chariot.⁶³⁵ The first being about two-thirds the size of the second image, the difference being

⁶³⁴ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna Part II* 18.

⁶³⁵ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna Part II*, 16. Davies makes this identification.

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probably due to the available space. The teams are layered, and take up half the register, their heads at the height of the charioteers and their withers at their waists. Their ears are upright and forward but there is not enough left to identify any other facial details. The conformation is elegant but poor and they seem of the fine robust style. The tails are long and flowing and held at a high angle, the legs impossibly thin and very contracted. The impression is of contained energy. This image contains four horses in the lower registers. Davies identifies one of them as royal and the other, the lowest, as belonging to Panhesy⁶³⁶ - although the plumes on the royal team are not visible. Panhesy's horses are interesting in that the artist has very badly rendered the hind legs which all seem to be on the same side of the near horse. Other than this, all the horses are of the Amarna style with Panhesy's horses being very elongated indeed.

(2) Royal Family Driving Out. Plates XIII to XVII (Figs. 4.203-4.206). This scene is similar to that on the west wall of the tomb of Meryra I, the king and queen are driving out with the princesses and their escort. The king's chariot is the centrepiece and the largest image with the queen's being half the size of the king's. The two teams will be dealt with together. The horses are layered. They are in proportion but badly conformed having standard tubular barrels. They are as tall as the king (and the queen in her case) and their heads would be at the same height as the royals and their withers at their waists. They are of the fine robust style.

They have no discernable forelocks but their ears poke through the plume bonnet and are upright and forward. They have large eyes, the outlines of nostrils and open mouths. The king's horses have teeth in the lower jaw! Their tails are long and flowing and are held at a high angle. Hoofs, pasterns, fetlocks and canons are visible and the horses are male. They are leaping ahead in the "Flying Gallop" under the king's control. The hind legs are not contracted, but quite straight, and the forelegs raised high off the

⁶³⁶

N. de Garis Davies (1905) *The Rock Tombs of El-Amarna Part II*, 16.

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ground and extended forward indicating energy and speed. Interestingly, whilst the king possesses a whip, it is the queen who is seen to be in the process of using hers.

The remainder of the retinue is depicted in a “stereotypical fashion”⁶³⁷ which can be found created with higher or lesser levels of skill, in many of the Amarna tombs and which this work regards as the “standard” depiction from Amarna.

The forward group immediately below the image of Nefertiti moves at a faster pace also in the “Flying Gallop” but the remainder follow much more slowly.

AM IV-AKH (19) AS 7 PARENNEFER

(Figs. 4.207, 4.208, 4.209, 4.210)

Site:	El-Amarna South 7.
Reference:	<i>PM 4, 219-221 (1-2, 9-10).</i>
Titles:	Royal Craftsman.
	Washer of the Hands of His Majesty.
Source:	Davies. N de Garis. (1908) <i>The Rock Tombs of El Amarna. Part VI. The Tombs of Parennefer, Tutu and Ay</i> , London. Plates 2, 4, 5.
Dating:	Akhenaten: Davies, PM
Position in tomb:	Façade east wall (<i>PM 1-2</i>) Broad hall west wall, (<i>PM 9-10</i>).
Subject:	(1) Façade. King and queen worshipping the Aten. (This is a most unusual tomb in that it has its façade fully decorated and much has been preserved.) Plate II.
	(2) Rewarding of Parennefer. Hall. West wall. Plates IV, V.
Horses:	(1): Royal horses (2) Non-royal (tomb owner's) horses.

(1) King and Queen worshipping the Aten. Plate II.

Much detail has been lost but there is enough left to discern the “standard” depiction of the royal horses of Amarna (Fig.4.208). One interesting feature is that for the first time their plumes extend from the bottom register where the horses are into the ground line of the next register, making the horses themselves fill the whole height of the register.

⁶³⁷ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna Part II*, 18.

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The four horses are waiting in an usually agitated fashion being steadied by their drivers and a groom.

(2) Rewarding of Parennefer. Plates IV and V:

The scenes in Plates IV and V (Fig. 4.209, 4.210) have suffered damage in the areas where horses are shown. Of the royal horses in registers three and four (Plate IV) only the hindquarters remain. They seem to be of the “standard” type so far encountered in these tombs, the only noteworthy features are that at least one horse is male and the hind legs of the upper horses are very badly drawn and excessively contracted. There are only a few scattered ink lines (and Davies’ reconstruction) showing Parennefer’s horses in his chariot as he returns home. They are in proportion to the height of the tomb owner.

AM IV-AKH (20) AN 5 PENTHU

(Figs. 4.211, 4.212, 4.213)

Site:	El Amarna North 5.
Reference:	<i>PM 4, 217 (5-6).</i>
Titles:	Royal Scribe. First under the King.
	Chief Servitor of the Aten in the Residence of the Aten in Akhetaten.
Epithets:	Chief Physician. Intimate of the King. Privy Councillor.
	Royal Chancellor. Sole Companion.
	Attendant on the feet of the king.
	Favourite of the Good God. Beloved of his Lord.
	He who approaches the Person of the God.
	Chief of Chiefs. Companion, Chief of the Companions.
Source:	Davies. N. de Garis. (1906) <i>The Rock Tombs of El Amarna. Part IV. The Tombs of Penthu, Mahu and Others</i> , London. Plates 5, 8.
Dating:	Akhenaten: Davies, PM
Position:	Long hall.
Subject:	(1) The Royal Family entering the Temple. North wall upper scene. Plate V.
	(2) Rewarding of Penthu. North wall lower scenes. Plate VIII.
	(3) Rewarding of Penthu. South wall lower scenes. Plate VIII
Horses:	(1) Ten horses; (2) Four teams; (3) A Chariot team.

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(1). The Royal Family entering the Temple. North Wall upper scene, Plate V, (Fig. 4.212):

There are ten horses in this scene, two of which are harnessed to the royal chariot - they are larger than the others and the only ones wearing plumes. They fill either two thirds or all of the register and are of the standard Amarna style. The similar treatment of the hind legs would suggest the work of the same artists on all of them as they are most anatomically inaccurate and all of identical construction. Although this tomb is very badly damaged (or incomplete), Davies has been able to reconstruct quite a lot. At least two horses are male, all are of the same conformation and proportion and of the fine robust style. In all cases they are taller than their drivers by at least a head and their withers come to the charioteer's chests.

The ears are upright and forward, there are no forelocks and there are blinkers, the eyes are largely reconstructed and the mouths are open. The manes on all the horses are hogged, either completely or partially and the tails are long and flowing and held at a high angle. The legs show hoofs, pasterns, fetlocks and canons. Almost all the legs are on the ground but the contraction of the hind legs gives the impression of prancing or stamping impatiently and all the drivers are seen restraining the teams with taught reins.

(2) The Rewarding of Penthu. North wall lower scenes, Plate VIII, (Fig. 4.213).

There are four chariot teams here but the damage is so profound it is impossible to tell if they are royal or private teams. Davies' reconstruction indicates only that they are of the standard Amarna type.

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(3) Penthu is honoured in the Palace. South wall lower scenes, Plate VIII, (Fig. 4.213). A very small part of a chariot team is illustrated here. They are reconstructed with plumes, but Davies points out that there is no justification for this.⁶³⁸

AM IV-AKH (21) AS 8 TUTU

(Figs. 4.214, 4.215, 4.216, 4.217)

Site:	El Amarna South 8
Reference:	<i>PM IV 221 (9-11)</i>
Titles:	Chamberlain of the Lord of the Two Lands Chief Servitor of N in the temple of the Aten in Akhetaten. Chief Servitor of N in the Barge. Overseer of all the Commissions of the Lord of the Two Lands. Overseer of all the Works of His Majesty. Overseer of the silver and gold of the Lord of the Two Lands. Overseer of the Treasury....the Aten in the Temple of Aten in Akhetaten. Chief mouthpiece of the entire land.
Source:	Davies. N. de Garis. (1908) <i>The Rock Tombs of El-Amarna. Part VI. The Tombs of Parennefer, Tutu and Ay</i> . London.
Dating:	Akhenaten: Davies, PM.
Position in tomb:	Pillared hall, north-west wall.
Subject:	(1) The King receives Tutu at the door of the Palace. West wall, north side and south side. Plate XVIII. (Fig. 4.215) (2) Tutu receiving promotion from the king. West wall, south side, Plate XIX. (Fig. 4.216) (3) Tutu receiving the congratulations of his friends. West wall, south side, Plate XX. (Fig. 4.217)
Horses:	(1) Twelve horses (2) One team (3) Sixteen horses.

(1) The King Receives Tutu at the Door of the Palace. Plate XVIII.

There is much damage to this scene and although there are many horses shown not one team is complete (Fig. 4.215). There seems to be twelve horses in this scene, all layered and harnessed to chariots. Davies identifies the two teams in the top register as royal but shows only one with royal plumes. All of the horses that can be identified in any clear way appear to be of the standard Amarna style, finely robust, with elegant proportions

⁶³⁸

N. de Garis Davies (1906) *The Rock Tombs of El-Amarna Part IV*, 5. Note 4.

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but elongated barrels. There are hogged manes, open mouths, upright and forward pointed ears, long flowing tails, contracted hind legs, three quarter filled registers and head heights at the same height as the persons and withers at their waists. Hoofs, fetlocks and canons are visible. All these features can be found scattered on the horses whose images remain. The horses are under control but are obviously agitated and impatient.

(2) Tutu Receives Promotion. Plate XIX.

This scene contains only one team - a royal one in the far left side of the Plate XIX, (Fig. 4.216). It is a team facing away from the centre and falls into the category of the standard Amarna style.

(3) Tutu Receives Congratulations. Plate XX.

This is an exceptionally busy scene containing sixteen horses, Plate XX, (Fig. 4.217). There was more detail here but owing to the condition of the tomb, little detail remains. The various horses depicted exhibit the characteristics of the standard Amarna type, fine/robust, elegant but elongated, layered and at the height of the persons with withers at their waists. Ears are upright and forward, there are no forelocks and the manes are all hogged. Noses and mouths are not common but the existing mouths are open. Tails are all long and flowing and held at a high angle. All the usual features of the legs are present and several are observed to be male. The contracted hind legs indicate activity excepting two teams: In the second bottom register, instead of walking, two teams are shown in the “Flying Gallop” - their hind legs are in contact with the ground but their front legs are raised high above the ground and stretched out in front of them.

The most interesting are the images in the top register of two teams feeding from troughs – again, standard Amarna horses but in a very different depiction.

Tutu’s horses are shown about half again as large as the others in the scene.

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4.2.11 THE REIGN OF TUTANKHAMUN

TU (1) TT 40 AMENHOTEP HUY

(Figs. 4.218, 4.219, 4.220, 4.221, 4.222, 4.223, 4.224)

Site:	Qurnet Mura'i TMP Map VIII, F-3,h, 3
Reference:	<i>PM I (I) 75-78 (I, 5, 8, 11).</i>
Titles:	Viceroy of Kush.
	Governor of the South Lands.
	Real Scribe of the King, Beloved of Him.
	King's Envoy in every Land. King's Son of Kush.
	Fan Bearer to the Right of the King.
	Overseer of the Cattle of Amun in the Land of Kush.
Source:	Overseer of the Gold Countries of Amun.
	Davies. Nina. M. & A. H. Gardiner (1926) <i>The Tomb of Huy, Viceroy of Nubia in the Reign of Tutankhamun (No. 40)</i> . The Egypt Exploration Fund, The Theban Tomb Series, 1st Memoir, London.
	Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> . Geneve, 1. Plates 42a and 165.
	Desroches-Noblecourt. C. (1963) <i>Tutankhamun</i> , London. <i>Plate 114</i> .
	Brewer. D. & E. Teeter (2007) <i>Egypt and the Egyptians</i> , Cambridg, fig. 11.7.
	Kampp. F. (1996) <i>Die thebanische Nekropole: 233-235</i> .
Dating:	Amenophis IV/Tut'ankhamun: Davies, PM Tutankhamun: Kampp, TMP
Position in tomb:	Broad Hall.
Subject:	(1) (<i>PM8</i>) Scribes counting horses. Broad hall, east wall north side (Davies)(Lower registers) Plates V & VIII. (PM south wall east side) (Fig. 4.219)
	(2) (<i>PM1</i>) Huy on his way to Nubia on the state dahabayah. East wall, south side (Davies) Plate XII. (PM West wall south side) (Fig. 4.220)
	(3) (<i>PM5</i>) Nubian goods brought back, horses on boats. (Coloured image from Freed (1983) <i>Egypt's Golden Age</i> , 6 used in Fig. 4.221) West wall south side, (Davies) Plate XXXI. (PM West wall north side) (Fig. 4.223)
	(4) (<i>PM11</i>) Huy presents to Tutankhamun the tribute of Asia. East wall north side, (Davies) Plate XIX. (PM east wall North side) (Figs. 4.223, 4.224)
	(1) Twelve horses; (2) Two horses; (3): One horse or chariot team; (4): Single horse.

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Note: Much of the scene in Plate XIX is based on the work of Weidenbach.⁶³⁹

(1) Scribes Counting Horses. Plates V & VIII: Fig. 4.219

In the scenes of Huy leaving the palace groups of horses occupy the lower registers however the great damage that the tomb has suffered has obscured them almost to invisibility. Five horses might be made out at this time. Gardiner notes that the drawings of Nestor l'Hôte have been a resource for the reconstruction of the scene.⁶⁴⁰ But Plate VIII which is a reconstruction of the scene by Davies⁶⁴¹ more horses can be identified in a scene that Gardiner identifies as Huy carrying out his official duties.⁶⁴² There seem to be twelve horses here being counted by scribes. These horses are differently rendered compared to the standard Amarna horses. Most appear layered and are unharnessed, wearing nothing but either bridles or halters and being led by grooms. Their conformation is much improved even if their stance has them appearing slightly “sway-backed.” Their proportions are more even: they do not feature the elongated barrels typical of the Amarna horses. They continue to fill three quarters of the register and are at the height of their attendants with their withers above waist height. They are fine/robust with upright and forward pointed ears, they all have dots for eyes but the noses and mouths cannot be made out. The manes seem to be hogged and the tails are long, flowing, in-filled and held at a normal angle. There seems to be detail in the legs and hoofs. The hind legs are partially contracted indicating movement but most have all hoofs engaged with the ground. One groom is turning to hold up a calming hand. They are alert, fit and highly strung.

⁶³⁹ Nina. M. de Garis Davies & A.H. Gardiner (1926) *The Tomb of Huy*, 29. Weidenbach-the draughtsmen in the 1842-1845 Richard Lepsius, Prussian expedition.

⁶⁴⁰ Nina. M. de Garis Davies & A. H. Gardiner (1926) *The Tomb of Huy, Viceroy of Nubia in the Reign of Tut'ankhamun* (No. 40), London, 11. In Note 1 he states,” Plate V is taken directly from the original drawing in the Bibliothèque Nationale (*nouv. acq.fr.*, 20404, fol 77).

⁶⁴¹ She used “existing lines rather than conform to Nestor l'Hôte's drawings which are evidently far from correct,”(20) to reconstruct the images on the lower registers.

⁶⁴² Nina M de Garis Davies & A. H. Gardiner (1926) *The Tomb of Huy* 20.

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(2) Huy on his way to Nubia on the state *dahabeeyah*. East wall, south side, Plates XII Fig. 4.220)

Huy is proceeding to Nubia in the viceregal *dahabeeyah*. The report provides a splendid copy of the scene (Plate XII). There are two horses within what appears to be a magnificent, specially built stall on the foredeck of the boat (Fig. 4.220). The horses can be seen standing head and shoulders above the sides of the stall. Damage has removed much of their faces but it can be determined that they are bay coloured horses with red/brown coats and black manes. There are two of them layered and they seem to be well proportioned.

(3) Nubian goods brought back (horses on boats) (Figs. 4.221, 4.222). West wall, south side, Plate XXXI:

Huy's viceregal *dahabeeyah* is seen again, together with another ship. There seems only to be one horse here but it is most likely to be interpreted as the chariot team of Huy returning north with him. Additionally the two boats below his have stalls on their foredecks for horses that are seen apparently singly within them.

(4) Plate XIX, West wall north side. (Figs. 4.223, 4.224). Huy presents to Tutankhamun the tribute of Asia: Davies⁶⁴³ points out that this wall was very badly damaged and that she has reproduced Weidenbach's coloured drawing which shows only one horse. Contrastingly the Hay drawing⁶⁴⁴ shows two, the far horse indicated by a few lines for the legs and face. These must have perished by the time Weidenbach copied them.

The near horse, the one examinable in this scene, is being led forward by a Syrian. It is of the fine robust type and very elongated with a tubular barrel. It is in most ways a standard Amarna horse reasonably well proportioned but oddly conformed. It takes up

⁶⁴³ Nina M de Garis Davies & A. H. Gardiner (1926) *The Tomb of Huy* 29.

⁶⁴⁴ Hay MSS 29851, 369-86 reproduced in L. Manniche (1987) *City of the Dead, Thebes in Egypt*, Boston, fig.39.

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three quarters of the register. Its head is slightly higher than the groom in front of it but lower than the Syrian man behind it. Its withers are at his waist but in line with the shoulders of the groom. This is most likely a result of an attempt at showing the hierarchy of the individuals as well as fitting the horse into the register without making it too small. There seems to be damage to the area of the ears and forelock so none are discernable, eyes are discernable as is the nose but the mouth appears to be closed. No mane can be seen and the tail is long and flowing and held at a high angle. The legs are fine and there are hoofs, pasterns, fetlocks and canons. The hind legs are only partially contracted indicating a slow pace and the groom is standing directly in front calming the horse. The angle of the neck may indicate tension as it is very acute. The horse seems to be male.

TU (2) KV 62 TUTANKHAMUN PAINTED BOX

(Figs. 4.225, 4.226, 4.227, 4.228)

Site:	Thebes.
Reference:	<i>PM I (2) 577-578.</i>
Title:	King.
Source:	Egyptian Museum JE61467 James. T. G. H. (2000) <i>Tutankhamun</i> , London. Carter. H. & A. C. Mace (1923) (reprint 2003) <i>The Tomb of Tut.ankh.Amen</i> , 1. Oxford. Porter. B. & R. Moss (1964) (Second Edition) <i>Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings</i> . 1. Part 2. Oxford. 569-586. Robins. G. (2000) <i>The Art of Ancient Egypt</i> , Cambridge, fig. 189. Tiradritti. F. (1999) <i>The Cairo Museum Masterpieces of Egyptian Art</i> . London. 213. Davies. N. & A. H. Gardiner (1962) <i>Tutankhamun's Painted Box</i> , Oxford. Plates 1, 2, 3, 4.
Dating:	Tutankhamun: Carter & Mace, Davies, PM, James
Artefact:	Painted box found in the antechamber of the tomb.
Position in tomb:	Antechamber.
Subject:	Illustrated on the sides and top with painted scenes of the king hunting and in battle. Side A. King slaying Nubians. Side B. King Slaying Asiatics. Lid A. King desert hunting. Lid B. King hunting lions.
Horses:	Side A: 10 horses. Side B: 20 horses. Lid A: 10 horses. Lid B: 10 horses.

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Notes: The painted box is in exceptionally good condition and the images clear. Carter comments about the box; “This last will probably rank as one of the greatest art treasures of the tomb,” and “the delicacy of the painting which far surpasses anything of the kind that Egypt has yet produced.”⁶⁴⁵

Side A. King slaying Nubians (Fig. 4.225):

This image contains ten horses, two royal and eight attendant's horses. There are no Nubian horses or chariots. The attendant's horses are smaller and not as detailed as the king's team. They are very elongated with thin stretched barrels and hindquarters. They are all red/brown in colour and layered. They occupy three quarters of their register with their heads at the same height as the attendants and their withers are at approximately chest height. Whilst they are finely depicted they are not gracile in form. Their ears are difficult to make out as they are wearing bonnets without plumes and there are no forelocks visible. Their eyes are round black filled circles as are the noses and the mouths are all open. The manes seem to be hogged up to the lower edges of the bonnets and their tails are filled and held at a very high angle. Hoofs, pasterns and fetlocks are visible, their legs are fine and they are stallions. They are seen as galloping, the “Flying Gallop” under the control of the drivers whose whips are present, but folded and not in use.

The much larger king's team is depicted in considerably more detail as they crush the Nubians beneath their hoofs. These are seen as very robust aggressive animals. The horses are layered and painted red/brown with the exception that the rear horse's lower limbs are darker than those of his teammate perhaps indicating a bay horse as opposed to a chestnut. These animals are elongated but in better proportion than the attendant's horses. They occupy three quarters of their “register” with their heads at approximately the height of that of the king and their withers at his chest height. Their ears are upright and forward and there are no forelocks. There is considerable detail in the eyes which

⁶⁴⁵ H. Carter & A. C. Mace (1923) (reprint 2003) *The Tomb of Tut.ankh.Amen* Vol. 1 Oxford, 110-111.

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are triangular with black pupils and a crease in the face below them. The horses are wearing blinkers. The noses are circular and the mouths open. The near horse has two teeth in the lower jaw. Both horses are wearing plumed bonnets but their manes have been hogged from above the harness pad to the lower edge of the bonnet. The tails are red/brown, held at a very high angle and each hair has been painted individually. They have hoofs, pasterns, fetlocks and canons and their legs, while fine, are in proportion to their bodies. Most interestingly - and observed for only the second time - is the “feathering”⁶⁴⁶ on the fetlocks of the king’s horses. Both a penis sheath and a scrotum are visible indicating stallions. Their harness is extremely elaborate as is the caparison. They are shown in the “Flying Gallop” action and appear very aggressive and yet are under Tutankhamun’s complete control as he rides forward drawing his bow with the reins tied around his waist.

Side B. King slaying Asiatics, (Fig. 4.226):

There are twenty horses in this scene, two royal horses, six attendant’s chariots with twelve horses and six Asiatic horses attached to three chariots. The attendant’s horses are in many ways similar to those on Side A, however, there are certain variations in those of Side B. Most of the teams possess hogged manes that extend from the harness pad to the ears and in all of them there are traces of forelocks, excepting the far team on the lowest register that is wearing bonnets without plumes made from spotted fabric. Of the twelve horses, most are red/ brown indicating chestnut but again the lower team is outlined in red suggesting a white/grey team. The near horse in this team has its tongue protruding which is the first depiction of this. The centre team is darker than the others and seems to be brown. There is more detail in the eyes, tails and legs of the attendant’s horses on this side of the box. Tutankhamun’s team is also a copy of that on Side A, with some exceptions. Both horses in this team have shaded legs and the near horse has its tongue protruding. Again they are shown with slight feathering at their fetlocks.

⁶⁴⁶ See Horse Terminology. The first instance of this is in the tomb of Rekhmire TT 100.

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The Asiatics in this scene have three chariots and six horses that are depicted in a totally different fashion to that of the Egyptian horses. They are robust in form with thin legs and thicker bodies than the Egyptians. Their colour varies from chestnut (top team) to brown (centre) to almost black (bottom). They are harnessed together, but not layered, as are the Egyptian horses. There is considerable separation in their depiction conveying their disarray in battle. The top team is upside down still relatively parallel but there is some distance between them as they crash to the ground. The centre team is still upright but the near horse is turning its head away from the other which in its turn is facing fully to the front: a very unusual feature. The third team appears to be stumbling out of control. The Asiatic horses seem quite small in proportion to the humans who surround them and there is considerable detail in their images; their eyes and ears are shown, mouths are open, manes are hogged and on the face of the centre horse turned to the front, is a forelock. Tails are the same colour as the horses and they are very detailed with the hairs in all cases picked out almost individually. The tails excepting the inverted team are held at a low angle. Hoofs, pasterns and fetlocks are shown and most have genitalia indicating stallions. In complete contrast to the Egyptian horses these are shown in total disarray, falling, going in various directions and without the control of a driver. The image is diametrically different to the Egyptians and the demeanour of the horses contributes to the vivid depiction of an enemy in total rout and defeat.

Lid A. King desert hunting (Fig. 4.227)

The horses are almost identical in all their features to the Egyptian horses on the sides of the box. There is evidence of wear on this side of the lid of the box.

Lid B. King hunting lions (Fig. 4.228)

The horses in this image are almost identical to the Egyptian horses on the sides of the box.

TU (3) SENNEDJEM

(Figs. 4.229, 4.230)

Site: Akhmim.

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References:	2km west of Sohag near Awad Azzaz. (2.25km South east of Nag ed Deir.)
Titles:	Overseer of Tutors, Prince, Count, Father of the God. Seal-Bearer of the King of Lower Egypt. Sole Companion. Fan-Bearer to the Right of the King. Administrator.
Source:	Ockinga. B. (1997) <i>A Tomb from the Reign of Tutankhamun at Akhmim</i> . The Australian Centre for Egyptology Reports: 10, Warminster. Plate 36.
Dating:	Tutankhamun: Ockinga
Position in tomb:	Portico.
Subject:	Chariot Procession.
Horses:	Twelve harnessed horses.

This is a very badly damaged unpainted wall depicting Tutankhamun driving his chariot (Fig. 4.230). There are twelve layered, harnessed horses very much in the style of Amarna horses. Where there is a register, they take up three quarters of it and are almost all (including the king's team) the same height as the persons nearest them with their withers at their waists. Even with the level of damage, these are very badly constructed images. The horses are badly conformed and in odd proportions with the heads and necks too large, very tubular barrels and the hindquarters proportionally too small, although they are better drawn. No detail of ears, forelocks, eyes, noses, manes or mouths remain. The tails are long and flowing but there is very little detail left on the very thin legs excepting tiny hoofs. Male gender can be identified. All of the attendant's horses are moving as indicated by the contracted hind legs and the king's horses are more active as shown by the more raised forelegs, although this is not a "Flying Gallop." The king and attendants seem to have whips but none appear to be being used. An interesting detail in this scene is that there is a second unidentified person in the chariot with the king.

TU (4) HOREMHEB

(Figs. 4.231, 4.232, 4. 233, 4.234, 4.235, 4.236, 4.237)

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Site:	Memphis.
Reference:	<i>PM 3 (2) 655- 661.</i>
Titles:	Overseer of All the Offices of the Palace.
	Deputy of the King in Every Place.
	Overseer of the Generals of the Lord of the Two Lands.
	Overseer of All the Divine Offices.
	Favourite of his Lord as Regards his Speech.
	Overseer of All the Offices of the King.
	Hereditary Prince of Upper and Lower Egypt.
	(This is only a very few of the titles and Epithets of Horemheb.
	Martin in Appendix 1 of his text gives a very comprehensive list
	and discussion of the titles and epithets from a variety of
	sources.) ⁶⁴⁷
Source:	Martin. G. T. (1989) <i>The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary.</i> Egypt Exploration Society, Excavations Memoirs 55, London. Plates 16, 28, 29, 32, 95, 105, 115, 123.
Dating:	Tutankhamun: PM, Martin
Position in tomb:	First and second courtyards.
Subject:	(1) Plate 16, Scene 1, (Figs. 4.232, 4.234) Horemheb boasts of his triumphs to the court, military trophies. “ 2 chariots (4 horses) are represented on the preserved part of the wall, each drawn by a pair of horses..... the outlines of one horse are particularly well preserved; in fact the drawing is perhaps one of the finest of its type to have survived from ancient Egypt.” ⁶⁴⁸
	(2) Plate 28, Scene 17. Military encampment. “Alongside 2 horses have been unharnessed from their chariot, the pole of which now rests on a support with a splayed foot. Both animals are held in check by a squatting soldier while the charioteer’s attendant is resting on the back of the vehicle, stick in hand.” ⁶⁴⁹
	(3) Plate 29, Scene 17, Fragment 27, “red/brown pigment on the flesh of every figure save that of the naked boy.” ⁶⁵⁰ (4 horses)

⁶⁴⁷ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, London. See 163-164 for a list of all the known offices conducted by Horemheb.

⁶⁴⁸ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 26. Also W. Peck (1978) *Egyptian Drawings*, New York, fig. 114, “this ochre drawing, in situ in the tomb of Horemheb at Saqqara, must stand as one of the finest.” 178.

⁶⁴⁹ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 38.

⁶⁵⁰ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 38.

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(4) Plate 32, Scene 22, (Fig. 4.234). Two charioteers wait in readiness, “Further along, a horseman, perhaps a dispatch rider, gallops at a smart pace towards the left, with a stick and reins in hand. (...) The whole scene gives the impression that the militia has arrived.”⁶⁵¹ (5 horses).

(5) Plate 95, Scene 69, (Fig. 4.235). Presentation of foreign captives, (grey on body of mule).⁶⁵²

(6) Plate 105, Scene 72, (Fig. 4.236). “Then comes a scene practically unparalleled in Egyptian art, although only a fragment remains: a dense melee of galloping and cantering horses is shown, (42 hoofs-10 horses?) some with legs painted red/brown and others orange/brown (refer pp. 26, 45, 83). In view of the context these cannot be animals in the wild, but must represent either tribute or animals captured on the field of battle. It has already been noted that the hostages depicted on this great wall are exclusively Western Asiatic and in two instances Hittite. Horses at this period must have been regarded by the Egyptians as one of the most highly prized products and exports of Western Asia. They feature in at least one other 18th Dynasty tribute scene and are increasingly depicted in the art of the period mostly in military contexts.”⁶⁵³

(7) Plate 115, Scene 76, “receive a delegation of foreigners.”⁶⁵⁴ (Fig. 4.237) Asiatics and Libyans. “Behind the foreigners six grooms are shown holding the reins of the horses. (Note 1, Helck, Beziehungen, 2nd ed. 332.) The horses of the visiting chiefs are twelve in number, perhaps one horse for each of the dignitaries, pairs of attendants riding each of the remaining three steeds. Schafer- (*Principles of Egyptian Art* 229) and Wolf (*Kunst Agyptens* 522) regard the horses as gifts to Pharaoh.”⁶⁵⁵

“...traces of red/brown pigment on most of the grooms and horses.”⁶⁵⁶

⁶⁵¹ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 43.

⁶⁵² G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 83.

⁶⁵³ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 90.

⁶⁵⁴ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 95 and 96.

⁶⁵⁵ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 96.

⁶⁵⁶ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 97.

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(8) Plate 123, Scene 83, (6 chariots, 12 horses.) “Chariots and horses advance in the same direction doubtless as part of the same cortege. Horemheb’s funeral procession.”⁶⁵⁷ Horses, “red/brown or orange.”⁶⁵⁸

Horses: (1): Four horses; (2): two horses; (3): Four horses; (4): Individual riding a horse; (5): Six horses; (6) 45 horses – legs; (7) Twelve horses; (8): Twelve horses.

(1) Plate 16, Scene 1, (26) (Fig. 4.232, 4.233). Outline.

There are four horses in two registers, the first exist only as the faintest outline. This is a chariot and its team. The second image is of two horses, the distance between which would suggest that they were not harnessed, at least not together.⁶⁵⁹ Of the two horses seen here, one is almost complete at least in sketch, and the other only the forefront of the head remains. The horse is reasonably conformed but badly drawn with a tubular barrel, sinuously shaped chest and very thin legs. It fills three quarters of the register but there are no persons nearby to compare the relative heights. It appears to be of the fine, robust style. The ears are fine and forward to an extreme degree and there is a forelock clearly indicated draped across the brow. The eyes exist only as a circle, there is some detail in the muzzle, but nostrils cannot be distinguished and the mouth appears to be open. Unusually, the mane is draped, long and filled. The tail is held at a high angle but only the dock remains. Little of the legs remains but what can be seen is that they are very thin and the hind legs only partially contracted, indicating that the animal is walking. The facial expression is alert and the horse seems to be male.⁶⁶⁰

⁶⁵⁷ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 100.

⁶⁵⁸ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, 101.

⁶⁵⁹ G. T. Martin (1989) *The Memphite Tomb of Horemheb*, Martin suggests: “The second span was shown in the third register beneath which is actually the dado of the wall. It is not certain that a chariot formed part of the scene..... Since the dado of the tomb was customarily decorated only with horizontal bands of colour, this outline scene could be a trial drawing by the artist for the scene above.” 26.

⁶⁶⁰ G. T. Martin (1989) *The Memphite Tomb of Horemheb*, “The outlines of one horse are particularly well preserved; in fact the drawing is perhaps one of the finest of its type to have survived from ancient Egypt.”

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This is an aesthetically pleasing image, free in composition and showing similarities to other “sketches” rather than the more formal artistic images of this period.

(2) Plate 28, Scene 17. Military encampment. (38) (E Berlin 20363 PM III/ 2 Pt 2 656): In fine raised relief at a military encampment⁶⁶¹ there are two horses unhitched from their chariot and are being held casually by their groom whilst the charioteer sits in the chariot. Not much of the horses remains. They are layered, nostrils and open mouths are shown as well as four forelegs carved with hoofs, pasterns, fetlocks and canons. The legs seem in proportion to the other parts visible. There are traces of red/brown pigment.

(3) Plate 29, Scene 17, Fragment 27 (38)

There are four horses (and two hoofs) in this fragment. Only the tops of the images remain. They are two chariot teams which appear to be harnessed and they are layered. The larger of the two images shows that the manes are hogged and the ears are unusually pointed forward, almost on the horizontal. There is detail in the eyes, which, in the second pair, show pupils. The legs show hoofs, pasterns, fetlocks and canons.

(4) Plate 32, Scene 22 (43) (Bologna 1889) Dispatch Rider.

At the top of this block two chariots await, but unfortunately very little of the image remains. Tails, held at a normal angle can be seen as can a jumble of legs showing hoofs, pasterns, fetlocks and canons.

On the lower part of the block a most unusual scene is visible: an individual riding a horse! Martin calls this “a dispatch rider”⁶⁶² (Fig. 4.234). This is a wonderfully active scene. The rider is perched far back on the horse’s hips a position known as the “donkey seat” which makes sense when riding a slim horse with no saddle. This is a single horse that is relatively well conformed but badly proportioned in that the chest is very large and sinuous and it is very swaybacked and tubular in the barrel. It is of the fine robust style and takes up three quarters of the register. It is the same height as the nearest

⁶⁶¹ G. T. Martin (1989) *The Memphite Tomb of Horemheb*, 38.

⁶⁶² G. T. Martin (1989) *The Memphite Tomb of Horemheb*, 40.

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person and its withers are at his waist. Unusually, its ears are vertical and upright. There is a forelock and eyes are shown as is shaping to the face, there are nostrils and the mouth is open. Noteworthy is the representation of a tongue and teeth; the mane is hogged. The tail is held at a very high angle. Hoofs, pasterns, fetlocks and canons are shown and the horse is male. The horse is depicted with a remarkable level of activity and energy. Its hoofs are flying - none touching the ground. The front legs stretch out and the hind legs are highly elevated giving the impression of great speed and effort. The rider has a whip that he does not appear to be using.

(5) Plate 95, Scene 69 (83) Presentation of Foreign Captives.

There are six horses in this scene (Fig. 4.235) in the second courtyard of the tomb. The lower register appears to be of a team of horses but the tails indicate that these are most likely mules, a point reinforced by the traces of grey paint remaining on the body of one of the team.⁶⁶³ The top register has only legs and tails showing but the middle register gives an excellent image of the teams. They retain much of their colour which is red/brown/orange. The horses are layered and occupy three quarters of the register, their heads at the same height (or nearly) as the persons and their withers at their waists. The further team in this image is slightly larger than the near team, perhaps indicting the implied prestige of its owner, perhaps Horemheb himself. As the addition of plumes was restricted to royal horses the size difference would be the main method for the artist to relate this fact. They are well conformed and in proportion. The horses are of the fine/robust “post Amarna” style with horizontal forward pointing ears and quite detailed eyes. They have pupils and there is shaping to the faces. There are crescent shaped noses, shaping to the muzzles and open mouths. The manes are hogged and there are no forelocks. The tails are long and flowing and held at a normal angle. There is great detail in the physiology of the legs, although the stifle is badly drawn. The legs not only have the hoofs, pasterns, fetlocks and canons but knees are indicated as well. The near horse is male. All of the horses are standing but their demeanour is alert and energetic, once again indicated by the contraction of the hind legs. The more casual depiction is

⁶⁶³ G. T. Martin (1989) *The Memphite Tomb of Horemheb*, 83.

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achieved by having one of the attendants draped quite impossibly over the backs of two horses.

(6) Plate 105, Scene 72 (90) (Fig. 4.236). Multiple horses.

Only the very base of the register is shown here (Leiden H.III.0000) showing approximately 45 horse's legs. Martin points out that the hostages are all Western Asiatic⁶⁶⁴ which reinforces the identification of the species to which the legs belong. There is considerable detail given the number of animals to be carved. There are hoofs, pasterns, fetlocks and canons and an attempt to indicate the ligaments of the legs. Almost all the hoofs are in contact with the ground and with human feet shown directly in front of them, it might be that they are being brought forward at a walking pace. I disagree with Martin that they are galloping or cantering.

In Note 7, p90, he quotes Nagel BIFAO 30 (1931) 189.n.1 "Une des meilleures representations de chevaux non attelés que je connaisse se trouve sur le bas-relief inédit, Caire: Journal d'entrée No 41944, provenant de Saqqarah. Il représente des valets d'écurie en train de saisir des chevaux. L'un est déjà dompté, mais deux autres se cabrent et cherchent à échapper en un mouvement hardi et plein de vie." The block (actually JdE 44924) is from the tomb of Ipuia (PM 111/2 Pt 2, 555-6) and was published in Quibell and Hayter, *Teti Pyramid, North Side* (Cairo 1927) pl. 12 upper.⁶⁶⁵

(7) Plate 115, Scene 76 (96) (Fig. 4.237).

The west wall second courtyard, contains twelve horses which have traces of red/brown pigment on them. They are layered and in raised relief. They are unharnessed. They occupy three quarters of their register, their heads at the same height as the grooms and their withers at their chests. They are well conformed but their forequarters are rather too heavily constructed to be in good proportion. They are of the post Amarna fine /robust style, still with a tubular barrel. Their ears are horizontal and forward and there

⁶⁶⁴ G. T. Martin (1989) *The Memphite Tomb of Horemheb*, 91.

⁶⁶⁵ G. T. Martin (1989) *The Memphite Tomb of Horemheb*, 90.

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are no forelocks. There is detail in the eyes which are circular, nostrils are crescent shaped and the mouths are open. The manes are hogged and the tails are long and flowing and held at a normal angle. Hoofs, pasterns and fetlocks are shown, the legs are rather too long and the hind legs of the near horse in the top register are wrong. Two near horses are male. Again, the contraction of the hind legs indicates motion but the context is prancing or stamping.

(8) Plate 123, Scene 83 (100).

The legs of twelve horses appear in the remains of the register showing the funeral cortege of Horemheb. Hoofs, pasterns and fetlocks are all that remain of harnessed chariot teams.

TU (5) TUTANKHAMUN MORTUARY TEMPLE

(Fig. 4.238, 4. 239, 4.240)

Site:	Thebes.
Reference:	Blocks only.
Titles:	King.
Source:	Johnson. R. (1992) <i>An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Rammesside Battle-Narrative Tradition</i> . Dissertation. University of Chicago. Plates 9, 10.
Dating:	Tutankhamun: Johnson
Subject:	Asiatic Battle Scene.
Note:	These scenes are reconstructions of a postulated mortuary temple of Tutankhamun/Ay ⁶⁶⁶ at Thebes. The reconstruction has been based on the examination of reused raised relief <i>talatat</i> blocks which were believed to have been reused in the reigns of Tutankhamun and Ay and found at Luxor and Karnak.
Horses:	88 chariot horses.

⁶⁶⁶ R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Rammesside Battle-Narrative Tradition*. Dissertation. University of Chicago.

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The horses appearing in these blocks (Fig. 4.238) are fragmentary yet some information can be gleaned. All the horses are chariot horses. In his reconstruction⁶⁶⁷ Johnson has illustrated 88 horses. In the blocks there is some detail but no colour. The horse images are layered.

There are two major scenes presented here one, “Episode 1: The Battle Proper” (fig.18 p.188) containing 54 horses and “Episode 2: The Battle Aftermath (Presentation of Spoilt to the King” (fig. 20 p. 190).

“Episode 1: The Battle Proper” (Fig. 4.239) depicts the routing of the Asiatic enemy which flees before the king’s horses towards a citadel. The Asiatic chariots are defined by their three man compliment (driver, shield bearer and archer) and the Egyptian by their two occupants (driver- who also has a spear or bow, and the shield bearer).⁶⁶⁸ All the horses are depicted in the “Flying Gallop” with the exception of one team galloping, heads down, in the top register. The massed Egyptian chariots surrounding the king are extremely similar to those on the exterior walls of the Abydos temple of Ramesses II that illustrates the battle at Kadesh. All the horses whether Egyptian or Asiatic are virtually identical.

In “Episode 2: The Battle Aftermath,” (Fig. 4.240) contains images of 34 horses including the king’s team. There are three different images of horses in this scene. The first group to the right are captured Aistaic horses shown in an extremely active stance considering the Egyptian holding their reins is standing still. The second group is that of the bottom register containing the Egyptian horses shown in the “Flying Gallop” attitude though their drivers are obviously standing still behind the chariots. The third group is depicted as smaller but essentially identically to the horses of the king with their drivers dismounted and standing behind the chariots. What is unusual about this is that in this grouping all the horses have royal plumes. Johnson mentions that only block 26 still exists showing the heads of these animals.⁶⁶⁹ Royal plumes usually bedeck only royal

⁶⁶⁷ R. Johnson (1992) *An Asiatic Battle Scene*.7

⁶⁶⁸ R. Johnson (1992) *An Asiatic Battle Scene*, 59.

⁶⁶⁹ R. Johnson (1992) *An Asiatic Battle Scene*, 73. “Dominating the decoration beneath the inscription and roughly centered on the block are the heads of the horses of the last chariot in the

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horses so it is possible that this extrapolation of plumes to all the horses in this group is in error.

In both Episodes the horses of the king are depicted and caparisoned with great similarity to those shown on Tutankhamun's Painted Box and they may have been coloured similarly originally.

Johnson points out that what is of greatest significance is that these images in "mark the true beginnings of the great Ramesside battle narratives."⁶⁷⁰

TU (6) PTAHEMWIA

(Fig. 4.241)

Site:	Saqqara.
Reference:	
Titles:	Royal Butler, Clean of Hands. Hereditary Prince and Count. Seal-Bearer of the King of Lower Egypt. Sole friend.
Source:	Leiden excavations at Saqqara. RMO (unpublished) http://www.saqqara.nl/excavations/tombs/ptahemwia Courtesy N. Staring.
Dating:	Tutankhamun: Leiden excavations
Subject:	Ptahemwia inspecting property.
Position in tomb:	North wall of the courtyard, centre of the tomb.
Horses:	Two harnessed horses.

Two harnessed horses with only the rear of each visible, (Fig. 4.241). No colour remains. They are layered and are probably head to head and they are withers at waist of the driver. They are gracile in form with tubular barrels. The tails are at a high angle and are full. The legs are very thin and appear to have hoofs, pasterns and fetlocks. The near horse is male and the team is standing.

⁶⁷⁰ register. These are decorated with plumes that extend into the space allowed for the inscription." He notes that, Catalog no. 26, [is] the only block to survive from this section of subsid. Reg. 2." R. Johnson (1992) *An Asiatic Battle Scene*, 138.

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TU (7) FAN

(Fig. 4.242)

Site:	Thebes
Reference:	<i>PM I (2) 569-586</i> . Fan 242. J.D'E. 62001.
Source:	Desroches-Noblecourt. C. (1963) <i>Tutankhamen</i> , London.
Dating:	Dynasty 18: Desroches-Noblecourt
Subject:	Fan depicting the king on an ostrich hunt (both sides).
Horses:	There are four horses - two horses on either side.

The horses are variously depicted as charging at a gallop, the “Flying Gallop,” during the hunt and prancing as the ostriches are brought back from the hunt. The same chariot team is depicted on both sides and there is text on the fan explaining that the horses are “like bulls in their strength.” They are quite gracile though obviously very powerful. They are somewhat elongated but in relative proportion though the necks and chests are quite thick. The ears are pointed forward and there is no trace of a forelock. There do not seem to be blinkers being used and the eyes on the “charging” side are tear shaped (the others are damaged). The noses on both sides are slitted and the mouths open. Strangely the hogged manes are standing under the plumes though a plume bonnet is present. The tails are held at a very high angle and infilled and there seems to be banding at the base of the tails. The legs are detailed with hoofs, pasterns and fetlocks and what appears to be “feathering” (indications of long hair above the corona). There is no indication of gender. The energetic and spirited galloping and prancing are clearly indicated by the stretching of the one team and the compression of the legs of the other. The king is restraining them with very tightly held reins.

TU (8) BUCKLE/PLAQUE

(Fig. 4.243)

Site:	Thebes
Reference:	<i>PM I (2) 569-586</i> . J.D.'E. 87847
Source:	James. T. G. H. (2000) <i>Tutankhamun</i> , London. 257.

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Dating:	Dynasty 18.
Subject:	Plaque or buckle depicting the king in his chariot returning from campaigning.
Horses:	Two horses.

The horses appear to be walking as the king follows his Nubian and Asiatic captives. The team is gracile and elongated with heavy chests and necks. Their ears are orientated forward and there are blinkers depicted. The eyes are very large and round, their noses appear slitted and their mouths are open. There is no trace of mane under the plumes and bonnet and the tails are held at a high angle, banded and “filled” in great detail. The legs are in proportion and there are hoofs, pasterns and fetlocks apparent. On one hoof there appears also to be some slight feathering. The near horse appears to be male.

4.2.12 THE REIGN OF HOREMHEB

HO (1) TT 49 NEFERHOTEP

(Figs. 4.244, 4.245, 4.246, 4.247)

Site:	Khokha TMP Map IV. D-5. D, 8
Reference:	<i>PM 1(1) 91-95 (6).</i>
Titles:	Chief Scribe of Amun.
	Superintendent of the Oxen and Heifers of Amun.
	Overseer of the Neferut of Amun.
Source:	Davies. N. de Garis. (1933) <i>The Tomb of Neferhotep at Thebes</i> . Vols.1 & 2. The Metropolitan Museum of Art Egyptian Publications: IX, New York. Plates 1,43.
	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 251-254.
	Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 88.
Dating:	Ay/Horemheb: Davies (possibly Ay or Horemheb)
	Probably temp Ay: PM
	Tutankhamun/Ay/ Horemheb: Kampp (favours Ay)
	Late 18 th Dynasty: Wasmuth
	Tutankhamun/Ay/ Horemheb: TMP
Position in tomb:	Broad Hall, west wall south side.
Subject:	Neferhotep returning after being rewarded with the Gold of Honour. Plate XVI.

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Horses:	Two harnessed horses.
Note:	In the scene of the deceased receiving a bouquet in the Temple of Amun, there are sailing boats featured. Plate XI. On the bottom left boat there is a structure on the deck that resembles a stall for the transportation of horses (Fig. 4.236).

There are two layered, harnessed horses in this scene (Fig. 4.245, 4.246). There seems to be some damage to the scene but Davies has made a reconstruction of the tomb owner, the chariot and team. The horses are relatively well conformed and in proportion, excepting the typical elongated barrel and overly thick necks. They are of the fine, robust style. They take up three quarters of the register and are of the same height as the tomb owner, with their withers at his waist. Their ears are upright and pointed forward, the eyes are oval and have blinkers. No trace of nostrils remains. The mouths are open and there are tongues protruding some distance from the mouths. The manes are hogged and the tails held at a very high angle, long and flowing and filled in. Hoofs, pasterns, fetlocks and canons are present on very thin legs and they are male. The hind legs are on the ground and the fore legs raised to approximately knee height and stretching out into a moderate gallop. The team is under the control of a driver who does not seem to be in possession of a whip. On the boat in this tomb there appears to be an enclosure which may have been for the transport of horses (Fig. 4.247) (See Chapter 10).

HO (2) TT -162- PARENNEFER

(Fig. 4.248, 4.249, 4.250)

Site:	Dra Abu el Naga.
Reference:	Kampp. Plan VII, C 3-4.
Titles:	High Priest of Amun.
Source:	Hofmann. E. (2004) <i>Bilder im Wandel. Die Kunst der ramessidschen Privategräber</i> , Theban XVII, Mainz. Plates 2 (3), 3 (5). Kampp. F. (1996) <i>Die thebanische Nekropole: 713-716</i> . Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 72.
Dating:	Tutankhamun/ Horemheb: Kampp, Wasmuth, Hofmann
Position in tomb:	Southern longwall of the Broad Hall.
Subject:	(1) Pl 2. Abb. 3 Arrival of ships loaded with material for the temple in Karnak. (Fig. 4.250)

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(2) Pl 3. Abb.5. Chariot journey to the temple. (Fig. 4.249)

Horses: (1): Three horses: (2): two chariot teams.

(1) Arrival of Ships:

There are three horses, one in each boat (Fig. 4.250) that can be identified from this image, although they are so small that there is almost no detail visible. They appear to be single horses as there is no indication of layering. This could, of course, be left out because of their size and the images may have been intended to be understood as the transportation of chariot teams. They are all red/brown in colour and judging by the depiction of the heads, most probably of the robust type. Of particular interest are the structures in which the horses are confined - which appear to be generally similar. On the smaller two boats they are in the centre of the decks and on the larger one they are on the foredeck.

(2) Chariot journey to the temple:

There are two chariot teams illustrated here and both are layered (Fig. 4.249), in the top team the near horse is white and the far one is red/brown. In both cases their conformation is good but their hindquarters are very thin compared to their chests. There is a slight tapering of the barrel which is more realistic than has been seen previously. In the bottom register, both horses are red/brown. In both instances, the horses fill almost the full height of the register, their heads at the same height as the persons in the chariots and their withers at their waists. Both teams are of the fine robust style (particularly so here). The ears in the top team have been damaged but the ears of the lower team are upright and nearly horizontal with hogged forelocks between them. The eyes are difficult to discern, but appear to be oval in shape - there is shaping to the muzzle and the mouths are open. The bottom team have teeth showing in the lower jaw. The manes on all of the horses are hogged and the tails on the top team are long, flowing, held at a high angle and coloured the same as the coat of each animal. Hoofs, pasterns, fetlocks and canons are indicated. The top team is male but gender cannot be determined in the lower team because of damage. The gaits of the teams are different

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the top team are shown as reaching out in their stride in what might be considered a canter but the lower team is stretched very far forward in a “Flying Gallop.”

HO (3) (LATE 18TH DYNASTY) IPUIA- RELIEF IN THE CAIRO MUSEUM.

(Figs. 4.251, 4.252, 4.253)

- Site: “Around the Teti pyramid” S2730 (Saqqara).
Reference: *PM 3 (2) 555- 556, S2730* (and probably S2736) (Late Dyn. XVIII).
Titles: Overseer of a Workshop and Head of Goldwashers of the Lord of the Two Lands.
Source: Egyptian Museum Cairo. JE 44924.
Quibell. J. & A. Hayter (1927) *Excavations at Saqqara: Teti Pyramid, North Side*, Cairo, pl 12 upper and lower, 35-36. Plate 12 (1).
Hofmann. E. (2004) *Bilder im Wandel. Die Kunst Der ramessideschen Privatgräber* Theban XVII, Mainz. 98 Plate 118.
Gardiner MSS photo 28.44.A.
Hays. H. (2011) “On the Architectural Development of Monumental Tombs South of the Unas Causeway at Saqqara from the Reigns of Akhenaten to Ramesses II”, in M. Bárta et al, *Abusir and Saqqara in the Year 2010*, Prague, 93. Viewed 10 April 2015,
<https://www.academia.edu/1262002/On_the_Architectural_Development_of_Monumental_Tombs_South_of_the_Unas_Causeway_at_Saqqara_from_the_Reigns_of_Akhenaten_to_Ramses_II>
Dating: Horemheb: Quibell & Hayter, PM, Hofmann, Hays
Position: “Found in situ, outside of the West wall of Apuia’s chapel at the North end.”⁶⁷¹ (From the room west of the hall- *PM 3 (2) 555*.
Horses: Three unharnessed horses.

There are two reliefs each in three pieces, *PM 3 (2) 555 (4)* describes the uppermost as “men leading horses” (Figs. 4.251, 4.252) from the room west of the Hall. Hoffmann describes the scene as “Rossebändiger, Um zeichnung nach Grabrelief aus Saqqara.”⁶⁷²

There are three unharnessed horses shown here under the control of three men. The heads of the horses are at the height of the men and their withers are at their waists.

⁶⁷¹

J. Quibell & A. Hayter (1927) *Excavations at Saqqara; Teti Pyramid, North Side*, Cairo 35

⁶⁷²

E. Hofmann (2004) *Bilder im Wandel. Die Kunst Der ramessideschen Privatgräber*. Mainz. 98 Abb 118.

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There is some red/brown colour adhering to the bodies of the horses which appears to be the same or a similar colour to that used for the skin of the men, one patch of colour remains on the chest of the man at the far right. The horses are robust in form and in proportion and they are not layered. The ears of the centre horse are forward and its eyes are leaf shaped. Its nose is an extended dot. All three have their mouths open and they are wearing halters only. Their manes are hogged and there are no forelocks. Their tails are full and held at very high angles. They have hoofs, fetlocks and pasterns and there has been some attempt to depict canons. All the horses are male and at least two of them seem to be stallions. The most interesting feature of this informal image is the attitude of these animals - they are extremely excited and not under the usual degree of control depicted in paintings and reliefs. The first horse on the left throws its head up, rearing up, its front legs raised high and forward and its hind legs stretched backwards. The second is less extended but it too is moving forward in an agitated fashion and the third is rearing up also and moving forward. The men appear to be having trouble controlling them and the excavator's interpretation of the scene as one of "horse training" is reasonable.

The second series of three reliefs was described by Quibell and Hayter as: "A scene of military exercises... found on the north wall of the chamber west of the Apuia chapel, at right angles to the last."⁶⁷³ *PM 3 (2) 555 (5)* describes this scene as "Archers shooting target with chariot."⁶⁷⁴

The horses depicted in this relief (Fig. 4.253) are similar in conformation and detail to those in the other relief blocks with the exception that they are fully harnessed and under the control of their driver who, although they are moving in the "Flying Gallop" mode, has the reins wrapped around his waist and is facing in the opposite direction.

⁶⁷³ J. Quibell & A. Hayter (1927) *Excavations*, 36.
⁶⁷⁴ *PM 3 (2) 555, (5)*.

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4.2.13 THE REIGN OF SETI I

SE I (1) TT 41 AMENEMOPE- (IPY)

(Fig. 4.254, 4.255)

Site:	Shaykh ‘Abd al Qurnah. TMP Map IV,V, D-4, j. 9
Reference:	<i>PM I (I) 78-80 (17).</i>
Titles:	Chief Steward of Amun in the Southern City. Viceroy of Nubia. Overseer of the Great House. Royal Scribe.
Source:	Assman. J. (1991) <i>Das Grab des Amenemope TT 41 (Theben 3)</i> Mainz. Plate 31. Kampp. F. (1996) <i>Die thebanische Nekropole: 235-237.</i> Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 84.
Dating:	Ramesses I to Sethos I (?): PM, Assman Horemheb/ Seti I: Kampp 18 th Dyn / 19 th Dyn: Wasmuth Ramesses I to Seti I: TMP
Position in tomb:	Pillared hall, east wall, north part.
Subject:	Amenemope being praised.
Horses:	Two harnessed horses.

There are two layered and harnessed horses here (Fig. 4.255). They are quite badly conformed and badly proportioned, the front legs being extremely thin, the barrel especially elongated and the chest almost square. Overall they seem to approximate the standard Amarna horses and are of the fine robust style. They fill three quarters of the register but they break with standard depictions in that they are shorter than the height of their owner and yet their withers do come to his waist. There are no ears, forelocks, noses or manes visible. The eyes are oval in shape and the mouths seem to be open. The tails are long, flowing and filled in and held at a high angle. Whilst the forelegs are far too thin they show attempts at portraying hoofs, pasterns, fetlocks and canons. They appear to male. They are shown as being very active and alert and in the “Flying Gallop.” The driver is holding a whip but is not seen to use it.

SE I (2) TT 324 HATIAI

(Fig. 4.256, 4.257)

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Site:	Shaykh ‘Abd al Qurnah. TMP Map VI, E-4, n,3.
Reference:	<i>PM I(1) 395-396 (8).</i>
Titles:	Overseer of the Prophets of all the Gods. Chief Prophet of Sobek, Scribe of the Temple of Montu.
Source:	Davies. N. de Garis. (1948) <i>Seven Private Tombs at Kurnah</i> (Mond Excavations at Thebes, 2) London. Plate 32. Kampp. F. (1996) <i>Die thebanische Nekropole: 574-577.</i> Wasmuth. M. (2003) <i>Innovationen und Extravaganzen</i> , Oxford. 131.
Dating:	Merenptah (?): Davies Ramesside: PM Ay to Seti I: Kampp 18 th Dyn / 19 th Dyn: Wasmuth Ay to Seti I: TMP
Position in tomb:	Broad hall, west wall.
Subject:	Chariot on a boat on an Abydos pilgrimage.
Horses:	The presence of a chariot on board the boat would imply the existence of a chariot team (Fig. 4.257).

SE I (3) TT 51 USERHAT

(Fig. 4.258, 4.259)

Site:	Shaykh ‘Abd al Qurnah. TMP Map VI, E-4, i, 2.
Reference:	<i>PM I (1) 97-99 (3).</i>
Titles:	First Prophet of the Royal Ka of Thutmose I.
Source:	Davies. N. de Garis. (1927) <i>Two Ramesside Tombs at Thebes</i> . Publications of The Metropolitan Museum of Art Egyptian Expedition, Robb de Peyster Tytus Memorial Series: V, New York. Plate 13. Weeks. K. (2005) <i>The Treasures of Luxor and the Valley of the Kings</i> . Art Guides, Cairo. 478-484. Kampp. F. (1996) <i>Die thebanische Nekropole: 255-257.</i>
Dating:	Sethos I: Davies, PM Seti I: Kampp, Weeks, TMP
Position in tomb:	Broad hall, west wall.
Subject:	Userhat and his wife receiving offerings whilst a chariot waits. Davies Plate XIII.
Horses:	Two harnessed horses.

There are two horses harnessed to a chariot and layered (Fig. 4.259). Unfortunately, damage has removed all trace of the horses from the withers forward. They appear to be of the fine/robust style with elongated barrels and are adequately proportioned. They are taller than the driver, their withers being aligned with his neck. The tails are long and flowing and held at a normal angle. Hoofs and pasterns are seen but there is not much

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more detail. They are standing with the usual indications of energy, being the contracted hind legs. They are male.

SE I (4) NORTH EXTERIOR WALL – KARNAK

(Fig. 4.260, 4.261, 4.262)

Site:	North Exterior Wall of the Hypostyle Hall.
Reference:	<i>PM 2, 53-59. Campaigns of Sethos I in Syria and Palestine.</i>
Titles:	King.
Source:	The Epigraphic Survey (1986) <i>Reliefs and Inscriptions at Karnak: The Battle Reliefs of King Seti I</i> , 4. The University of Chicago, Oriental Institute Publications, Chicago. Plates 11, 28, 34.
Dating:	Sethos I: PM
Position in tomb:	North Wall, East and West Wing, Second Register.
Subject:	A. Seti I attacking the Libyans (West wing). B. Seti I attacking the town of Yenoam (East wing). C. Seti I attacking the Hittites (North Wall, West Wing, Bottom Register.)
Horses:	A: Two royal horses; B: Two chariot teams and a horse with rider; C: Injured enemy horses.

A. Seti I attacking the Libyans (Fig. 4.260). There are two royal horses in the king's team, they are layered and there is no colour remaining. The horses are well proportioned, although the barrel is elongated. They are very robust in appearance. They occupy three quarters of their register, their heads at the same height as the king and their withers at his waist. Although there is some damage, there seems to be no forelock. There is also damage near the eyes which seem to be semi circular with lids.

The nostrils are semi circular as well and there are wrinkles on the muzzle. The mouths are open and there are teeth displayed in the upper and lower jaws of the near horse. The manes are hogged from below the bonnet to the harness pad and the tails are full and held at a high angle. There is detail in the rendering of the hoofs, pasterns, fetlocks and canon bones and the legs are in proportion but still fine. There is a penis sheath and a scrotum visible indicating stallions. These animals appear very aggressive and are performing the "Flying Gallop" and trampling the Libyans beneath their hoofs while they are under the complete control of Seti who attacks the foe whilst driving the team with the reins around his waist. There is no whip present.

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B. Seti I attacking the town of Yenoam, (Fig. 4.261).

The two royal horses are extensively damaged in this scene however the horses of Yenoam are generally well preserved. This is a scene depicting a defeated enemy in rout towards their city. There are two chariot teams and a horse with a rider.

The ridden horse whose rider has been pierced by an arrow is leaping over his forces in a reverse of the "Flying Gallop," he is heading down not up. The horse's rear is extended and thinner than its forequarters. It is a robust animal and is approximately as tall as the men around it with its withers at their waist (although this is difficult to assess as there are no standing Asiatics in the image) and they are approximately one-fifth to one-sixth the size of Seti's horses. The horses of the rider and the left chariot team are smaller than those of the team depicted under the hoofs of Seti's horses. This may indicate the higher rank of the vehicle's occupants as they are larger than other human figures of Yenoam in the scene. All the horse's ears are upright and forward and only the rider's horse has a forelock. The eyes are triangular and there is an indication of a nasal bone in all the horses. The nostrils are circular and the mouths open with what appears to be teeth in the lower left team. There is muzzle wrinkling in the horse with the rider and muzzles can also be seen in the lower left team's horses. The manes are hogged on all of the horses and the rider's horse has a forelock. All the tails are full and held at a very high angle. Hoofs, pasterns, fetlocks and canons are shown on all the horses and all are stallions. The varied appearance of the horses contributes a great amount to this scene. The rider's horse is obviously travelling at great speed, jumping athletically over the devastated Yenoam forces. The left chariot team seems to have become disconnected from its chariot and has joined the panicked retreat again at full speed but the third team whose driver and passenger are being crushed under the horses of Seti seem to have slowed and the near horse which may be injured is contrasting the far horse with its head down and moving slowly while the other is throwing its head up and rearing forward. All this gives the image great energy and variety increasing the communication that this was a complete rout of the enemy and a great triumph for Seti.

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C. Seti I attacking the Hittites, (Fig. 4.262)

This image is included because of the depiction of injured enemy horses and those of two riders. The royal horses are shown in the same way that has been discussed above however the enemy chariot team in the far right in the centre of the image is in panic with the near horse collapsing from its injuries. Both these animals are shown, with the exception of their draped manes, which is no doubt a method of distinguishing them from the Egyptian horses (similar in form to the royal horses, with the exception of the posture of the injured horse and the positioning of the ears, which, in both horses, are swept back and down as are the ears of one of the top team in the image). The “Flying Gallop” is used in this case to indicate panicked rout on the part of the Hittites and aggression on the part of the king’s horses.

There are two Hittite riders in the image, also in rout, with the horses in the “Flying Gallop” mode and the riders occupying the “donkey seat” with no saddles visible.

4.2.14 THE REIGN OF RAMESSES II

RA II (1) TT 31 KHONS (CALLED TO)

(Fig. 4.263, 4.264)

Site:	Shaykh ‘Abd al Qurnah. TMP Map VI, E-4, h, 2.
Reference:	<i>PM I (1) 47- 49 (4, 5, 6).</i>
Titles:	Overseer of the Cattle of Menkheperure.
	High Priest of Menkheperure.
	High Priest of Mont, Lord of Djorty.
	High Priest of Akheperure.
Source:	Davies. N. de Garis (1948) <i>Seven Private Tombs at Kurnah.</i>
	Mond Excavations at Thebes 2, London. Plate 12.
	Weeks. K. (2005) <i>The Treasures of Luxor and the Valley of the Kings</i> , Art Guides, Cairo. 484-487.
	Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 219-221.
Dating:	Sethos I: Davies
	Rameses II: PM, Kampp, TMP
Position in tomb:	Broad hall, west side.
Subject:	Scenes associated with the festival of the god Mont. Royal horses being transported on boats. Plate XII.

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Horses:	Four horses on boats.
Comment:	Davies points out, “The tugs are not the same as before; judging by the decoration of the captain’s box, these are the horse- transports of the army or of the king. Two men maintain the continual offering to the god. They are <i>the charioteer of the stable of Usimatre-setepenre</i> (ie. Ramsesses II) <i>Raia</i> and <i>the charioteer Iia</i> .” ⁶⁷⁵

Unfortunately, not only are these horses tiny but they have been damaged as well. There are four horses discernable on two boats (Fig. 4.264) and they are situated within stalls constructed on the foredecks of the boats. They are layered and defined as royal teams by the existence of plumes that occur only on royal horses. The horses fill up the stalls but they are tiny compared to all the figures in the scene excepting the rowers and even then they seem to be smaller. They are quite elongated and have elaborate blankets with tassels on them. The tails are at a very high angle. No facial details can be observed but the manes seem to be hogged.

Although the horses are confined within the foredeck structures their legs are depicted as indicating at least a running pace.

RA II (2) TIA & TIA

(Fig. 4.265, 4.266, 4.267)

Site:	Memphis.
Reference:	<i>PM 3 (2) 654-655.</i>
Titles:	Tia- Sister of Ramesses II.
	Tia- Overseer of the Treasury of the King.
Source:	Martin. G. T. (1997) <i>The Tomb of Tia and Tia. A Royal Monument of the Ramesside Period in the Memphite Necropolis.</i> London. Plates 3, 47, 154.
Dating:	Ramesses II: PM, Martin
Position in tomb:	South Wall of the Apis Chapel.
Subject:	Tia and Tia making a voyage along the river to Abydos as part of the funerary ritual.
Horses:	Two horses on a boat.

⁶⁷⁵

Davies. N. de Garis (1948) *Seven Private Tombs at Kurneh*, 15.

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There are two horses accommodated in a forward deckhouse of one of the boats accompanying Tia and Tia on their journey (Figs. 4.266, 4.267). These two animals are not layered. Only one body is seen but there are two heads, one turned in the opposite direction to the other, perhaps indicating the horse is looking over its shoulder. Given their relative size there is a considerable amount of detail conveyed in the image relying on the line drawing by Martin. Their conformation is good and they occupy three quarters of the height of the stall. They are of the fine/robust style with ears which are upright and forward. Both horses have draped forelocks and hogged manes. Oval eyes can be seen as can a dotted nostril on the far horse and both have their mouths open. One tail can be seen and this is held at a normal angle, because of the stall structure nothing below the barrel can be seen. Both animals seem especially alert and interested.

RA II (3) RAMESSES II – ABYDOS TEMPLE.

(Fig. 4.268, 4.269, 4.270, 4.271, 4.272)

Site:	Abydos- Temple of Ramesses II.
Reference:	<i>PM 6, Upper Egypt - Chief Temples, 33-41.</i>
Titles:	King.
Source:	Author's own photographs. <i>PM 6.</i> Wrezsinski.
Dating:	Ramesses II: PM
Position in temple:	North and West exterior walls of the temple.
Subject:	Kadesh.
Horses:	A. Ramesses chariot team; B. Egyptian chariot teams; C. Hittite horses in battle.
Note:	Five sites of Ramesses II, have been selected as there are so many, they are, Luxor, Abydos, The Ramesseum, Beit el-Wali and Abu Simbel, they are separated by distance are different types of structures in a way and they all show the same thing- the king in battle. At all five sites the same images have been examined, Kings horses, Egypt's horses and enemy horses.

A. Ramesses' Chariot team, (Fig. 4.270).

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The chariot team is awaiting the king. There are two very finely layered horses which appear to be well proportioned in fore and hind except for a very tubular and elongated barrels. They occupy over two thirds of the register, their heads at the same height as the groom and their withers at his waist. Typically, this is the case as the king is not present in this scene so the horses are in proportion to the most significant individual present. They are robust in form. No forelocks are present, but the ears are upright and forward. There is some damage to the eyes, but what is left shows indications of circles and they are wearing blinkers. The muzzles are of particular interest, they are quite thick and the nostril appears more like that of a lion than a horse, as do the mouth and teeth and the expression of baring the teeth which is not accomplished in this manner in a horse. There is a parallel to this in the depiction of Ramesses' horses at Luxor temple. Once again, the image is far more leonine than equid (Fig. 4.270). The manes are hogged from the harness pad to the lower edge of the plume bonnet. The tails are full and held at a high angle. Hoofs, pasterns, fetlocks and canons are present but as the near hind leg is forward there is no indication of gender. Other images of royal horses in this rendition of the Kadesh story are all stallions. The image is one of pent up energy, the horses heads are high, their legs contracted possibly indicating prancing and they are needing to be calmed by the groom who uses his up-raised hand in a calming non threatening gesture.

B. The Egyptian Army Chariot Teams, (Fig.4.269, 4.71)

The exceptionally large number of chariot teams depicted on these walls indicates Ramesses' use of massed chariot divisions in his army. The images of the horses are in all extant cases almost identical to the royal horses described above. The major exception is the absence of the royal plumed headdress. Their stance is also the same whether prancing or leaping forward into battle in the "Flying Gallop." They are also stallions, again the only instance where this cannot be determined is when the near hind

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leg is forward.⁶⁷⁶ In all cases they are very active, aggressive and forward moving without the use of force.

C. The Enemy Horses, (Figs. 4.272):

These images provide a major contrast to the Egyptian royal or rank horses. Their basic structure is very similar to the Egyptian horses; it is in their orientation and action that the difference lies. These animals are disconnected from their chariot, the near horse is falling to the ground and the far one is upside down, legs in the air. The harness has come off at least the near horse and they are out of control. The open mouths assist in conveying an atmosphere of panic. Another image of the movement of Hittite captives perhaps shows one horse taken as plunder (Fig. 4.272) perhaps a chariot horse. Again, structurally it is very similar if not identical to the Egyptian horses, but it is a single horse, unharnessed, apparently without any lead rope, although it does seem to be wearing a bridle. It is walking obediently in front of the Egyptian guard who encourages it forward with the other captives.

RA II (4) RAMESSES II- RAMESSEUM

(Fig.4.273, 4.274, 4.275, 4.276)

Site:	Thebes. West Bank.
Reference:	<i>PM 2, Theben Temples, 431- 444.</i>
Titles:	King
Source:	Author's own photographs. Wreszinski. W. (reprint 1988) <i>Atlas zur altägyptischen Kulturgeschichte</i> , Geneve. 1 & 2. Callender. G. (1993) <i>The Eye of Horus</i> , Melbourne, fig. 8.13.
Dating:	Ramesses II: PM

⁶⁷⁶ J. B. Pritchard (1955) *Ancient Near Eastern Texts, Relating to the Old Testament*, Princeton. "The Biography of Amen-em-hef," 241. The chariot divisions of Egyptian armies appear to have depended largely on stallions to make up their teams to the extent that the king of Kadesh sent out a mare, possibly in oestrus, as a means by which to disrupt the army of Thutmose III in its attack on his city. See also J. H. Breasted (2001) *Ancient Records of Egypt*, Vol 2. *The Eighteenth Dynasty*, Chicago, "Biography of Amenemhab," (589) 233.

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Position in temple: Second Pylon, Inner Face.
Subject: Kadesh.
Horses: A. Ramesses' chariot team; B. Egyptian chariot teams, ridden horses; C. Hittite horses in battle.

A. Ramesses' chariot team (Dapur) (Fig. 4.273, 4.274).

There are two horses in the king's team, their bodies are in proportion in the fore and rear but the barrel is tubular and thin. They occupy two thirds of the register and their heads are at the height of that of the king if he was on the ground and their withers at his waist. They are robust in appearance, their ears quite small, upright and forward but very far down on their faces. The heads of these animals appear to either have been poorly executed or perhaps reworked. Subsequent damage has made this difficult to discern but there seems to be another ear below the plume bonnet which is more catlike than horselike. The mouth is carved very far back - atypical for other horse images of this reign - and the bit seems to extend all the way to the lips. There is no forelock, the eyes are triangular, the nostrils damaged and the mouths open. The mane is hogged from the harness pad to the lower edge of the plume bonnet and the tail is carried at a very high angle. Hoofs, pasterns, fetlocks and canons are present and the legs, while fine, are in proportion. These animals are stallions and are under the complete control of the king who has their reins tied about his waist. These horses depicted in the "Flying Gallop" and are gigantic compared to all the other horses shown in the scene. They provide an extremely energetic, forward and aggressive impression as well as an implication of the great abilities of their master.

B. Egyptian chariot teams: (Fig. 4.275)

The massed chariot teams of the Egyptians are very similar to those in the Abydos reliefs excepting for the greater level of detail and finesse included in the latter - a factor, perhaps, of the very fine limestone used at the Abydos site. The major difference in the Ramesseum's horses is their exaggerated elongation. They are relatively in proportion except for the extremely long tubular barrels. This is a feature of the king's

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horses as well. Perhaps this is to fill the available space, or the standard applied to their depiction.

C. Hittite horses in battle (Dapur)(Fig. 4.276).

At the attack on Dapur there are Hittites in full retreat towards the city. They include fleeing troops, chariot teams of both high and lesser status individuals, ridden horses and loose horses. The largest team is approximately one quarter of the size of Ramesses' horses. There are two layered horses whose appearance is the same as the Egyptian horses however the difference in them is in their position; these horses are stumbling. The near horse is falling and the far horse turned back towards the attacking forces. In front of the hoofs of the king a Hittite chariot with the team intact charges forward in the "Flying Gallop", an exact copy of the Egyptian horses following it. Below this team one horse flees without its rider and below and in front of that another races forward with its rider sitting on the "donkey seat," (Fig. 4.275).

The depiction of the enemy horses is essentially that of the Egyptian horses, the primary difference in their treatment is in their actions. They are almost always out of control, the team is acting disparately, often falling or fallen.

RA II (5) RAMESSES II- ABU SIMBEL TEMPLE.

(Fig. 4.277, 4.278)

Site:	Abu Simbel. Lower Nubia.
Reference:	<i>PM 7, 95-111.</i>
Titles:	King.
Source:	Author's own photographs. Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> , Geneve. 1 & 2. James. T. G. H. (2002) <i>Ramesses II</i> , Vercelli. Partridge. R. (2002) <i>Fighting Pharaohs, Weapons and Warfare in Ancient Egypt</i> , Manchester. Plate 101.
Dating:	Ramesses II: PM
Position in temple:	South and North Interior walls, Great Hall (First Pillared Hall).

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Subject: Ramesses attacking a Syrian town.
Horses: A. Ramesses' chariot team, B. Egyptian chariot teams, C. Syrian chariot teams.

A. Ramesses' chariot team (Fig. 4.277).

The two huge royal horses are layered and retain some slight red/brown colouration. They are in proportion, excepting for their tubular and elongated barrels. They occupy three quarters of the register, their heads at the head height of the king and their withers at his waist (if he was on the ground). They seem very fine but not small and therefore are to be considered as robust in form. Their ears are upright and forward and they have no forelocks. The eyes are triangular and they wear blinkers and there is detailing of the nasal bone and the lower jaw line. The noses are circular and show signs of slitting and the mouths are open. The manes are hogged from the bottom of the plume bonnet to the top of the harness pad. Tails are full and held at a very high angle. There is considerable detail in the hoofs, pasterns, fetlocks and canons and the legs are also very fine. These stallions are charging forward in the "Flying Gallop" and the king, in total control has their reins tied around his waist. There is no sign of a whip.

B. Egyptian chariot teams (Fig. 4.278).

These multiple depictions of chariot teams charging forward into battle represent Ramesses' sustained use of chariot divisions in his war strategies (Fig. 4.278). There are twelve Egyptian horses in this image, all layered in teams of two and retaining a small amount of red/brown paint. Again they are well proportioned excepting for their elongated tubular barrels. When compared to their drivers, they are slightly taller than their heads and their withers are at chest level. Their ears are upright and forward and there do not appear to either be forelocks or manes. They seem to be wearing some type of bonnet, although there are no plumes. Eyes are triangular, nostrils are circular and mouths open. Their tails are at a high angle. Their legs are very fine but still display hoofs, pasterns, fetlocks and canons. They do not all seem demonstrably to be stallions, although the fourth horse from the top shows evidence of a penis. They are all leaping

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forward in the “Flying Gallop” and the reins appear to be tied about the waists of their drivers who seem in complete control without the need of whips.

C. Syrian chariot teams (Fig. 4.278).

Syrian chariot teams can be seen being defeated in battle. In almost every case the depiction of these horses is nearly identical to the Egyptian horses in the same scene the only exception being that they appear to have hogged manes and their actions are different. They range from attacking in “Flying Gallop” (top teams) to complete disruption, falling to the ground (centre and lower right) and overturned chariots and plunging horses. They are out of control, their drivers falling to the ground in total contrast to the Egyptian forces. Egyptian horses are depicted in this manner in no scene examined.

RA II (6) RAMESSES II - LUXOR TEMPLE

(Figs. 4.279, 4.280, 4.281, 4.282)

Site:	Luxor (Thebes)
Reference:	<i>PM 2, 301-336 (215)</i>
Titles:	King
Source:	Author's own photographs. Wreszinski. W. (reprint 1988) <i>Atlas zur altaegyptischen Kulturgeschichte</i> , Geneve, 2, Plate 77.
Dating:	Ramesses II: PM
Position in temple:	East Side, Exterior,
Subject:	Campaigns of Ramesses II, (Syrian and Moabite Wars).
Horses:	There are 12 horses in this scene. A. Fig. 4.279- Egyptian on horseback. B. Fig. 4.280- Egyptian chariot team. C. Fig. 4.281, 4.282 – King's chariot team.

- A. Egyptian on horseback. (Fig. 4.279). There is an Egyptian scout/messenger/warrior on horseback. There is some damage that has removed much of the rear of the horse. This is a single unharnessed animal controlled by the reins of the rider. The horse is gracile and elongated being somewhat rectangular with a thick chest and neck. Its legs are thin and there are no hoofs depicted. The

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ears are pointed forward and there is evidence of eyes and nose however the image is worn and the fine detail missing. There is no mane and the tail is thin and held at a high angle. This is an unusual image, one of the very few of a horse being ridden. There is no saddle/ blanket or stirrups and the rider is sitting in the “donkey” seat- further back on the more rounded section of the horse’s rump.

- B. Egyptian chariot team. (Fig. 4.280). This is a team in battle in the Flying Gallop orientation. There are two gracile, layered horses that are very elongated with thick chests and necks and thin angular legs. Damage has removed the hoofs. The ears are pointed forward and blinkers are shown. There is considerable detail in the tack that not only features cheek pieces but also a dropped nose band that is used to “prevent the horse from opening his mouth and evading the bit.”⁶⁷⁷ The eyes are large and slightly angular, the nose square, the nostrils slit and there is wrinkling on the muzzle. There are sharp pointed teeth in the open mouths giving a “fierce” aspect to the horses. There is no trace of a mane and the tail is held at a very high angle. The near horse is male.
- C. King’s horses. (Fig. 4.281. 4.282). This is the largest team in the scene and it is equipped with royal plumes. The image is quite worn and shows some damage but the faces are preserved and are unusual. The image may have been “re-worked.” There are several aspects of the faces that are more lionine than equid. They are short and thick with large recessed eyes, round nostrils, wrinkled muzzles and sharp pointed catlike teeth in short wide mouths. They are distinctly un-horselike. This may be an example of the image being deliberately designed to produce a fiercer impression more suitable to the horses of a triumphant king.

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J. Draper, D. Sly & S. Muir (2004) *The Ultimate Book of the Horse and Rider*, London. 438.

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RA II (7) RAMESSES II- BEIT EL-WALI TEMPLE

(Figs.4. 283, 4.284)

Site:	Beit el-Wali
Reference:	<i>PM 7, 21-27.</i>
Source:	Ricke, H., G. Hughes & E. Wente (1967) <i>The Beit el-Wali Temple of Ramesses II</i> , Oriental Institute Nubian Expedition 1, Chicago. "Beit el-Wali Cast," The Trustees of the British Museum AN 98881.
Dating:	Ramesses II: PM
Position in temple:	Entrance hall, northern and southern walls.
Subject:	Northern wall- Ramesses in battle against the Asiatic enemies of Egypt, plates 10 & 113. The southern wall- Ramesses in battle against the Nubians, Plates 7 & 8.
Horses:	Northern wall 2 horses, southern wall 6 horses

The image on the North wall is more damaged than the South wall but the faces of the horses are better preserved and thus it provides the clearest information about the horses depicted. (Figs. 4.283, 4.284).

There are two harnessed layered horses and their colour is red/ brown with black tails and hoofs based on the colour exhibited in the Beit el-Wali Cast.⁶⁷⁸ The horses occupy the whole height of the registers on both walls and are in proportion to the figure of Ramesses II. They are gracile and elegantly formed in general proportion though with shortened necks and rather square chests. Their barrels are tubular. The ears (north) are small and pointed forward. It is difficult to see the eyes clearly and no blinkers seem to be present. The damage to the noses and mouths leaves a hint of the custom of "nose-slitting" and the mouths are open. No manes or forelocks are present. Tails are held at a high angle the legs are fine and include little detail that can be identified other than hoofs being shown and highlighted in black (south). Both walls show the king's team as stallions. The teams of the princes following Ramesses on the south wall are more

⁶⁷⁸ The cast (showing the image on the northern side of the courtyard) which can be found in the British Museum (AN 98881) was made for Robert Hay by Joseph Bonomi in 1825. The colours were added by Bonomi based on the originals as seen by Bonomi and Arundale. The cast was repainted by D. Champion in 1952. The colour has been extrapolated to the northern wall based on this information.

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elongated copies of the king's steeds and are also stallions. All of the horses are performing the "Flying Gallop" and the image is one of energy, speed and power.

4.2.15 THE REIGN OF MERENPTAH

MR 1 (1) MERENPTAH'S CANAANITE CAMPAIGN

(Figs. 4.285, 4.286)

Site:	Karnak.
Reference:	<i>PM 2, 132-133.</i>
Source:	Yurco. F. (1986) "Merenptah's Canaanite Campaign" <i>JARCE 23</i> (1986) 189-215, fig. 8.
Dating:	Merenptah: PM, Yurco
Position in temple:	Transverse axis of the temple, outer western face of the Cour de la Cachette.
Subject:	Battle scenes, prisoners driven to Egypt and presentation to Amun.
Horses:	The scenes are very badly damaged however the horses are apparently very similar to those of Ramsesses II (Figs. 4.285, 4.286).

MR (2) ANHURMOSE

(Fig. 4.287)

Site:	El Mashayikh.
Reference:	<i>PM 5, 28-29.</i>
Titles:	Overseer of the Army; Scribe of Recruits; High Priest of Onuris.
Source:	Ockinga. B. & Y. al-Masri (1988) <i>Two Ramesside Tombs at Mashayikh</i> , Part 1, The Ancient History Documentary Research Centre, Sydney, Plates 35-36.
Dating:	Merenptah: PM, Ockinga
Position in tomb:	Broad Hall, west wall, top register.
Subject:	Funeral procession.
Horses:	No horses, chariot carried in funeral procession.
Note:	The presence of a chariot in the funeral procession, the depiction of which is unusual in the Ramesside Period, is probably to be explained by Anhurmosé's early military career; in his biography

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he tells us that he was a “scribe of the army and chariotry in very great numbers.”⁶⁷⁹

4.2.16 THE REIGN OF RAMESSES III

RIII (1) MEDINET HABU

(Figs. 4.288, 4. 289, 4.290, 4.291)

Site:	Medinet Habu, Thebes.
Reference:	A --- <i>PM 2, 516.</i> B --- <i>PM 2, 517-522.</i> C --- <i>PM 2, 492.</i>
Source:	<i>The Epigraphic Survey (1930) Earlier Historical Records of Ramesses III</i> , Medinet Habu vol. I, The University of Chicago, Oriental Institute Publications VIII, 1. Chicago.
Dating:	Ramesses III: PM
Position in temple:	A. Hunting scene- Outer face of the temple, south side. B. King returning with captives –Outer face of the temple, north side. C. Chariot and team- inner face, First Pylon. D. Ramesses III battle with the Sea Peoples. Outer face of the Temple, north side.
Horses:	Royal chariot teams.

Images A, B, C, are representative of the horses in the scenes in the temple of Ramesses III at Medinet Habu. The informal hunting scene is without traces of colour (Fig. 4.288).

The images are of royal chariot teams of layered horses with the south and north wall

(Fig. 4.288, 4.289, 4.278), horses being quite disproportionate in construction. Both groups are very heavily built in the head, neck and chest regions and much lighter in the hind areas. The horses on the inner pylon (Fig. 4.290) are better proportioned in themselves. In A (Fig. 4.288) and B (Fig. 4.289), the horse's heads are at the corresponding height of the king and their withers at the height of his waist. The horses

⁶⁷⁹ B. Ockinga & Y. al-Masri (1988) *Two Ramesside Tombs at Mashayikh*, Part 1, Sydney, 33.

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in C (Fig. 4.290) are at least twice the size of their attendants. In every scene they are all very robust individuals. Their ears are upright and forward, eyes are round with lines from their corners and no forelocks are visible. The nostrils in B are round, mouths are open and there is detailed wrinkling in the muzzle. Manes are shaved and hogged, tails are full and held at a high angle. There are hoofs, fetlocks pasterns and canons. There is no evidence of gender. All of the horses are under control and movement is the “Flying Gallop,” moving forward or standing restlessly.

Image D, Ramesses III Battling the Sea Peoples (Fig. 4.291) contains images of enemy chariot teams. They are small but again appear to be in the same mode as the Egyptian horses with the slight exception of the far left pair that is not as layered as the others.

4.2.17 RAMESSID TOMBS

RAM (I) TT 302 PARAEMHEB

(Fig. 4.292)

Site:	Dra Abu el Naga. TMP Map II, D-6,f,3.
Reference:	<i>PM I (I) 381 (I)</i> .
Titles:	Overseer of the Magazine.
Source:	PM Kampp. F. (1996) <i>Die thebanische Nekropole</i> : 569.
Dating:	Ramesside: PM, Kampp, TMP
Position in tomb:	Broad hall, south west wall.
Subject:	Chariot with sleeping charioteer.
Horses:	The image is too badly damaged to discern the horses.

CHAPTER 5: TEXTUAL EVIDENCE

*“Yet when the books have been read and reread, it boils down to the horse, his human companion and what goes on between them.”*⁶⁸⁰

5.1 TEXTUAL EVIDENCE FOR THE EGYPTIAN ACQUISITION OF HORSES

The approach that this thesis has undertaken beginning as it does with the origins of the horse and the tracing of its movement into Egypt through the examination of faunal remains has introduced an orientation towards visual material rather than textual. This has been furthered by the enormous amount of iconographic material uncovered in the research. However there is a significant amount of textual material that deals with the ancient Egyptian horse and some of it is referred to directly here but there is more than could be included within the limits of this work and so detailed examination of that corpus will form the basis of much future investigation.

There is no faunal or textual evidence suggesting that the Egyptians possessed horses before the war with the Hyksos.⁶⁸¹ There are, however, several texts that indicate that they did acquire them during that conflict. In the Second Stele of Kamose,⁶⁸² the king was mentioned as “seizing their chariot teams”⁶⁸³ in the attack on Avaris. The

⁶⁸⁰ W. Farley quoted in K. Maffei (2007) *Horses*, New York, 429.

⁶⁸¹ There were six instances of horse remains in Egypt excavated from sites dated from 1750-1532BCE, five at Tell el-Daba and one at Buhen. None of these sites was in the possession of the Egyptians until the war with the Hyksos so there is no faunal evidence to support Egyptian possession of horses until that conflict.

⁶⁸² W. Helck (1975) *Historisch-biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie*, Wiesbaden, (1975) 82-97. For translations see W. K. Simpson (2003) *The Literature of Ancient Egypt: An Anthology of Stories, Instructions, Stelae, Autobiographies and Poetry*, (3rd edition) New Haven. New Haven, 345-350. See also H. S. Smith & A. Smith (1976) “A Reconsideration of the Kamose Texts,” in *Zeitschrift für ägyptische Sprache und Altertumskunde* 103 (1976) 60 and L. Habachi (1972) *The Second Stela of Kamose and his Struggle against the Hyksos Ruler and his Capital*, Abhandlungen des Deutschen Archäologischen Instituts Kairo, Ägyptologische Reihe 8. Glückstadt, for further translations and studies.

⁶⁸³ W. Helck (1975) *Historisch-biographische Texte der 2. Zwischenzeit und neue Texte der 18. Dynastie*, Wiesbaden, (1975) 2nd stela of Kamose line 13, 93. See Chapter 2 for a discussion regarding the translation of *ḥt-nt-ḥtry*.

inscriptions in the tomb of Ahmose son of Ibana⁶⁸⁴ reveal that only the king seems to be in possession of a horse and chariot. Ahmose states: “I used to accompany the sovereign (...) on foot, following his excursions in his chariot.”⁶⁸⁵ Under Thutmose I, Ahmose captured a chariot and its horse:⁶⁸⁶ *ini.n=i wrry.t ssm.t=s n.ty hr=s m skꜣ nh* “I brought a chariot, it’s horse (and) the one upon it as a prisoner,” - this being something special and worth noting.⁶⁸⁷ The texts suggest that the numbers of horses possessed by the Egyptians were limited at this early time, a conclusion supported by the very small amount of faunal and iconographic evidence (see above for the faunal evidence). Asiatic campaigning under Thutmose I⁶⁸⁸ and Thutmose II⁶⁸⁹ resulted in the acquisition of horses as booty and tribute to add to those already in Egyptian possession.

⁶⁸⁴ *Urk*, IV, 1-1; in *Urkunden IV*: K. Sethe (ed.), *Urkunden der 18. Dynastie*, fasc. 1-16 (Leipzig, 1927-30) reprinted in 4 vols. (Berlin & Graz, 1961); W. Helck, *Urkunden der 18. Dynastie*, fasc. 17-22 (Berlin, 1955-61). J. B. Pritchard (1955) *Ancient Near Eastern Texts Relating to the Old Testament*, Princeton, (ANET) 233.

⁶⁸⁵ *Urk* IV, 3.5-6; J. B. Pritchard (1955) *ANET*, 233.

⁶⁸⁶ *Urk* IV, 9.17-10.1.

⁶⁸⁷ John A. Wilson in J. B. Pritchard (1955) *ANET* 234 and M. Lichtheim (1976) *Ancient Egyptian Literature. Volume II The New Kingdom*, Berkeley, 14 translate “horse”. Iconographic data suggests that there were single horse chariots. J. D. Cooney (1965) *Amarna Reliefs from Hermopolis in American Collections*, Brooklyn, 54 Image 51, the caption notes, “Chariots waiting outside a house. Two drivers, soldiers to judge by their dress, restrain the restless horse while they await the appearance of their owner directly outside the door of the villa. Chariots such as this are drawn by a single horse and were perhaps the property of a noble.” This is an image from the Amarna period.

⁶⁸⁸ “The Tombos Stele” *Urk* IV, 82-87; J. H. Breasted (2001) *The Ancient Records of Egypt, 2 The Eighteenth Dynasty*, Chicago. §§67-73 Like that of Ahmose son of Ibana, the autobiography of Ahmose Pen-Nekhet also mentions the capture of 21 hands a horse and chariot while on campaign with the king in Naharin; *Urk* IV, 36.9-11.

⁶⁸⁹ The battle scene fragments remaining from Thutmose II’s temple in Western Thebes depict horses and Asiatic figures in conflict. B. Bruyère (1952) “Deir el Medineh Année 1926, Sondage au Temple Funéraire de Thotmés II (Hat Ankh Shesept)”, *FIFAO* 4/4 pls II, III and IV. Also a fragment cited in J. H. Breasted (2001) *The Ancient Records of Egypt, 2 The Eighteenth Dynasty*, 51, records a campaign against Retenu resulting in horses brought as “[Gifts which were brought to] the fame of the king Okheperne [from his vic]tories___elephants___horses___Retenu.” D. Redford (1992) *Egypt, Canaan and Israel in Ancient Times*, 154 note 122, comments that the dating is uncertain and that the fragments might record Thutmose I’s activities instead of Thutmose II. What is significant is that which ever Thutmose I or II was involved it was a time when the number of horses began to increase as a result of an influx from Asia.

CHAPTER 5: TEXTUAL EVIDENCE

Texts continue to shed light on how the Egyptians then put the horse to use and there are changed circumstances by the end of the nearly 70 years⁶⁹⁰ from the end of the reign of Ahmose I to Year 22 in the reign of Thutmose III, when the king set out on his first campaign into the Levant. In the Annals of the Asiatic campaigns of Thutmose III inscribed at Karnak,⁶⁹¹ the enemy at Yehem have “their horses (and) [their troops being very many indeed].”⁶⁹² This is to be expected, but Thutmose’s ground force, on its way to Megiddo, also had many. Gabriel, based on comparisons with a U.S. Army infantry brigade in World War I,⁶⁹³ estimates 500 chariots with 1000 horses in Thutmose’s army at Megiddo; Redford⁶⁹⁴ suggests 2000 horses were involved. What is significant here is that Thutmose included large numbers of chariots in the armies he took to his Asiatic campaigns in lands where chariot warfare was the norm⁶⁹⁵ and he was successful. By this time, therefore, Egypt must have been in possession of a significant number of horses if it was not only to supply these numbers to his campaigns but also to include

⁶⁹⁰ J. von Beckerath (1997) *Chronologie des pharaonischen Ägypten*, Mainz, 189 which gives 1525 BCE as the end date for the reign of Ahmose I and 1479 as the beginning of that of Thutmose III. This is a period of 46 years and the first campaign of Thutmose III took place in Year 22 creating a total of 68 years during which Egypt could have increased its horse population very significantly.

⁶⁹¹ *Urk IV* 645ff; J. B. Pritchard (1955) *ANET* 234ff; D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, Leiden.

⁶⁹² *Urk IV*, 649.10; D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, 14 thinks there is more space at the end of the preserved section of col. 23 and adds [being very many indeed] to Sethe’s restoration.

⁶⁹³ R. A. Gabriel (2009) *Thutmose III, A military biography of Egypt’s greatest warrior king*, Washington, 83-84 and he states that he has referred to the translations in D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, Leiden, H. Goedicke’s (2000) *The Battle of Megiddo*, Baltimore, as well as J. H. Breasted *Ancient Records of Egypt, Vol. 2 The Eighteenth Dynasty*, Illinois and K. Sethe *Urkunden der 18 Dynastie: Urkunden des Ägyptischen Altertums*, IV 2nd ed. Berlin.

⁶⁹⁴ D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, 205 based on *Urkunden IV* 663:8. A. Spalinger (2005) *War in Ancient Egypt: The New Kingdom*, Ancient World at War Series, Oxford, 99, Note 22: “My calculations indicate that this figure is too high if we consider only the able bodied men. I would reduce it by four to five thousand.” All these calculations are based on infantry figures, not those of the chariotry, so all their conclusions must remain equivocal and only generally applicable to the number of chariots and their teams in Thutmose’s army. The only conclusion that can effectively be drawn is that the king had enough with him to enable him to be victorious given his tactical abilities and the other elements of his army.

⁶⁹⁵ R. A. Gabriel (2009) *Thutmose III*, Washington, 83-84: “The references to horses in the Annals make clear that Thutmose’s army had its chariots at Megiddo. Thutmose would have known that Asiatic armies possessed large complements of chariots as a matter of course and that Megiddo was located on the Esdraelon Plain, ideal chariot country. It is unlikely, then, that Thutmose would have left his chariots behind.” The passage referring to the king’s preference for the Aruna road in his approach to Megiddo implies the use of chariot teams. J. B. Pritchard (1955) *ANET* “Will not horse (have to) go after [horse and the army] and the people similarly?” 235. Egyptians very rarely rode horses so this passage must refer to chariot teams.

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replacements for injured, sick or dead horses as well as avoiding denuding Egypt of breeding stock and reserves by their removal.

Thutmose acquired horses as booty and he imposed “dues” on those polities he brought under Egyptian control and the numbers of horses acquired were significant.⁶⁹⁶ It is also of note that in general, the physical size of the horses depicted in tombs increases from this time suggesting that the animals he introduced on his return were larger than those already in Egypt.

The Megiddo campaign resulted in the acquisition of 2,041 mares, 6 stallions, 191 foals, colts (...) ⁶⁹⁷ Booty or imposts on Asiatic states under Egypt’s overlordship during the reign of Thutmose III that are mentioned in the Annals result in an estimated total of 4102 horses.⁶⁹⁸

Year/ Campaign	Place	Number of horses
24	Meggido	2238 (Urk IV, 663.8-11)
29	Djay	32 (Urk IV, 668.5)
30	Retenu	188 (Urk IV, 690.8)
31	Ullaza	26 (Urk IV, 691.6)
33	Retenu	260 (Urk IV, 699.6)
34	Djay	40 (Urk IV, 704.14)
	Retenu	41 (Urk IV, 706.1)
35	Naharin	180 (Urk IV, 711.12)
	Retenu	226 (Urk IV, 712.18)
38	Nukhashshe	328 (Urk IV, 717.9)
39	Retenu	229 (Urk IV, 721.16)
40	Retenu	124 (Urk IV, 669.5)
42	Kadesh	48 (Urk IV, 731.4)

⁶⁹⁶ Minmose, Butler and Foreman of Works of Thutmose III, *Urk. IV* 1442- 1442 states: “I crossed Upper Retjenu behind my lord and I taxed Upper Retjenu in silver, gold, lapis lazuli and all (kinds of) precious stones, chariots and horses without number.” There are few references to incursions by 18th Dynasty kings into Asia before Thutmose III and there are none referring to tribute in the form of horses before the reign of this king.

⁶⁹⁷ *Urk IV*, 663.8-11; J. B. Pritchard (1955) *ANET* 237, and D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, 34.

⁶⁹⁸ D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, gives a detailed account of the sources of both plunder and “dues” in the reign, 34-95.

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Year/ Campaign	Place	Number of horses
	Retenu	68 (Urk IV, 731.9)

Table. 5.1. Horses acquired by Thutmose III in his Asiatic Campaigns.

There were additional horses in this group, but the numbers are missing because of lacunae in the texts. In the biography of Minmose who served Thutmose III and Amenhotep II there are mentions of horses “without number”⁶⁹⁹ levied as part of the tribute quotas on the chiefs of Upper Retenu. Minmose continues: “I caused the chieftains of Retjenu to be aware of their yearly dues.”⁷⁰⁰ This would seem to indicate that the supply of horses as part of the “dues” was to continue.

The Memphis and Karnak Stelae of Amenhotep II⁷⁰¹ mention approximately 1246⁷⁰² horses acquired from his Syrian campaigns. While the Asiatic campaigns of succeeding kings do not equal those of Thutmose III and his son there were subsequent incursions into that territory⁷⁰³ and the booty secured by Egyptian victories would probably have

⁶⁹⁹ Urk IV 1442.3-5, “I crossed Upper Retjenu behind my lord and I taxed Upper Retjenu in silver, gold, lapis lazuli and all (kinds of) precious stones, chariots and horses without number.” B. Cumming (1984) *Egyptian Historical Records of the Later Eighteenth Dynasty* Fasc. II Warminster, 139.

⁷⁰⁰ Urk IV 1442.7; Cumming (1984) 139.

⁷⁰¹ Urk IV 1301-1316; J. B. Pritchard (1955) *ANET* 246-7; B. Cumming, *Egyptian Historical Records of the Later Eighteenth Dynasty* Fasc. I (Warminster, 1982) 29-33; Memphis Stele-Year 7- Retenu 820 horses (Urk IV 1305.10; *ANET* 246; Cumming (1982) 31.) Year 9 Retenu campaign, booty from Iteren and Migdol 54 horses (Urk IV 1307.8; *ANET* 247; Cumming (1982) 31; from Anaharath 7 teams=14 horses Urk IV, 1308.8; *ANET* 247; Cumming (1982) 32.

⁷⁰² This is an estimated number as in addition to the specific numbers stated in the texts of the Memphis and Karnak Stelae there are mentions of “their chariots and teams of horses,” Urk 1303.2 and “his horses” Urk IV, 1306.9. Also, “1032 painted chariots” are mentioned in the tally of booty Urk IV, 1309.7 and it is unclear whether this included their teams. Urk IV, 1315 is the Karnak stele, a duplicate text of the Memphis stele, i.e. the figures in it should be the same as those in the Memphis stele.

⁷⁰³ A fragmentary inscription of Thutmosis IV mentions offerings made to the temple of Amun being “from the plunder of His Majesty in wretched [Nahar]in on his first victorious campaign.” Urk IV, 1554.17-18; Breasted, *ARE* II, §817; B. Cumming (1984) *Egyptian Historical Records of the Later Eighteenth Dynasty* Fasc. III Warminster, 256. The victories of Amenhotep III are also cited in the stele the “Tablet of Victory” set up by the king in his mortuary temple in Thebes, (CCG 34026); “[every] country, all people, (*rhyt*), all populations (*hnmmt*), Naharin (*N-h-r-ny* sic!), the wretched Kush, Retenu the Upper and Retenu the Lower are at the feet of this Good God, like Re, forever.” (Urk IV, 1658.18-20; B. Davies, (1992) *Egyptian Historical Records of the Later Eighteenth Dynasty* Fasc. IV, Warminster, 5) This is accompanied on the Tablet by an image of the king in his chariot driving over Syrians; for a photo see M. Saleh and H. Sourouzian, (1986) *Die Hauptwerke im Ägyptischen Museum Kairo*, Mainz, No. 143. The historical value of this is, however, questionable; the composition is a copy of a relief of Amenhotep II, see Abdel Hamid Zayed (1984) “Une représentation inédite des campagnes d'Aménophis II” in P. Posener-Kriéger (ed.) *Mélanges Gamal eddin Mokhtar* I BdÉ 97/1 (Cairo, 1985) 5 – 17.

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included horses. From the time of Thutmose III onwards there is certainly evidence in the reliefs of the tombs of officials of horses also being brought as tribute from Asiatic states. The tombs of Menkheperresonb (TT 86), Senniferi (TT 99), Amenmose (TT 42), Amunedjeh (TT 84), Rehmire (TT 100), Penhet (TT 239), Tjanuni (TT 74), Heti (TT 151), Nebamun (TT 90), Re'a (TT 201), Sobekhotep (TT 63), Haremhab (TT 78), Amenmose (TT 89), Huya and Meryre II at Amarna and that of Horemheb at Saqqara all depict horses being brought as tribute from the east. (See Chapter 4). The Amarna Letters mention in excess of 80 horses given as gifts to Amenhotep III by rulers such as Tušratta of Mitanni and the king of Alašiya.⁷⁰⁴ This activity continued on into Ramesses II's time when the "Marriage Stele" of Year 34⁷⁰⁵ mentions tribute from the "Great Prince of Hatti," including "a great many horses without limit to them."⁷⁰⁶

Booty and tribute and "gifting" secured a supply of horses but these were not dependable sources and Egypt would have had to be cognisant of the need for a steady supply if it was to maintain its military standing in an era of chariot warfare. It would have been necessary to establish domestic breeding programs. There is no archaeological evidence to support this but it is possible to speculate about whether Egypt could have domestically produced the numbers that Thutmose III would have needed by Year 22. Using Pascal's Triangle⁷⁰⁷ a mathematical tool for calculating probability, it is possible to calculate that one breeding pair of horses (a mare and a stallion) could have been the progenitors for approximately 1500 horses over some 70 years from the end of Ahmose I's reign to Year 22 when Thutmose III led his first Asiatic campaign. This figure makes no allowance for variables such as sickness, infertility, stillbirths, accidents etc. Conservatively, eliminating 500 of these animals as a result of the effects of these variables still permits Egypt to have approximately 1000 horses resulting from the original pair by Year 22.⁷⁰⁸ Whilst this is mathematical

⁷⁰⁴ EA 2, EA 3, EA 7, EA 9, EA 15, EA 17, EA 19, EA 22, EA 34, EA 37; W. L. Moran (ed. and transl.) (1992) *The Amarna Letters*, Baltimore, pp. 6, 7, 12, 18, 37, 41, 43, 51, 105, 110.

⁷⁰⁵ KRI II, 233 ff.; K. A. Kitchen (1996) *Ramesside Inscriptions, Historical and Biographical*, vols. I-VIII, Oxford, 86 ff.

⁷⁰⁶ KRI II, 247.5-6; Kitchen (1996) 94; J. B. Pritchard (1955) *ANET* 257.

⁷⁰⁷ This is a triangular array of binomial coefficients. It is named after the French mathematician Blaise Pascal. It is mainly used in probability and algebra. See A. W. F. Edwards (2002) *Pascal's Arithmetical Triangle: The Story of a Mathematical Idea*, Boston.

⁷⁰⁸ C. Bridgewater. Eastside Riding Academy (Sydney), suggests that depending on the conditions under which the horses were maintained there may have been 1000 out of the 1500 lost over the

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probability, it does show that a well organised and successful breeding program based on more than one pair could have comfortably provided for all the animals that Thutmose would have needed, as well as maintaining the breeding stock remaining within Egypt itself.

The Delta was definitely able to provide sufficient fodder and the method of “hogging” of Egyptian horse manes (See Chapter 10), as a possible response to the insects and the moisture in the Delta, could supply supporting evidence for its use as a grazing and breeding area.

Additional information concerning the Egyptian ability to breed sufficient horses can be gleaned from the Amarna Letters containing requests from Canaanite princes for military assistance in the form of chariots, for example: “May it appear right to the Lord, the Sun of the Lands, that he may give to me twenty teams (?) of horses!”⁷⁰⁹ This is a consistent plea, especially during the reign of Akhenaten, with the underlying expectation that Egypt had a lot of horses to contribute.

Ramesses II’s massive stables at Pi-Ramesse were judged to cater for approximately 418 horses.⁷¹⁰ Whilst it is not possible to ascertain the origin of these animals, the size of the installation demonstrates (again) the large numbers of horses available to the Egyptians over time. These stables were apparently enlarged under Ramesses III.

Trade cannot be excluded as another method by which Egypt may have acquired horses - although there is no apparent textual or archaeological evidence to support this.

period. Even so, this would still have resulted in 500 progeny for each breeding pair. (Personal communication 5/4/2013).

⁷⁰⁹ EA 71, W. Moran (1992) *The Amarna Letters*, Baltimore, EA107, 40-41. The requests from Rib Hadda total 580 horses so there was an expectation internationally that Egypt could supply these numbers. EA 76, EA 78, EA 85, EA 90, EA 99, EA 100, EA 103, EA 106, EA 107, EA 108, EA 117, EA 127, EA 131, EA 132, W. Moran (1992) *The Amarna Letters*, Baltimore, pp. 140, 146, 148, 156, 163, 171, 172, 176, 179, 180, 181, 193, 207, 212, 132.

⁷¹⁰ E. D. Pusch (1993) “Pi-Ramesse geliebt von Amun, Hauptquartier deiner Streitwagentruppen. Ägypter und Hethiter in der Delta-Residenz der Ramessiden” in A. Eggebrecht (ed.) (1993) *Pelizaeus-Museum Hildesheim. Die Ägyptische Sammlung, (Antike Welt Sondernummer)* Mainz, 126-139. See also A. Herold (1998) “Piramesse-Northern Capital: Chariots, Horses and Foreign Gods,” 138 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29 1996* Jerusalem, Israel, 129-146.

Egypt acquired most of its horses following the defeat of the Hyksos, and must, therefore, have begun a serious breeding program of its own in order to furnish the driving force of the new technology: the light spoke-wheeled chariot. The chariot supported the subsequent incursions of aggressive Egyptian kings into the east who won horses as booty and who then imposed tribute including horses on those states under Egypt's sway. This process was so successful that it went on to provide the basis of the huge chariot divisions that appear so significantly on the walls of temples depicting the victories of kings such as Ramesses II. Horses enabled Egypt to contend on an equal military footing with the states of the Near East. They also meant Egypt could extend its sway to the banks of the Euphrates and to participate, to its advantage, in international relations with such polities as Mitanni and the Hittites whilst maintaining a successful forward defence policy which lasted until the 21st Dynasty.

The textual evidence while limited does give an indication of the sources for Egyptian horse ownership from their earliest appearance and proceeding through time. Whilst horses were highly valued and do feature in the texts it is the iconographic material that gives the greatest insight into the circumstances of Egypt's relationship with horses.⁷¹¹

⁷¹¹ The texts discussed in this work are representative only, much further work can be undertaken in future to fully examine the presence of horses in texts throughout the New Kingdom period.

CHAPTER 6: THE ARTISTIC CONTEXT OF THE HORSE - AN OVERVIEW

*“A horse is a thing of such beauty
None will tire of looking at him as long
As he displays himself in his splendour.”⁷¹²*

Scenes from 71 tombs, as well as several on temple walls and some on artefacts in sufficiently good condition, were used in the examination. These contain images of horses or associated material. The majority originate in Thebes and its necropolis, with some additional material from the provinces, Amarna and Saqqara, as these are the sites where most of the images are preserved. Unfortunately, an analysis of all the temples and artefacts is not possible here, but as many tombs that could be found to contain usable data have been included. In many cases there has been significant damage to the images and so in certain areas only the images that are sufficiently complete have been used.

6.1. MEANING IN EGYPTIAN ART

“Theban tomb painting and its iconography bear the imprint of the social, religious, economic and artistic realities present at the time of the painting’s creation.”⁷¹³ Egyptian tombs and temples were decorated with images imbued with much more meaning than merely the expression of the desire to create something beautiful. They were public places where “official” or “establishment”⁷¹⁴ works were created to display and reinforce concepts of religion, order and beliefs in the afterlife as well as the private requirements of the tomb owner or temple builder/inscriber. “This made the meaning of works of art heavily dependent on their content, the ‘message’ they conveyed.”⁷¹⁵

⁷¹² Xenophon in, M. Morgan (ed. and transl.) (1893) *The Art of Horsemanship* Boston, X, 64.

⁷¹³ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes 1419-1372 BCE*, Monumenta Aegyptiaca X, Belgium 3.

⁷¹⁴ J. Malek (2003) *Egypt, 4000 Years of Art*, London, 5.

⁷¹⁵ J. Malek (2003) *Egypt, 4000 Years of Art*, 5 also A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, London, 77 and G. Robins (2000) *The Art of Ancient Egypt*, Cambridge, 12.

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Egyptian art incorporated the belief that the mere depiction of something made it potent or powerful and real⁷¹⁶ and real for eternity. This “reality” was not a reflection of the world as it was but the world as it should be according to the wishes of the tomb owner or temple builder.⁷¹⁷ Consequently, there are no images of ill or disabled tomb owners or defeated Egyptian kings. It was not “photographic” reality but aspirational reality that would “magically” create the perfect situation for eternity.⁷¹⁸ There were certain themes that were consistently stressed in tombs and temples as these were deemed suitable tools in the efforts of those who commissioned the works to achieve the goals they had set. Given this understanding, one has to be careful about what can be concluded from examining the horse images contained in them. Whilst Rommelaere⁷¹⁹ makes accurate observations regarding the changes in the appearance of horses in the period, there is not sufficient evidence to support her contention that there was a change of “breed” or “race” since the images are not simply photographic depictions of horses and much artistic licence was taken.

It was the kings and the elite⁷²⁰ who could afford to have temples and tombs constructed and decorated by the most talented artists in Egypt in both the capitals and the provinces; it was their beliefs, desires and activities that were reflected in them. Davis underlines the need to add an understanding of the “personal” motivation behind the images contained in tombs and temples because “those who commissioned and produced canonical images had rational, self-interested, perhaps even fully self-conscious reasons for preferring certain formats and themes and for organising

⁷¹⁶ J. Malek (2003) *Egypt, 4000 Years of Art*, London, 5. A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, 77.

⁷¹⁷ A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, 77 see M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, 5-7; N. Kanawati (2001) *The Tomb and Beyond*, Warminster, 115; S. Ikram (2003) *Death and Burial in Ancient Egypt*, London, 170-173.

⁷¹⁸ C. Aldred (1980) *Egyptian Art*, London, 15 see also I. Shaw & P. Nicholson (2008) *Illustrated Dictionary of Ancient Egypt*, Cairo, 41. The purpose of art was to “represent, influence and manipulate the real world (...) Egyptian art was concerned above all with ensuring the continuity of the universe, the gods, the king and the people.” S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt: Scenes from Private Tombs in New Kingdom Thebes*, transl. D. Warburton, London, 21.

⁷¹⁹ C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, Ch 2.

⁷²⁰ N. Strudwick & H. Strudwick (1999) *Thebes in Egypt: a guide to the tombs and temples of ancient Luxor*, London, 139 and 171, see also. G. Robins (2000) *The Art of Ancient Egypt*, Cambridge MA, 12.

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production in a certain way.”⁷²¹ The inclusion of a chariot team would increase the overall impressiveness of the work.

6.2 AN OVERVIEW OF EGYPTIAN ART

Egyptian art was incredibly “stable” over a long period of time - its rules and traditions, the “canon,” having been established in the early dynastic period and continuing throughout Pharaonic history.⁷²² But the styles, themes and subjects of that art did change over time, in response to changing conditions both inside and outside Egypt.⁷²³

In the period of Egypt’s first acquisition of the horse, there was a lack of decorated tombs in Thebes (and there are few known tombs from Ahmose and Amenhotep I’s senior officials)⁷²⁴ but the art of the period was characterised by a return to the style of the early Middle Kingdom, such as that seen under Mentuhotep II.⁷²⁵

During the later part of the reign of Thutmose III, there was a movement away from the stiff traditions of the Middle Kingdom.⁷²⁶ Wold describes the art of this period as demonstrating “a soft engaging style, which occasionally evokes the mood of the scene,”⁷²⁷ and citing the “Botanic Gardens” images in Thutmose III’s Festival Hall at Karnak, Abate identifies a change “more to refinement than grandeur.”⁷²⁸ Aldred identifies a “more mature style”⁷²⁹ in the tomb of Rekhmire: all these reflecting the changing position that Egypt was beginning to occupy in the larger world. Its interactions with the Middle East were bringing new methods, materials and subjects such as horses for inclusion in temples and tombs. By the time of Amenhotep III, Egypt was sophisticated, immensely wealthy, cosmopolitan and a “diplomatic centre of

⁷²¹ W. Davis ((1989) *The Canonical Tradition in Ancient Egyptian Art*, Cambridge, 220.

⁷²² Certainly by the Second Dynasty, see W. Davis (1989) *The Canonical Tradition in Ancient Egyptian Art*, Cambridge, 120 and N. Kanawati & A. Woods (2009) *Artists in the Old Kingdom*, Cairo, 2. G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, Ch 4.

⁷²³ W. Davis (1998) *The Canonical Tradition in Ancient Egyptian Art*, 221. “...within limits the system was flexible, accommodating many forms, themes and functions.”

⁷²⁴ B. Bryan (2000) “The 18th Dynasty Before the Amarna Period (c.2550-1352 BC)” in I. Shaw (ed.) (2000) *The Oxford History of Ancient Egypt*, Oxford, 222.

⁷²⁵ See C. Aldred (1980) *Egyptian Art*, 147.

⁷²⁶ C. Aldred (1980) *Egyptian Art*, 162, also F. Abate (ed.) (1972) *Egyptian Art*, London, 96 and G. Robins (2000) *The Art of Ancient Egypt*, Cambridge MA. 142.

⁷²⁷ I. Woldering (1963) *The Art of Egypt*, New York, 144.

⁷²⁸ F. Abate (ed) (1972) *Egyptian Art*, London, 103.

⁷²⁹ C. Aldred (1980) *Egyptian Art*, 162.

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international importance”⁷³⁰ and this was reflected in the art that Woldering describes as having the “soft fluidity and elegant draughtsmanship of the golden age.”⁷³¹

The reign of Amenhotep IV/Akhenaten took this much further. Amarna art⁷³² “is characterised by a much freer and in some ways more naturalistic approach to the treatment of people and nature,”⁷³³ as well as its being dominated by the person of the king and of the royal family almost to the exclusion of the tomb owners. Van Dijk points to an “extraordinary sense of movement and speed a general looseness and freedom of expression”⁷³⁴ which was to change Egyptian art from that time forward; and provide a very large number of differently depicted horses. However, Robins reiterates Stevenson Smith’s comment that “the innovators of the Amarna period had left intact the foundations of Egyptian art”⁷³⁵ adding changes in style and subject to an already existing tradition.

At the end of the Amarna period (and perhaps facilitated by religious and political imperatives), Egyptian art returned to more orthodox forms. Although, as can be seen in the depiction of horses, Amarna’s influence was to remain in several areas.⁷³⁶

During the Ramesside Period “there was a shift toward the veneration of the gods on the part of the tomb owner. The entire tomb complex increasingly acquired the character of a mortuary temple.”⁷³⁷ The change in emphasis caused the disappearance of images that

⁷³⁰ J. van Dijk (2000) “The Amarna Period and the Later New Kingdom, (c.1352–1069)” in I. Shaw (2000) *The Oxford History of Ancient Egypt*, Oxford, 272.

⁷³¹ I. Woldering (1963) *The Art of Egypt*, 154.

⁷³² H. Schäfer (2002) *Principles of Egyptian Art*, E. Brunner-Traut (ed.), J. Baines (transl. and ed.), with revisions of the 1974 edition, Oxford, 153 discusses the “Amarna reform movement.”

⁷³³ J. Bentley (2000) “Characteristics and Style of Egyptian Art in the New Kingdom” in L. Donovan & K. McCorquodale (eds.) (2000) *Egyptian Art, Principles and Themes in Wall Scenes*, Cairo, 13 and G. Robins (2000) *The Art of Ancient Egypt*, Chapter 9.

⁷³⁴ J. van Dijk (2000) “The Amarna Period and the Later New Kingdom,” 282.

⁷³⁵ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin 119. Here she quotes W. Stevenson-Smith (1998) *The Art and Architecture of Ancient Egypt*, 3rd Edition Yale, (1981) with revisions and additions by William Kelly Simpson (the 1998 reference for this quote is 179.) Robins cautions against the over-emphasis given to the “revolutionary” nature of the Amarna changes in Egyptological discussions and states: “A look at any Amarna scene shows that objects were still depicted at their most characteristic aspect, as in traditional art.” 119. She further discusses the treatment of the two-dimensional surface, the ordering of material and the use of scale. See also G. Robins (1997) *The Art of Ancient Egypt*, Cambridge, 151.

⁷³⁶ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, 148.

⁷³⁷ F. Kampp-Seyfried (1998) “Overcoming Death – The Private Tombs of Thebes” in R. Schulz & M. Seidel (eds.) (1998) *Egypt: The World of the Pharaohs*, Cologne, 254. C. Aldred (1980) *Egyptian Art* 190, emphasizes this change: “In the Ramesside tomb, the prime concern is with

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had been typical of tomb decoration to this point and with this the end of the inclusion of horses there. But there was an increase in the depiction of the king's great battles on temple walls and the further development of a narrative aspect took place. These battle narratives displayed a huge increase in the number and variety of horse images. Battles had been depicted before many times but now so great are the events depicted that incidents that formed part of them are featured almost individually, organised in registers and chronological order, including geographical and topographical detail.

6.3 THEMES

Meaning was expressed through themes central to Egyptian art with the overarching theme being the maintenance of order: *mꜣt*. This determined the subjects appropriate to the decoration of tombs and temples where this order could be clearly seen, they were: the journey to the afterlife, hierarchy, life activities and kingly iconography. The New Kingdom horses were, for the first time, incorporated into these subjects that demonstrated the maintenance of *mꜣt* both in life and in eternity.⁷³⁸

6.3.1 THE JOURNEY TO THE AFTERLIFE

The tomb was the “resurrection machine”⁷³⁹ that provided the means for the owner to reach the afterlife and so it had to be built and decorated in accordance with *mꜣt* in such a way that it could, together with the appropriate rituals and offerings, carry out that basic function. Additionally it had to show the owner acting in accordance with *mꜣt* and thereby being worthy of acceptance into the afterlife.

With this in mind throughout much of the 18th Dynasty, Theban tombs were ideally orientated with the forecourt opening in an easterly direction and the chapel façade

the scenes of burial in the necropolis, the last judgment before the gods of the Underworld and vignettes extracted from the Book of the Dead.”

⁷³⁸ G. Robins (2000) *The Art of Ancient Egypt*, Cambridge, “The order that the Egyptians strove to maintain in the world around them was also fundamental to their art.” 21.

⁷³⁹ V. W. Davies & R. Friedman (1998) *Egypt*, London, 53.

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facing west so that the tomb operated as a passageway between the real world and the realm of the dead⁷⁴⁰ (although it was not always possible to achieve this orientation given the quality of the rock at the tomb's location and the topography of the Theban hills). Within the tombs, the "western" interior hall (the Long Hall) was particularly associated with the journey from life to afterlife and it was decorated with images of funerary and religious rituals such as processions and pilgrimages to Abydos,⁷⁴¹ many of which contained horses. During the 18th and following dynasties, there were changes to what was considered "suitable" or "decorous"⁷⁴² in scene choices as well as alternate tomb sites such as Saqqara and tomb designs all of which impacted on the positioning of such scenes. Still, horses continued to be included in them.

Whilst horses do not appear in the Egyptian pantheon they are included in "suitable" scene choices such as in funeral processions shown in the tombs of Thutnefer (TT 80; Fig. 6.1) (Long Hall, north wall) Userhat (TT 56; Long Hall, west wall), Haremheb (TT 78; Long Hall, west wall), Kenamun (TT 162; Long Hall, north wall) and Horemheb at Saqqara (Fig. 6.2) (Second Court, north wall). Chariots are included as part of these processions in the tombs of Ahmose (TT121; Long Hall, north wall) and Mentuiui (TT 172; Long Hall, west wall) and Heti (TT 151). Chariots themselves with horse images were included as grave goods in the tombs of Thutmose IV and Tutankhamun.

They also appear in scenes of funerary journeys to Abydos.⁷⁴³ The tomb of Hatiai (TT 324; Fig 6.3; Broad Hall, west wall) clearly displays a chariot on the top of one of the

⁷⁴⁰ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, 16 and S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt*, 13 she notes that this was not always possible because of the topography of the Theban hills so "fictional directions" were applied. See also A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, 82.

⁷⁴¹ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, 16. I. Woldering (1965) *The Art of Egypt*, New York, 141. I. Woldering (1967) *The Arts of Egypt*, London, 129. A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, 82-84. R. Parkinson (2008) *The Painted Tomb Chapel of Nebamun*, London, 30: M. Hartwig (2000) "Style and Visual Rhetoric in Theban Tomb Painting," in Z. Hawass & L. P Brock (eds.) (2000) *Egyptology at the Dawn of the Twenty-First Century, Proceedings of the Eighth International Congress of Egyptologists, Cairo 2000*, American University Press 2, Cairo, 298-307 for an extensive interpretation of the tombs and their decoration schemes. See also A. Verbovsek (2015) "Reception and Perception" in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester, 144.

⁷⁴² R. Parkinson (2008) *The Painted Tomb Chapel of Nebamun*, London, 30: "The images are idealized and governed by long-standing and elaborate conventions about subject matter and decorum."

⁷⁴³ L. Manniche (1987) *City of the Dead. Thebes in Egypt*, London, 40-41. Kenamun (TT 162) also contains an image of horses on a boat involved in the Abydos pilgrimage.

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boats involved in this journey and though no horses are evident, the chariot would suggest their association with it. The Saqqara tomb of Tia and Tia (Fig. 6.4) (South Wall of the Apis Chapel) displays two such ships, one of which has a deck stall with two horses inside.

The fact that horses are illustrated in tombs at all would suggest that they were considered suitable for inclusion in scenes closely associated with religion, funerary ritual and beliefs in the afterlife and also met the requirements of the tomb owner in part as representations of his status and prestige. Horses appear to have participated in the rituals that were in keeping with the tomb owner's observance of *mꜣt* in both image and reality.

The evidence suggests that even as early as Thutmose III and Amenhotep II, horse images and equipment associated with them were acceptable inclusions in the demonstration of the appropriate burial activities of the tomb owners. They continue to be seen in the long halls of tombs involved in these activities under Thutmose IV and Amenhotep III, but they change (as do these types of scenes during the reign of Akhenaten) when images of the king and the royal family replaced most of the traditional scenes.⁷⁴⁴ The funeral procession including horses reappears briefly in a different place, under Tutankhamun in Horemheb's Saqqara tomb (Fig. 6.2) in the Second Courtyard. Under Seti I in Hatiaï's tomb (TT 324; Fig. 6.3) the journey has been moved to the Broad Hall northwest wall and under Ramses II, Tia and Tia place their Abydos journey on the South wall of the Apis chapel (Fig. 6.4). When tomb design changes and religious images almost altogether replace the old subjects, horses vanish from the tombs and leap onto the temple walls.

⁷⁴⁴ N. Kanawati (2001) *The Tomb and Beyond*, Warminster, "All scenes of daily life, such as agriculture, fishing, fowling and industries become very rare and those relating to the Hereafter are completely absent." 114.

6.3.2 HIERARCHY.

Tomb images expressed the theme of *mꜣt* through their visual reinforcement of the “status quo”- the hierarchy. “Such depictions embody the hierarchical aspects of the society that produced them.”⁷⁴⁵

Visually, horses contributed to this by being depicted in a scale paralleling the status of the individual either in control of them or directly associated with them. This person or persons are typically portrayed in a scale reflective of their own authority or power. Thus, the king was shown larger than his officials and the officials larger than their servants, farmers and others.⁷⁴⁶ This tradition is consistently applied in all the tombs and temples and it is a visual reinforcement of the ordered hierarchy of Egypt with the king as the most important and everyone else lessening in status. Horse images parallel this process. In the tomb of Meryra I at Amarna⁷⁴⁷ (Fig. 6.5) in a royal journey to the temple, the representations of the king’s horses are, like his, the largest shown, the queen’s are proportionally smaller and the teams of the princesses and the attendants are the smallest, clearly making a statement about who was the most or least important in the scene and visually reinforcing the hierarchy.

The horse also reinforced the social order through its depiction as a possession of the upper echelons of society or the military only. The king, as the source of everything that Egypt possessed, distributed all including horses, according to his favour. It was clear that only those with the approval and benefice of the king could possess them - a factor that, once again, reinforced the existing hierarchy. With the approval of the king and successful undertaking of official duties part of the benefits accruing was the possession of horses. There is no image in any temple or tomb of horses being used in the same fashion as donkeys. They were not beasts of burden; they were not available to the

⁷⁴⁵ R. Parkinson (2008) *The Painted Tomb Chapel of Nebamun*, London, 30.

⁷⁴⁶ H. Schäfer (2002) *Principles of Egyptian Art*, Oxford, 231-234; S. Binder (2000) “Representing the Physical World,” in L. Donovan & K. McCorquodale (eds.) (2000) *Egyptian Art Principles and Themes in Wall Scenes*, Cairo, 30; G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, 8.

⁷⁴⁷ El-Amarna, North 4. PM IV, 214ff and in N. de Garis Davies (1903) *The Rock Tombs of El-Amarna. Part I. The Tomb of Meryra*, London, pl.10.

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lower echelons.⁷⁴⁸ The mere possession of a chariot team was a matter of considerable prestige,⁷⁴⁹ most especially in the early 18th Dynasty when horses (based on faunal, textual and iconographic evidence) seem to have been quite rare. Ahmose, son of Ibana who served under Ahmose I, ran behind the king in his campaigns and later captured a chariot, its team and driver which he presented to Thutmose I,⁷⁵⁰ but he didn't have one himself. His grandson, Paheri, shown carrying out his duties and placing his horses and chariot⁷⁵¹ in a prime position in his tomb (Figs. 6.6, 6.7), reinforces his possession and expresses his delight in them with a text placed above them that reads: *ḥꜥ m iri ndb p3 ḥtr ikr ḥ3.ty-ḥ.w mri.y nb=f ḥꜥ.n p3 ḥ3.ty-ḥ.w im=f n bw nb* "Stand (still), don't be restless, O excellent team of the mayor, beloved of its master, and of whom the mayor has boasted to everybody."⁷⁵² They were rare; they were from the king; and they weren't for everyone. They identified the tomb owner as an important person in life and reinforced his position in the status quo in the afterlife.⁷⁵³ The appropriate order was being maintained.

⁷⁴⁸ M. Hartwig (2003) "Style and Visual Rhetoric in Theban Tomb Painting," in Z. Hawass (ed.) (2003) *Egyptology at the Dawn of the Twenty-first Century*, Cairo, 305. "...it also educated the viewer about the merits of successful service to the king, thereby acting as a type of cultural reinforcement for the existing social order of Egypt." Here, Hartwig is discussing the symbolism of the ruler as the source of the "sustenance" to the tomb owner - a chariot team can certainly be seen as a highly prestigious instance of that.

⁷⁴⁹ The prestige associated with horses arose from a variety of factors. They were part of the "executive package" for officials and devolved from the king and their use paralleled the actions of the kings in their chariots. Initially they were rare and very special and seemed also to be highly regarded by the leaders of foreign lands.

⁷⁵⁰ J. B. Pritchard (1955) *Ancient Near Eastern Texts*, New Jersey, 233-234 "Thus I used to accompany the Sovereign (...) on foot, following his excursions in his chariot" (233) and "(...) his majesty saw how valiant I was. I carried off a chariot, its horse and him who was in it as a living prisoner," 234.

⁷⁵¹ The chariot and team are smaller in size than the image of Paheri as they are in direct contact with a groom. Paheri includes a small text to emphasize his possession and opinion of the chariot and team.

⁷⁵² J. J. Tylor (1895) *Wall Drawings and Monuments of El-Kab: The Tomb of Paheri at El Kab*, London, pl.3. This is Tylor's translation, this writer's translation follows: "Stand (still), do not make 'trouble', excellent chariot team of the 'mayor', beloved of its lord, that the mayor boasts of to everyone."

⁷⁵³ S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt*, 23. She mentions that hunting scenes "characterize the tomb-owner as a wealthy member of the propertied classes ... Such scenes preserved the same social status in the next world."

6.3.3 LIFE ACTIVITIES.

A tomb owner strove to display himself in all ways in the service of the king and playing his part in the maintenance of *mꜣt* in the more “public” areas of his tomb⁷⁵⁴ the transverse or broad hall of the “T” shaped Theban tomb.⁷⁵⁵ The aim of the deceased in the images in the tomb was to present himself impressively, create the “aspirational reality” mentioned above and have him remembered in funerary rituals, cultic activities and prayers offered not only by his family but also by those who would visit his tomb over time.⁷⁵⁶ Horses were an important inclusion in the images chosen to enable the achievement of this goal.

Hunting in a chariot features often in tombs up to the Amarna period when scenes of the tomb owner’s life make way for images of the king and the royal family. Hunting scenes can be interpreted as implying the elimination of chaos⁷⁵⁷ as well as being used to impress the viewer by the display of power and speed. The personal use of the team in recreational activity was a theme, both royal and non-royal. Userhat (TT 56; Fig. 6.8)⁷⁵⁸ flies across the desert scattering and killing a variety of animals with his horses stretched out in the “Flying Gallop.”

⁷⁵⁴ S. Hodel-Hones (2000) *Life and Death in Ancient Egypt*, 13. “The scenes in the transverse hall reflect the tomb-owner’s life in this world: professional life, agriculture, craftsmen at work, hunting and other ordinary amusements. Highlights of the career of the deceased such as a royal audience, rewards, or other significant events are recounted here.” See also N. Kanawati (2001) *The Tomb and Beyond*, 44 and S. Ikram (2003) *Death and Burial in Ancient Egypt*, 171.

⁷⁵⁵ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, 17 “...scholars noted that the images on the western back walls of the transverse hall were a sensitive indicator of the deceased’s status, identity, relationships and social environment.” R. Parkinson (2008) *The Painted Tomb Chapel of Nebamun*, 29: “The inscriptions in the tomb-chapel centered around the tomb-owner’s name, titles and self presentation or ‘autobiography’. These texts would often evoke prayers for the deceased and were to be read by elite visitors and passers-by, who would thus maintain the funerary cult beyond the confines of the deceased’s relatives.” These texts were enhanced by their association with the visual reinforcement of the images.

⁷⁵⁶ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, 7 -15 discusses the visitors to the tomb including family members, priests, the educated elite of Egypt, artists and those in the process of constructing tombs themselves.

⁷⁵⁷ S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt*, 23. A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, 86: “Conflict between man and nature, with man triumphing over the wild and chaotic aspects of nature, are an integral part of the Egyptian belief system. The maintenance of *mꜣt* and balance represented by the victory of the ordered world over the chaos of the wild is the responsibility of the tomb owner if a continued existence is to be expected.”

⁷⁵⁸ C. Beinlich-Seeber & A. G. Shedid (1987) *Das Grab des Userhat (TT56)* Archäologische Veröffentlichungen 50, Mainz, pl.12.

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The execution of the duties of office includes the use of horses eg Mahu apprehends villains (Fig. 6.9), Rekhmire accepts tribute on behalf of the king (Fig. 6.10), Horemheb oversees the activities of the military (Fig. 6.11), Menna (TT 69; Fig. 6.12) inspects fields and Amarna officials are rewarded by the king (Fig.6.13).

6.3.4 THE ICONOGRAPHY OF THE KING.

The largest scale images of the horse are contained in those of the activities of the kings from Ahmose I to Ramesses III. The primary duty of the Egyptian sovereign was to maintain *mꜣt*⁷⁵⁹ and one of the many ways in which he performed this duty was with regard to military activities. From very early on, the horse played a part in transforming the images of the kings. Ahmose I's pyramid at Abydos (Fig. 6.14) displays large-scale images of the king battling the Hyksos in his war of Liberation and even though horses, according to the evidence, were relatively rare at the time, they are depicted as playing a very obvious role in this basic and most important duty of the king. In time with the development of chariot warfare, large-scale chariot divisions and the acquisition of vast external territories, the images began to change the art. Monumental structures required monumental illustrations and the size and complexity of the images containing horses exploded. The multiple images of the battle at Kadesh (Fig. 6.15) illustrate this clearly. Fundamental artistic traditions such as the use of registers to order images were discarded in an effort to illustrate the size and action of the major kingly conquests.

The scenes from Amarna also stress the kingly maintenance of *mꜣt* in that Akhenaten is repeatedly shown making the journey to the temple in the company of his family to carry out the ceremonies required to guarantee the continuation of *mꜣt* (Fig.6.16).

Royal hunting scenes such as that of Ramesses III at Medinet Habu (Fig. 6.17) point to the king imposing order on the natural world and the use of the horse powered chariot enhanced the image of the king as both a sportsman and a fit and strong individual as

⁷⁵⁹ S. Ikram (2003) *Death and Burial in Ancient Egypt*, 173.

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shown in the images of Amenhotep II firing arrows.⁷⁶⁰ (Fig. 6.18) Der Manuelian suggests that Amenhotep's actions "may well have elevated horsemanship from casual reference to true royal tradition,"⁷⁶¹ which was continued well into the future such as in Tutankhamun's hunting scenes, (Fig. 6.19), further enhancing the iconography of the king.

The inclusion of horses enhanced the depiction of the king in the maintenance of *mꜣt* helped to reinforce the social order, emphasised the proper conduct of duty and underscored his status, prestige and wealth.

The presence of the horse in tomb and temple images played an important part in achieving the aims of those who commissioned them as well as in reinforcing the social structures existing at the time and contributed to emphasizing the major themes of Egyptian art.

⁷⁶⁰ P. Der Manuelian (1987) *Studies in the Reign of Amenhotep II*, Hildesheim Ägyptologische Beiträge, fig 44. Thutmose IV is also recorded as having continued in his father's footsteps as a sportsman. *Urk.* IV 1541 11-13.

⁷⁶¹ P. Der Manuelian (1987) *Studies in the Reign of Amenophis II*, 198.

CHAPTER 7: THE DEVELOPMENT OF THE IMAGE AND ITS SUBJECT

*“By reason of his (the horse’s) elegance
He resembles an image painted in a palace
Though he is as majestic as the palace itself.”⁷⁶²*

Two dimensional Egyptian art appears to the modern eye to be naïve especially in its renderings of the human body, the feet, chest and arms facing forward and other features of the body (namely, the face) in profile. But this is to inappropriately apply modern interpretations and concepts to a form that is not modern, one that was very different and very specific to its time and context. Care must be taken therefore, not to treat the horse in Egyptian art on a modern basis rather it should be examined within the context of the norms of ancient Egyptian art.

When conveying a three-dimensional object like the horse on a two-dimensional surface the Egyptian artist

“accepted the drawing surface as flat and represented the subjects of their composition through a series of symbols which they arranged over the surface. The aim of artists was to depict the enduring nature of the objects and scenes they portrayed; they were not interested in how these might appear at any one time from a particular viewpoint. They used established conventions to encode the information about the world that they wished to convey. Since viewers were familiar with these, they could easily grasp the meaning.”⁷⁶³

⁷⁶² Emir A. Abd-El-Kader, “Origin of the Arab Horse,” quoted in K. Maffei (2007) *Horses*, New York, 105.

⁷⁶³ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, 3. See also N. Kanawati (2001) *The Tomb and Beyond*, Warminster, 77. “In general, the Egyptian artist did not draw

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Among these conventions were placement, traditional scenes, composition, the use of ground lines and registers, layering, proportion, colour and the canon of proportion. Artists were not free in their methods of depiction and they worked to a commission based on the tomb owner's priorities, but they could show their skill through observation and rendering of details of anatomy and behaviour.

One must be cautious about making general statements about Egyptian horse images, as there are a large number of factors to take into consideration. Some of these factors are: the standard of observational skills of the artist, especially early in Egypt's experience of the horse, and the level of familiarity of the artist with his subject, the individual skill of the artist himself and the techniques he employed in his work, the characteristic requirements of the patron, whether king or official, the context and scope of the piece of art, the private tomb or temple wall and the demands of decorum as well as the social, religious and cultural contexts.⁷⁶⁴ Obviously, we are also dealing with what remains of the image, not as it came from the hands of the artist, and this often skews our understanding; the older the work, the more damage and change has occurred to the original.

7.1 IMAGE PLACEMENT

Hartwig explains that the "commemorative image was also intentionally organized externally towards the viewer and reader of the scene to impress them, and motivate them to leave an offering or say a prayer for the well being of the deceased."⁷⁶⁵ In the scenes associated with life, all the tribute, travelling, and congratulating scenes and most of the hunting, waiting, recording, military and honouring scenes containing horses are in the most "public" parts of the tomb: 76% of these scenes occur in the

what he saw but what he knew. His picture, therefore, is not a true rendering of nature, but an intellectual composition." The classic work on the principles of ancient Egyptian representation of three dimensional objects in two dimensions is H. Schäfer, (reprint 2002) E. Brunner-Traut and J. Baines (eds.) *Principles of Egyptian Art*, Oxford.

⁷⁶⁴ A. Woods (2015) "Relief," M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*. Chichester, 222.

⁷⁶⁵ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, Belgium, 52. See also S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt*, London, 13.

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Broad/Pillared Hall. (Fig. 7.1) Those more closely associated with death constitute 24%, and occur in the Long Hall/Chapel, (Fig. 7.1). 100% of the scenes that include horses in a funeral procession are in the Long Hall. Of all the available horse images involved in these scenes, 35% are on the west wall, 36% on the north wall and 50% occur on a combination of the north/east/west walls. This is in keeping with Hartwig's findings relating to the placement of images in the tombs given the geological and topographical imperatives that determined the actual physical orientation of the tombs. These images were the "focal point representation ... sensitive indicator of the deceased's status, identity, relationships and social environment."⁷⁶⁶ The inclusion of a chariot and its team reinforced the prestige and authority of the owner and assisted him in accomplishing his goal. They also reflected what was considered appropriate in the scenes that exercised a specific function in specific places in the tomb.

7.2 SCENE SELECTION.

Scene selection, like the construction of the tomb itself, was determined by a large number of issues including tradition, personal choice, opportunity and finance and it reflected the context in which the tomb was constructed.⁷⁶⁷ Many scenes, such as hunting and funerary scenes, had precedents that stretched back to the Old Kingdom. The imperial New Kingdom with its immense wealth and cosmopolitan nature allowed the development of many images on a much grander scale than was possible previously and put greater emphasis on the conduct of the duties of the official class.⁷⁶⁸ The insertion of chariots into this context, their increasing numbers and growing application virtually determined their entry into tomb decoration schemes. They fitted readily into old scenes imbuing them with greater substance and authority. Given that one aim of the tomb owner was to impress and that chariot and its team were very prestigious

⁷⁶⁶ M. Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, Belgium, 17. See also A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, London, 82-85. H. Groenewegen-Frankfort (1987) *Arrest and Movement, Space and Time in the Art of the Ancient Near East*, Cambridge, 79 accentuates the political function of the tomb owner as demonstrated in the tomb. "...his *political* function became the focus of interest, namely, his public activities in what had become a powerful empire and what still remained a hierarchic state." This supports the importance of the chariot and its team in the tomb decoration in that they were acquired as part of an official post and were by their nature a reflection of Egypt's enhanced status in the world.

⁷⁶⁷ A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, London, 79.

⁷⁶⁸ H. Groenewegen-Frankfort (1987) *Arrest and Movement*, Cambridge, 79.

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items,⁷⁶⁹ it was inevitable that horses would be included. Although there is no material evidence for the existence of “pattern books”⁷⁷⁰ at this time, if they did exist, horses may have constituted elements of scenes copied using these. Alternatively tombs were open and thus various scenes that were expertly rendered and impressive would have been copied in later ones sometimes by the same artists. This begs the question: was their inclusion in some tombs reflective of the reality of the tomb owner’s situation? Nevertheless, unless new material is discovered to clarify this, the scenes in tombs that contain horses have to be taken on face value.

There was a variety of traditional scenes amongst which hunting scenes like those found in the tombs of Djehutyhetep (Debeira) Amunedjeh (TT 84) and Userhat (TT 56; Fig. 7.2) that acquired more energy and drama through the “upgrading” of the scene to a chariot hunt. Paheri, Renni, Menna (TT 69; Fig. 7.3) and Nebamun conduct their traditional inspections of agricultural produce - activities made more lively and impressive by means of the addition of chariots and their energetic teams that await

⁷⁶⁹ In that they appear to have been assigned to individuals, in most cases, directly associated with the king and the temples. (See Chapter 11.

⁷⁷⁰ In the absence of physical evidence there is considerable scholarly discussion concerning the existence of “pattern” or “copy” books. N. Kanawati & A. Woods (2009) *Artists in the Old Kingdom*, Cairo, 41, point out that there is no evidence of them being used in the Old Kingdom. C. Aldred (1980) *Egyptian Art*, London, 26 states: “Figures and objects were drawn on this grid by the outline draughtsman, scaling up the work from designs in pattern books.” Hartwig (2004) *Tomb Painting and Identity in Ancient Thebes*, 19 mentions a copybook: “The Instruction for the Painting/Writing of the Wall and the Painting of the Body” that was contained in the much later temple at Edfu. E. Chassinat and Le Maquis de Rochemonteix, (1928) *Le temple d’Edfou III*, Mémoires publiés par les membres de la Mission archéologique française au Caire (MMAF) vol 20, Paris, 351. More recently Dodson & Ikram (2008) *The Tomb in Ancient Egypt*, London, 51, suggested that “perhaps each atelier had some sort of pattern book from which the patrons would choose the scenes that were to be pictures in their tombs.” However, given that the tomb chapels were visited by the family and others, especially interesting or impressive ones would have been viewed by both patrons and artists and there would have been no difficulty in copying popular scenes from one tomb to another. As W. K. Simpson (1958) *The Art and Architecture of Ancient Egypt*, New Haven, 143 states, “The repertoire of scenes in Rekhmire’s tomb (No. 100) provided a rich source for the painters of the Theban necropolis.” Additionally the number of skilled artists available would have determined the fact that many would have worked on several if not many tombs repeating scenes as they went. There is evidence that this was the case, see L. Manniche (1997) *City of the Dead Thebes in Egypt*, London, 14-15 and B. Bryan “Painting Techniques and Artisan Organisation in the Tomb of Suemniut, Theban Tomb 92,” in W. V. Davies (ed.) (2001) *Colour and Painting in Ancient Egypt*, London, 63. T. G. H. James (1985) *Egyptian Painting*, London, 9 points out that “the lack of frequent and precise repetition in the content and detail of scenes where this repetition of themes occurs argues against the usage of such.” (pattern books). Also B. Bryan “Painting Techniques and Artisan Organisation in the Tomb of Suemniut, Theban Tomb 92,” in W. V. Davies (ed.) (2001) *Colour and Painting in Ancient Egypt*, London, 64 sums up the current position being that “once an artist had become a master he did not need to model himself on other masters.”

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their return from the proper execution of their duties. Tribute presentation is made more exotic by the inclusion of horses and chariots shown in the tombs of Menkheperresonb (TT 86), Senniferi (TT 99), Rekhmire (TT100; Fig. 7.4), Sobekhotep (TT 63), Horemheb (Saqqara) and the actual performance of his office is shown in a more energetic, dramatic and narrative sense by Mahu as he apprehends villains and presents them to the vizier while mounted in his chariot (Fig. 7.5).

Naturally, battle scenes dominated the monuments of kings, the temples of Ahmose I, Seti I (Fig. 7.6) and Ramesses II and III and they were also displayed on their artefacts, on the chariot of Thutmose IV, the scarabs of Thutmose II and the Painted Box of Tutankhamun. All were made more vivid and reflective of their activity and power by the addition of horses to the scenes.

Horses took an important role in the new scene choices in the tombs of Akhenaten's Amarna officials as they were rewarded and as the king and his family undertook their duties (Fig. 7.7). In place of traditional scenes, there were images of the king, queen and the royal family accompanied by guards a great number of whom are keeping pace with the royals in their chariots. They continued to give greater impact, action and energy to these images and to more fully develop the narrative elements of the scenes. The introduction of the king and queen together, the queen alone and the princesses in their chariots helped to demonstrate the changes that the Amarna period had brought to Egypt and provided whole new subjects for depiction.

7.3 THE CONSTRUCTION OF SCENES AND IMAGES.

Horse images conform to a great extent, to the norms of scene depiction in Egypt. However, there are some differences discernible to which our attention can now be turned.

7.3.1 BASE LINES AND REGISTERS.

Groenewegen-Frankfort traces the appearance of ground lines to the period of the Narmer Palette⁷⁷¹ and horses stand on ground lines throughout the period in this examination (except in battle scenes, such as those of Seti I and Ramesses II, when they are freed from them in a deliberate effort to convey the chaos of battle; or, as at Kadesh, the changing topography). Groenewegen-Frankfort further stated that ground line use “must inevitably lead to the use of registers.”⁷⁷² Registers imposed order on a scene and embodied the underlying theme in Egyptian art - that of *mꜣt* , or order over chaos.⁷⁷³ The horses (brought as Syrian tribute) in the tomb of Rekhmire (TT 100; Fig. 7.8) take their place on the north west wall, in the position of best light on one of the five registers that comprise the illustration of the vast and exotic collection of animals, products and materials being presented to the new imperial Egypt. The placement of the chariot teams in the tomb of Panhesy (AN6; Fig. 7.9) at Amarna demonstrates the use of sub-registers which make it possible to represent not only a large number of figures, but also demonstrate the status of the individuals as well as the grouping of figures and actions. Additionally, they “bulk up the scene,” giving increased complexity, action and detail.

The chariot teams in the Kadesh reliefs from Abu Simbel (Fig.7.10) are packed into registers that stretch across the relief, giving the impression of the great numbers of chariots present. And yet, when battle is joined, the use of registers is abandoned (Fig. 7.11). Even here, the Egyptian forces are shown in ordered lines whilst the defeated

⁷⁷¹ H. Groenewegen-Frankfort (1987) *Arrest and Movement*, Cambridge, 19. See W. Davis (1989) *The Canonical Tradition in Ancient Egyptian Art*, Cambridge, for an extensive discussion of groundlines, registers and their use, 29-33.

⁷⁷² H. Groenewegen-Frankfort (1987) *Arrest and Movement*, Cambridge, 20.

⁷⁷³ G. Robins (1997) *The Art of Ancient Egypt*, Cambridge, 21. “The order that the Egyptians strove to maintain in the world around them was also fundamental to their art. Images were not placed haphazardly on the drawing surface, unless there was a deliberate evocation of chaos, but were ordered by a system of registers.” J. Anderson (2000) “Spatial Distribution,” in L. Donovan & K. McCorquodale (eds.) *Egyptian Art, Principles and Themes in Wall Scenes*, Giza, 38-39; N. Kanawati (2001) *The Tomb and Beyond*, Warminster, 82; A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, London, 77 “... everyone was neatly organized into registers, separated by lines, so that it is obvious that *Mꜣt* is maintained in this world and the next.”

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enemy is in utter disarray. Registers are abandoned also to illustrate topographical changes⁷⁷⁴ (Fig. 7.10).

Another area where the use of registers is abandoned and horses feature prominently is in hunting scenes such as that of Ramesses III at Medinet Habu (Fig. 7.12) where chaos is illustrated by the random positioning of the prey that extends over the whole right of the scene and order by the tidy placement of the Egyptian soldiers within the lower register.

7.3.2 GRID LINES

Images in tombs, particularly human images, were characteristically drawn using grid lines.⁷⁷⁵ However, there are only two instances of horses directly associated with grid lines: one on an unprovenanced calcite tablet⁷⁷⁶ (Fig. 7.13) (See Ch 4 TH III 12) dated to the reign of Thutmose III that appears to be a preparatory sketch of a galloping chariot team; and another sketch from an unfinished register in the tomb of Suemnut (TT 92; Fig. 7.14)(See CH. 4 AM II, 13) that shows a single (heavily reworked) unharnessed horse.⁷⁷⁷

In an effort to investigate the possibility of there being a grid that specifically applied to horses these two images were compared after being digitally adjusted.

The Suemnut image was used as the base image and the Calcite Tablet image was manipulated to approximate it in size and direction (See Fig. 7.15) and was highlighted in green. Both images were fitted to the ground line of the Suemnut horse.

Several problems presented themselves in this exercise. The grids on both images are faint and incomplete. The Calcite image has both horizontal and vertical lines whereas the Suemnut image has only horizontal ones so the vertical lines had to be excluded from the discussion. The horses are illustrated as travelling at different gaits, the Calcite

⁷⁷⁴ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, 6.

⁷⁷⁵ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, 61.

⁷⁷⁶ C. Loeben (2011) Museum August Kestner (personal communication 19/4/11) No. 2952. There is no provenance available for this object. I. Woldering (1967) *The Arts of Ancient Egypt*, London, 129 dates it to the 18th Dynasty to the reign of Thutmose III. There is no indication of the reason for this determination or for its inclusion in that text in the period of Thutmose III.

⁷⁷⁷ J. Capart (1927 -1931) *Documents pour servir à l' etude de l'art égyptien*. Paris, 49 pl. 67.

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chariot team at a low level “Flying Gallop” and Suemnut’s individual horse walking or trotting. They occur on different surfaces in apparently different time periods. The Calcite image was still one under construction but close to being finished and Suemnut’s was on an unfinished register and obviously still being manipulated, Capart suggests that the artist was attempting to correct errors.⁷⁷⁸

Some things can be identified from this exercise after excluding the vertical lines from the discussion. After the digital adjustment the proportions/ conformation of the horses appear to be quite similar, they have elongated, narrow tubular barrels, and fine legs. Some horizontal grid lines pass through the bodies of both the horse images in similar areas. One line goes through the eye region, one near the withers at the front and on top of the croup at the back, one at the joint of the chest and the forelegs and one possibly through the hocks (if the hock position in the Suemnut image can be anticipated). None of these are in exactly the same position. It has been an interesting exercise but with only these two images available for comparison there is simply not sufficient evidence to indicate the presence of a distinct independent grid system relating to horses in Egyptian Art though there is an indication that another process was involved. (See below).

7.3.3 LAYERING / OVERLAPPING

Horses are depicted using this traditional technique also. Having committed themselves to a two-dimensional approach, the Egyptian artists were confronted with the need to show certain spatial relationships such as “depth” without the use of the perspective techniques developed very much later by the Greeks. The Egyptians used layering and overlapping to give the understanding of depth in painting.⁷⁷⁹ Robins⁷⁸⁰ refers to these techniques as “depth cues” and in the case of horses as in other instances, they are enhanced and clarified by the addition of colour. The primary reason for layering is to

⁷⁷⁸ J. Capart (1927 -1931) *Documents pour servir à l' etude de l'art égyptien*. Paris, 49.

⁷⁷⁹ On layering, see H. Schäfer, (reprint 2002) E. Brunner-Traut and J. Baines (eds.) *Principles of Egyptian Art*, Oxford, 4.3.8 “Overlapping of figures.”

⁷⁸⁰ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, 8.

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convey a sense of depth to an image and it was accomplished in three main ways using horizontal and vertical layering and overlapping.

A. HORIZONTAL LAYERING

This occurs when multiple horse images are intended, but the artist avoids having to provide the detail of every animal by rendering the near horse comprehensively but only depicting the faces, chests and fore and rear legs and tails of the other horses with a thin band paralleling the front horse; the backs of the horses form one line, or very nearly. Amenemhet's tomb, (TT 123; Fig. 7.15) shows a group of five horses, the near horse is typically the only one displayed in detail, with outlines only of those arrayed "behind" them. This is the most common manner of representation of horses in the tombs, be it in groups such as those of Haremheb (TT 78; Fig. 7.16), or in chariot teams such as those of Menna (TT 69; Fig. 7.17). This was a technique commonly used when depicting groups of other animals. The heads and chests of the cattle give a very colourful example of this as they are shown in the scenes from the "lost" tomb of Nebamun.⁷⁸¹

B. VERTICAL LAYERING

This method was less often used, probably because the numbers of horses being depicted in tombs were fairly small. Later, when artists began indicating large numbers of horses in a limited space, vertical layering helped them achieve their desired effect. Horses are shown, again, with only the near horse in detail. Instead of showing the chests etc. of the other horses, however, their heads, backs and tails are repeated above that of the near animal with only the first horse resting on a ground line. The technique achieves a sense of depth in the image. The scenes in the Egyptian camp in the Kadesh reliefs at Abu Simbel display both connected and disconnected vertical layering (Fig. 7.18 and 7.19). The unharnessed horses (twelve horses in two groups) are tightly spaced within the confines of the camp perimeter and at least three chariot teams outside the camp proper are shown in a disconnected series of layers. Unfortunately no paint

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R. Parkinson (2008) *The Painted Tomb-Chapel of Nebamun*, London, fig. 114.

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remains on the reliefs to suggest that the animals were differentiated with paint also. Another benefit of the spatial economy is in conveying more realistic images of a large number of unharnessed horses tied together in line being fed and a group of harnessed teams moving in formation. Again the tomb of Nebamun contains an example of this technique used with cattle.⁷⁸²

C. OVERLAPPING

This technique places one horse over the other so that there is comparatively more of the rear animal(s) showing. The technique is enhanced by the use of colour. Tjanuni's horses, (TT 74; Fig. 7.20) are differentiated with different coat colours and patterns as well. Haremheb (TT 78; Fig. 7.21) has limited overlapping and uses colour to indicate them clearly. There is a bay horse, two light tan horses, a skewbald and possibly two piebald horses (though the black of their patches seems to have leached to blue). Nebamun (TT 90; Fig. 7.22) includes a skewbald in the front with a grey horse behind it, but the artist has made an error. The head of the rear horse is impossibly placed on the near side of the near horse's neck! There is a very relaxed, overlapping pattern in Apuia's scene (Saqqara) (Fig. 7.23) wherein the horses are almost depicted as individuals but the broad overlapping may be being used to indicate the horse's spirited movement in the relief.

7.3.4 PROPORTION

Proportion was another means by which Egyptian art expressed the concept of order or proper hierarchy. The importance of individuals was encoded into images by a system of scale. The more important an individual the larger his image was,⁷⁸³ conversely, the less important an individual or group was the smaller they appeared. In the New Kingdom, the tomb owner is illustrated in the largest scale, however, if the king was

⁷⁸² R. Parkinson (2008) *The Painted Tomb-Chapel of Nebamun*, London, fig. 109.

⁷⁸³ A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, London, 77 also G. Robins (2000) *The Art of Ancient Egypt*, Cambridge, 21. N. Kanawati (2001) *The Tomb and Beyond*, Warminster, 79.

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included in the decoration then he was the largest in the scheme.⁷⁸⁴ In the case of horses there appear to be two systems of proportion that operate for their depiction and this seems to be an extension of the traditional one inherent in the canon. The first occurs when the chariot is being either driven by or contains the most prestigious person(s) in the scene. An example of this is in the tomb of Amenhotep Sisi (TT 75; Fig. 7.24). Amenhotep is driving the chariot and the horses are in proportion to him, the largest and most prestigious individual in the scene. This system is present in a large number of the tombs and temples in which horses are shown⁷⁸⁵ and appears to be consistent in the capital and the provinces and over time. In the tombs of Meryra I, (AN 4; Fig. 7.25) and Panhesy, (AN 6; Fig. 7.26) this is taken to extremes. Akhenaten's horses are the largest as befits those of the king, the queen's team is smaller as is she herself and those of the princesses are smaller again.

The second method exists when the most prestigious individual is not in direct contact with the horses or the chariot. Taking Paheri's tomb at El-Kab (Fig. 7.27) as an example, the chariot and its team are seen awaiting Paheri as he oversees agricultural production. It cannot reasonably be suggested that the team belongs to anyone other than Paheri, yet the chariot and horses are far smaller than their master and, in fact, are in proportion to the driver who directly controls them. In other tombs this applies to horses brought in tribute, military horses and others, even though in the case of the tomb of Anonymous B (TT 143; Fig. 7.28) the tomb owner is seen standing immediately beside the chariot and team (but importantly, is not in direct contact with them).

These methods would be in concordance with the spatial requirement to fit into appropriate registers but it appears that in scenes it is the level of prestige of the person who is in direct contact with the chariot and/or horses that determines their proportional

⁷⁸⁴ The apparent first occurrence of the inclusion of the king in a private tomb is in the tomb of Antefoker TT 60. N. de Garis Davies & A. H. Gardiner (1920) *The Tomb of Antefoker, vizier of Sésostris I and of his wife Senet*. Egypt Exploration Society: The Theban Tombs series, 2nd Memoir, London, pl. xvi; H. Groenewegen-Frankfort (1987) *Arrest and Movement*, Cambridge, 78 discusses this appearance and its significance to the purposes of tomb decoration.

⁷⁸⁵ This system occurs consistently in the tombs of Djehoutyhotep at Debeira, Userhat TT 56, Amunedjeh TT 84, Senedjem at Akhmim, Amenemope-Ipy TT 41, Neferhotep TT 49, Tutu AS 8, Panhesy AN 6, Meryra I AN 4, on the Painted Box of Tutankhamun and the chariot of Thutmose IV as well as the Karnak reliefs of Seti I and all the temples of Ramesses II.

representation. Once again, the depiction of horses is part of a system designed to illustrate the maintenance of *mꜣt*.

7.3.5 IS THERE A CANON RELATING TO HORSES?

The Canon of Proportion for drawing human figures had its origins by at least the 5th Dynasty.⁷⁸⁶ It remained relatively constant with minor changes throughout Pharaonic history.⁷⁸⁷ An examination of the images of horses in tombs and temples reveals a proportional relationship between the humans and the horses within a scene that changed over time.

With the proportions based on prestige referred to above as an underlying standard there is a second discernible general standard that appears to have been used to depict horses that was governed by “markers” on the bodies of the individuals in direct contact with them. There is not a grid specifically for them (See above) but it is rather indirectly tied to the one that is already there. This observation has been based on excavator’s publications and images already published as well as the author’s own photos. It gives a general indication, but more work in the actual tombs should be done in future to be sure.

In almost all cases, there was a proportional correlation that fell into several categories between the horse and the person in direct contact with it and this correlation changed over time.

Several problems were faced in discerning this scheme. There were only 64 instances where images were intact enough to make any determination. Several heights had to be adjusted for figures that were bent over or when one figure occurred on a higher horizontal plane than another - typically when the horse was on the ground line and the tomb owner in a chariot. In many instances, the harness pad covering the withers makes

⁷⁸⁶ H. Schäfer (2002) J. Baines (ed.) *Principles of Egyptian Art*, Oxford, 277 “...already in the fifth dynasty (about 2500B.C.) they had working drawings in which the parts of the human form were brought into a fixed relationship.”

⁷⁸⁷ G. Robins (1994) *Proportion and Style in Ancient Egyptian Art*, Austin, 258-259. See also T. G. H. James (1989) *Egyptian Painting*, London, 13. A. Dodson & S. Ikram (2008) *The Tomb in Ancient Egypt*, London, 48-49.

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locating the withers difficult and the harness pads themselves seem to be placed higher on the horse's backs over time. Biologically, the withers on horses can range from high to low and the level of observational and representational accuracy of the artist will also need to be considered and they too changed over time (Fig. 7.31). Occasionally, part of the plume bonnet will be part of the height measurement and not in others. Most especially, the amount of space devoted to the scene has a significant effect on the manner of horse depiction.

The artist's linking of the height of the horses to the humans in a scene occasionally resulted in some misshaped horses especially where there was a problem of space within a register. An example is in the tomb of Userhat (TT 56; Fig. 7.29),⁷⁸⁸ where the horses are the same height as the men but they have been "squashed" into a very small longitudinal space and as a result have become very distorted.

CATEGORY	DESCRIPTION	NUMBER OF TOMBS (63)	PERCENTAGE OF TOTAL	TOMBS (examples)
1	Small horses- Head at shoulders withers at hip	5	7.8%	Rekhmire TT 100
2	Small horses- Head at shoulders withers at waist	7	10.9%	Menkheperasonb TT 86
3	Head at head withers at hip	4	6.2%	Amenemhet TT 123, Userhat TT 56, Haremheb TT 78
4	Head at head withers at waist	38	59.3%	Nebamun (fragments) Mahu, Anonymous B TT 143, Amenhotep II (Luxor block)
5	Horse head above human withers at waist	3	4.7%	Amenmose TT 42
6	Horse head above human withers to shoulders	7	10.9%	Meryre I, Ay (official) Penthu, Amenemope TT 41.

Table 7.1 Proportional categories applying to horse representations. (Vol. 2, Fig. 7.30)

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P. Germond & J. Livet (2001) *An Egyptian Bestiary, Animals in Life and Religion in the Land of the Pharaohs*, London, pl. 92.

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Categories 1 and 2 (the smallest) (Figs. 7.32 and 7.33) occur in tombs dating from the reign of Hatshepsut to Amenhotep III. Both the faunal (Fig. 7.31) and representational evidence supports the fact that horses when first in Egypt were relatively small.⁷⁸⁹

In Category 3, small horses again are displayed for only a short time and in very few instances from Thutmose III to Amenhotep III (Figs. 7.34 a, b, c).

Category 4 is the most commonly depicted of the 64 instances these constitute 38/64 (59.3%) and are “head at head and withers at waist,” (Figs. 7.35a, b, c, d). This proportion is the most consistent and extends over the longest time period from Thutmose III to Ramesses III and possibly beyond. A rise in head height but not withers height is discernible.

Category 5 occurs in only three instances from Amenhotep II to Tutankhamun (Fig. 7.36) and indicates, again, a rise in head height but not withers height.

Category 6 appears in the reign of Akhenaten and extends to Seti I and shows an increase in both head and withers height (Figs. 7.37 a, b, c, d). The images exhibiting these categories occur in a variety of contexts: tombs, temples, artefacts as well as the individuals in direct control of the horses ranging from kings, a queen, princesses, tomb owners, drivers, grooms, Syrians, Asiatics, soldiers, Hittite leaders, prisoners, drivers and Sea Peoples.

Category 4 (head to head, withers to waist, Figs. 7.35a, b, c, d) not only extends through almost the whole period, but it constitutes the largest number of instances. The nature of tomb decoration in the Amarna period, which primarily shows the king and the royal family, influences the numbers as these individuals are often depicted as travelling in chariots and making presentations with substantial numbers of guards, who are also shown in chariots. Inclusion of the large number of horses shown on Ramesside temples results in a distortion of the chart for the earlier categories so the chart at Fig

⁷⁸⁹ M. A. Littauer (1971) “The Figured Evidence for a Small Pony in the Ancient Near East,” *Iraq* 33 (1971) Journal of the British Institute for the Study of Iraq, 24-30. Littauer discusses the evidence for a small pony in the Near East during the period when Egypt first acquired horses from that area. She also points to evidence for the existence of larger horses there. The Buhen horse at 1.5 metres is an anomaly possibly explained by the effects of castration, see Appendix 1. The Buhen Horse.

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7.38 gives only a small sample, but if they are included (again in only a sample, but a larger one) it becomes clear how typical Category 4 is of this period (Fig. 7.39).

The overall increase in the size of the horses is represented by the correlation between them and that of the individual in direct contact with the horse (Fig. 7.40). The reasons for these categories could be that in some cases, the same artists or “schools” were involved, pattern books may have been used (though there is still no material evidence for them)⁷⁹⁰ and/or they reflected the actual development of a larger Egyptian horse over time and this given the faunal evidence is the most likely cause.

The faunal remains (Fig. 7.41) from Hatshepsut onwards indicate the presence of small horses at the start of the period under examination lasting until the reign of Horemheb and then an increase in size after that time.

Textual evidence indicates that Thutmose III brought very large numbers of horses back to Egypt as booty from his many campaigns (see below) and that they were followed by horses included in the tribute from Asia. Up to and including this time the tombs of officials such as Menkheperresonb (TT 86), Paheri, Senniferi (TT 99), Amenemheb (TT 85), Amunedjeh (TT 84), Rekhmire (TT 100), Userhat (TT 56), Haremheb (TT 78), Menna (TT 69) and four others still contain images of small “gracile” - that is, small and finely boned horses (Figs. 7.38, 7.39, 7.41), but from Thutmose III larger “robust” - or taller and more heavily built - horses are being shown and the smaller horses gradually diminish in number and finally disappear.

The existence of these categories of depiction, together with the addition of the increase in the size of the faunal remains, is reinforcement for the understanding that over time Egyptian horses became steadily larger and more robust, perhaps through the injection of foreign animals or a deliberate domestic breeding program. The more robust animal gradually replaced the smaller breed certainly by the time of Horemheb and it became the standard into the Ramesside period. This conclusion is not unequivocal, however. The faunal remains are extremely limited though they clearly indicate only the presence of *Equus caballus*, and this limitation forces a dependency on the representations that are subject to a great variety of influences other than the imperative to produce

⁷⁹⁰ For examples of scholarly discussion of the existence and use of pattern books see Note 697.

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“photographic” accuracy. Some of these influences mentioned above could be the use of pattern books or the same artists thus determining a “standard” representation, the desires of the tomb/temple builder for prestige or action, or available space and the familiarity of the artist with his subject.

What is also of interest is that here there also seems to be a general correlation between the proportions of the person in direct control of the horse(s) and the proportions of the horses and that this correlation of proportions appears in at least a very large number of cases throughout the entire period from Hatshepsut to Ramesses III so that one might liken it to a partial “canon.”

7.3.6 DETAILS

There is a very clear development in the rendering of anatomical accuracy and the level of detail contained in images of horses during the time period examined. Renni’s chariot team, whilst the damage is acknowledged, is drawn in an almost “naïve” fashion, stiffly with straight lines and very little detail (Figs.4.9 and 4.10). There is some small indication of hoofs and filling in the tails but no indications of physical contours, structures such as withers or genitalia and they are painted a solid red/brown from ears to tail.

By the time of Akhenaten there has been a major change exemplified by the horse’s head (Fig. 4.159) possibly a sculptor’s model, found at Hermopolis. The level of detail displayed is impressive as is the knowledge of the anatomical features that are included. The mane is hogged and there are multiple lines indicating the hair. The head is contoured showing a correct jaw line in both proximal and distal areas. There is a pronounced supra orbital fossa, the skin is wrinkled above the eye and there are clear veins radiating from the eye down the length of the nose. The nostrils are so clearly shown that the custom of “nose slitting “ is obvious, the muzzle and chin are wrinkled as the mouth is open and teeth are visible in the mouth. The Painted Box in Tutankhamun’s tomb shows “feathering” on the legs of the king’s horses as well as pasterns, canons, fetlocks, teeth and protruding tongues. By this time in a variety of tombs and temples the gaits of horses are shown accurately and realistic colours are used to differentiate one from another. There are of course instances of poor depiction, mistakes and lack of knowledge but in the best images that remain for us to examine it

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is clear that over time the artists and sculptors became more familiar with the detailed nature of their subjects most probably because of the continuing increase in the number of horses over time and they were able to show accurately not only general equine physiology but also the changes that developed in it.

7.4 SUMMARY

There are categories of depiction that reflect the fact that two types of horses existed in ancient Egypt. The first type was small and delicately built, as evidenced by the limited faunal remains. Its depiction was adequate but not anatomically correct. It was shown as a quiet obedient animal whose mere presence was probably sufficient to impress. It occupied the earliest phase of horse depiction in tombs and temples.

The second type arrived during and after the campaigns of Thutmose III and gradually overtook the first, which disappeared at least in the images by the time of Amenhotep IV. This new type continued to be the central type depicted and as such represented the standard horse used in Egypt from that time (certainly for as long a period as covered in this study). This horse was larger and more sturdily built and, as such, would have been more suited to the growing use of chariots in both peace and war. Additionally, in the tombs, as horses became more common (borne out by the increasing number found in tomb images and textual evidence), the mere possession of one was not enough: they needed to be imbued with more fire and spirit so the images developed appropriately. The artists became more familiar with them so there was more anatomical detail included. They were bigger and probably more spirited.

It also seems that the styles used for their depiction changed over time as did the horses themselves but the fashion also changed and there is some indication that patterns or examples, even using one tomb as an example for another, became the norm. By the time of Amarna there was another change. This included typical Amarna features and style, but with a definite pattern being used there too - this could be the hand of one artist or a pattern used, as it is so consistent.

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The Amarna changes were continued in the post Amarna period and they can be found retained in the Ramesside horses which remain at the same height as Category 4, but are shown with the more “fluid” attributes of the Amarna steeds.

As the image of the horse developed over time, its creation conformed to the customs regarding placement, the principles of the established Canon and the norms of construction methodology and it is possible to observe a variety of gradual, real life changes in the morphology, use and significance of the horse itself through the lens of these depictions. Most notably the study of these images reveals an underlying pattern of construction of the animals that appears to have been followed by the artists within the context of the changes that art itself underwent during the period. Additionally, we can identify the increasing familiarity of the artist with his subject and the enhancement of the skills needed to illustrate it.

CHAPTER 8: THE HORSE AND REALITY

*“Show me your horse and I will tell you what you are.”*⁷⁹¹

8.1 PHYSIOLOGICAL ACCURACY

There is great variation in the way that horses are depicted over the period of this study: from anatomically quite accurate to quite badly distorted.

The smallest horses, Categories 1 and 2 (Figs. 8.1 and 8.2) can be seen in the tombs TT 86 (Menkheperasonb), TT 145, (Nebamun), Paheri (El-Kab) and TT 84 (Amunedjeh); they are of the type described by Rommelaere as “Longiline.”⁷⁹² This type of horse continues to be represented until the time of Amenhotep II, for example in TT 100 (Rekhmire).

They are small and “gracile,” very finely boned, with filled in or outlined draped manes, forelocks and tails and there is no indication of gender; their legs are delicate, their barrels are very thin, tubular and elongated⁷⁹³ and their stance is quite upright with their tails held at high angles. In all the views, whether they are seen harnessed or unharnessed, their only gait is a walk with all four legs on the ground or with one leg slightly elevated. Their demeanour is calm and obedient. The faunal material (See Chapter 3) indicates that the size of these animals was indeed small, but compared to the image of a real animal of similar size and description they are not very accurately shown. Heads and necks are overly thin and upright, there is little anatomical detail, especially in the legs, withers are not shown, the barrel is tubular and overly extended and the chests thin and sinuous.

⁷⁹¹ Traditional English Saying quoted in K. Maffei (2007) *Horses*, New York, 105.

⁷⁹² C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, 34-35. “La première race, que l’on peut appeler longiligne en vertu de ses caractéristiques physiques “étirées”, est bien représentée dans les tombes d’Amunedjeh, de Rekhmiré ou de Menkhéperaseneb. Il s’agit d’un cheval à la tête volumineuse, étroite et allongée, au front bombe, avec la partie inférieure du chanfrein légèrement convexe, lui donnant un profil nettement busqué. Les oreilles sont longues, assez rapprochées, l’encolure droite, la crinière ondulée et plaquée contre l’encolure, le dos long, la croupe avalée, tranchante comme celle d’un mulet, avec des cuisses greles, la poitrine étroite et des membres élances, sans trace de fanons.”

⁷⁹³ H. Smith Thomas (2005) *The Horse Conformation Handbook*, North Adams, MA, 194: “An ideal horse can be visualized in thirds. His body should be one-third shoulder area, one-third body and one-third hip area.”

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Explanations for this can be found in the evidence suggesting horses were rare in this period - they were introduced as booty and tribute and were restricted to use by the king and his officials so artists in the tombs may have only been familiar with their general appearance, rather than having a detailed knowledge of them. This problem may have been perpetuated if tombs were decorated by a limited number of artists or those using the work of others as examples. Additionally, the relative skill of the artists must be taken into consideration. Another factor was that of having to fit them into set registers, which may explain their elongated appearance.

Category 3 horses (Figs. 8.3; 8.4; 8.5), as seen in the tombs TT 123 (Amenemhet), TT 56 (Userhat), TT 78 (Haremheb), seem to feature a transition in their depiction. They remain small, however, their heads are now at the height of the groom's head but their withers have descended to the hip height of the person in contact with them.

The horses in TT 123 (Amenemhet) are very similar to Category 1 and 2 excepting their increased height, but significant changes can be seen in the others. Their necks and chests are thicker but they are much more contracted and quite distorted, their barrels are very thin and tubular. They have a much more "muscled" appearance and their demeanour is much more alert, heads even further back, backs hunched and in TT 56 (Userhat) the tail is held at an extreme angle. There are only three examples of this category with TT 123 (Amenemhet) being dated to the reign of Thutmose III and the other two later to Amenhotep III: one wonders if there was an effort to "upgrade" the image? Haremheb's horses (TT 78) certainly demonstrate the varied use of colour, though other coloured images are often not available for comparison. The unusual contraction in the body may reflect the need to fit a large number of animals into the scene, as at least seven are visible and they are layered horizontally.

One might suggest that the artist was not very skilled, but perhaps what might be seen here could be the influence of the tomb owners requiring a more "spirited" image, something that would better reflect the prestige of owning such an animal. The images may alternatively indicate that the Egyptians were "breeding for size" as those in the tombs of Userhat (TT 56) and Haremheb (TT 78) show "domestic" horses included in a funeral processions not apparently those originating from tribute from outside Egypt.

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Category 4 is the most numerous and consistent category extending throughout the period from Thutmose III to Ramesses III. Some examples are from TT 143 (Anonymous B), the Amenhotep II block (Fig. 8.6), the Nebamun fragments (Fig. 8.7), AS 9 (Mahu; Fig. 8.8) and Ramesses II's temple at Abydos (Fig. 8.9). The horses are larger creatures with their heads at the height of the person and their withers at their waist. They now resemble Rommelaere's "Bréviligne" type.⁷⁹⁴ More heavily built with muscular, thicker chests and necks, they can be described as "robust" in appearance, their fore and hindquarters in proportion with a slightly thicker and less elongated barrel. There is more anatomical detail in the face including occasional concave profiles and in the legs with the appearance of clearer hoofs as well as fetlocks and pasterns and some tapering of the canons. Gender is discernible with the inclusion of a penis sheath and, in the case of Amenhotep II's team (Fig. 8.6) the near horse exhibits testes indicating a stallion. Tails are more highly carried and manes are typically hogged.

Their demeanour is enhanced again by their very upright stance with open mouths, highly contracted hind legs and very high tail carriage. All four legs are in contact with the ground yet they are shown on the points of the hoofs (not a natural position), giving the impression of being in one place, but being very active or restive, perhaps prancing. Amenhotep II's team demonstrates the classic "Flying Gallop" with all feet off the ground, the forelegs leaping forward, the body very stretched out and the tail at an exceedingly high angle (Fig. 8.6).

There is considerable overlap between the taller (robust) horse and the shorter (gracile) one extending from Hatshepsut to Amenhotep III with the taller horse fitting into Category 5 because of its height. It appears during the reign of Amenhotep II and this would associate it in time with the large number of horses brought back by Thutmose III's campaigns and subsequent tribute payments. This probably reflects reality in that

⁷⁹⁴

C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, 35. "La seconde race, de proportions inverses et que l'on appellera Bréviligne en vertu de ses forms plus "ramassés" se retrouve beaucoup plus fréquemment, notamment dans les tombes d'Amenmose, d'Horemheb, de Menna et Ouserhat pour ne citer qu'elles. La tête du Bréviligne est brève avec au front large et plat, un chanfrein droit et un profil rectiligne ou parfois concave. Des arcades sourcillières très saillantes, dépassant de beaucoup la ligne du front, ce qui donne une orbit grande et rend l'oeil expressif. Les oreilles courtes, fines et droites, la crinière en brosse et la queue bien fournie. Le dos court, avec un garrot bien sorti et des côtes arrondies, la croup large, ronde, assez haute, avec une queue portée loin du corps, en panache, la poitrine ample et les membres secs."

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the gracile form was in fact the earlier type and it was contemporary with the robust form until it was replaced by it either through the importation, or the domestic breeding, of a more robust animal.

The depiction is more natural but the horse is far from photographically constructed. Once again, there seem to be few illustrations of withers, barrels are tubular and thin, occasionally either very contracted or elongated and chests incorrect. Tiptoeing hoofs are quite unnatural. The manes are typically hogged from this period perhaps showing a response to insect infestation (See Chapter 8). The first example of a hogged mane occurs in TT 42 the tomb of Amenmose. Hogging may also have contributed to increased height and robustness both in reality and in depiction.

This taller and more robust animal reflects the appearance in Egypt of a different type of horse, larger and more heavily built than its contemporary and more suited to use in a chariot team. It also shows a change in the level of artists' familiarity, and more tellingly, a change in the requirements of tomb owners and those who commissioned temples. Horses were prestige items as more officials came to possess them and they became more common but mere possession may not over time have been enough and so their depiction had to keep pace and they needed to be shown in a much more impressive fashion. It was no longer enough to show the mere possession of a chariot team but they had to convey their size and great energy and spirit as well. This trend was enhanced and enabled by the evolution of the artists' knowledge of their subject.

Categories 5 and 6 occur in a sprinkling from Amenhotep II to Seti I but TT 41 (Amenemope), dated to Seti I (Fig. 8.10) could be excluded as there seems to be an accommodation made here to fit the sub-register showing Amenemope's rewards into the space available. This has forced the chariot team to be in proportion not to Amenemope himself nor to his driver but to the cheering individuals in front of the chariot, which puts the horses into Category 6 but breaks with the norms of depiction. If this is the case, Amenemope can be excluded from Category 5, thus making the Category 5 and 6 horses occur almost entirely in the Amarna period.⁷⁹⁵ The image in

⁷⁹⁵ The horses in the tomb of Khaemhat (TT 57) also seem to be much taller than the groom in front of them but he is holding the reins and the driver is in the chariot holding the reins too. The

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Amenmose (TT 42; Fig. 8.11) shows an animal taller than its handler but still having its withers at his waist and it fits the description of the most robust of the Category 4 horses. Given that the tomb is dated to the time of Amenhotep II this is perhaps not unusual as this is the period when taller horses are increasingly seen entering tomb decoration and the horses shown in this tomb are being presented as tribute from the east which could have been a source for the taller horses.

Representations of Categories 5 and 6 occur in the tombs of Meryra I (AN 4; Fig. 8.12) Ay (AS 25; Fig. 8.13) and Penthu (AN 5; Fig. 8.14), all from Amarna itself. The horses are taller than the drivers or grooms and their withers vary from the waist to the shoulders. Manes are hogged and the bodies are more evenly proportioned, though the barrels are still elongated. The overall impression is that of a more elegant, softer and sinuous form. The style is consistent in both royal and non-royal teams and is typical of Amarna art. The level of detail is not dissimilar from the preceding period. The faces are quite detailed with ears, noses and eyes clearly represented. In some cases stallions are shown and there is detail in the fine legs of hoofs, pasterns, canons and fetlocks, manes are hogged and tails are held at a high angle. Anatomically, these animals are too tubular showing little actual differentiation between the various parts of their anatomy.

8.2 POSSIBLE CONSTRUCTION METHODS

There is a similarity in the construction of the horses in some of the Amarna tombs that may indicate the hand of one artist, or perhaps a “pattern book” being involved in their construction. An example of this is in the tomb of Penthu (AN 5; Fig. 8.15). The distance from one side of the neck of each horse (marked in red) to its other side is the same measurement as the thickness of the barrel top to bottom as well as the same measurement from the top of the base of the tail to the top of the chariot pole, as it intersects the body of the horse. This is repeated in the tombs of Meryra I (AN4), Tutu (AS8), Mahu (AS9), Huya (AN1), Panhesy (AN6), Meryra II (AN2) and Ay (AS 25).

driver is larger than the groom but is bent over making his size difficult to determine and the other drivers (?) in the scene may be sitting down.

Another similar arrangement is the fitting of the body of the horses into a “box” defined by a horizontal line drawn (in black in Vol. 2.) through the withers to the base of the tail, vertically down to the hocks, horizontally under the barrel and joining a line running vertically in front of the chest (Figs. 8.16; 8.17; 8.18). Additionally, there is a correlation overall between the height of the axle of the chariot and the height of the horse’s hocks (Figs. 8.15; 8.16; 8.17; 8.18). In these images, the level of the hocks and the axles on the chariots are at the same level as the knees on the grooms. There is a “pattern” discernible in these constructions. It appears similar to a system of “join the dots” which may suggest the standard “blocking out” by the master artist for finishing by an apprentice. More work needs to be done on the methods of construction but it appears that at least in these Amarna tombs the same processes were followed in the construction of the images of the horses.

8.3 ACCURACY

How well did the Egyptian artists convey reality: how well did they know the horse?

8.3.1 EARS

Horses communicate in a variety of ways including scent, vocalisation and body language, primarily using the face and ears. “After the head and eye movements the horse’s ears will orientate on the object being pricked forward ... they are used to a great extent for transferring messages, particularly those regarding where the attention of the animal lies, but also for other messages.”⁷⁹⁶ Because of their positioning on top of their heads, the ears were particularly useful to the artist to indicate attitude. Egyptian artists appear to have understood this well and generally used three ear orientations to illustrate attention/excitement, fear and aggression. In horses demonstrating attention/excitement, the ears are shown upright and forward (Figs. 8.19, 8.20). Ears that are shown flattened against the head are indications of either fear or aggression⁷⁹⁷

⁷⁹⁶ M. Kiley-Worthington (2004) *The Behaviour of Horses*, London, 76.

⁷⁹⁷ M. Kiley-Worthington (2004) *The Behaviour of Horses*, London, 82. “The most obvious and exaggerated protective response in horses is ear flattening (...). Here the ears are placed back and rotated onto the side of the head. In this way they are better protected from any blows to the face. This ear flattening has become associated with aggressive and defensive situations and

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(Fig. 8.21). In scenes such as that of Seti I in battle against the Hittites (Fig. 8.22) the king's horses' ears are upright and forward indicating excitement or attention, while at least three of the Hittite teams have theirs oriented backwards indicating fear.⁷⁹⁸ This would have been a known response and showing the flattened ears would have helped to convey the panic and defeat of the enemy being displayed in the scene. The artists are using their increased observations and knowledge of horse behaviour to effectively illustrate reality.

8.3.2 COLOUR

The colours that are visible in Egyptian tombs and temples today may have been altered over time by such factors as pollution, moisture, photochemical degradation, physical damage or chemical instability in the varnishes, binders or the paint itself so that conclusions based on them must be undertaken with caution. That having been said, Green points out that of the mineral and synthetic pigments used by the Egyptian artist, "the majority of these are stable."⁷⁹⁹ Additionally, other factors enter into the examination. Much is dependent upon the work of others in that not all tombs are accessible and many of the images recorded in the past have been destroyed or damaged leaving paintings and photographs as the remaining sources of images. A cautious approach concerning colour must therefore take into consideration factors such as aperture, lighting, and printing details before making assumptions.

The New Kingdom used the traditional colour palette of black, white, red, yellow, blue and green and extended it to accommodate the demands of a wealthy, luxurious and cosmopolitan state by "exploiting the effects of mixing."⁸⁰⁰

become exaggerated particularly for communication and hence is now used as a signal meaning 'Get out of the way; go away.'

⁷⁹⁸ A fourth Hittite team has their ears pointed forward the difference being that they appear to remain under the control of their driver and are not in an uncontrolled panic.

⁷⁹⁹ L. Green (2001) "Colour Transformations of Ancient Egyptian Pigments," in W. V. Davies (ed.) (2001) *Colour and Painting in Ancient Egypt*, London. 43.

⁸⁰⁰ J. Baines (2001) "Colour Use and the Distribution of Relief Painting in the Temple of Sety I at Abydos" in W. V. Davies (2001) *Colour and Painting in Ancient Egypt*, London, 145.

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There is symbolism in the Egyptian use of colour. Black was commonly used to represent fertile land (*Km.t*), the land of the Afterlife and places of *mꜣt*, and red was used to represent the desert (*dsr.t*) and places of chaos (*isf.t*). Red was used less realistically to denote the skin colours of men (red/brown) and women were more generally defined by the use of yellow for theirs. According to Hodel-Hoenes, “The natural colour of any given object was not necessarily relevant.”⁸⁰¹

In many instances of horses there is no colour left and only a few of the earlier tomb reports mention colour though this shortcoming is now being addressed in modern reports.

Of the 25 instances of images relating to horses where colour is visible or noted by the recorder, 20 contain at least one horse that could be described as red or red/brown. Red-brown pigments originated from iron oxides⁸⁰² and were commonly used to illustrate human bodies, most especially males⁸⁰³ and some skins of animals. Egyptian artists were skilled at using complex colours to paint an animal’s fur or a bird’s plumage and they demonstrated great ability in depicting detail.⁸⁰⁴ In contrast to Hodel-Hoenes’ comments (above), both Kanawati and Aldred point out that ancient Egyptian artists painted as realistically as possible⁸⁰⁵ and variations on “brown” are extremely common colours in horses, but the Egyptian palette was limited and subtle variation was similarly restricted. In Nebamun’s tomb (Fig. 8.24) both the driver and the far horse are red/brown, the same colour as they are in the tomb of Horemheb (Saqqara) (Fig. 8.25)

⁸⁰¹ S. Hodel-Hoenes (2000) *Life and Death*, 20.

⁸⁰² L. Green (2001) “Colour Transformations of Ancient Egyptian Pigments” in W. V. Davies (2001) *Colour and Painting in Ancient Egypt*, London, 46; G. Robbins (2000) *Art*, 27. S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt*, London, 19-21 has a comprehensive discussion of the sources of Egyptian paint colour and its use.

⁸⁰³ N. Kanawati (2001) *The Tomb and Beyond*, Warminster, 81: “Conventions also determined the use of colours. A male body was painted in brick-red/brown while that of a female was yellow.” C. Aldred (1980) *Egyptian Art*, London, 30.

⁸⁰⁴ C. Aldred (1980) *Egyptian Art*, London 30. Also J. Baines (1985) “Color Terminology and Color Classification: Ancient Egyptian Color Terminology and Polychromy,” in *American Anthropologist*, New Series 87/2 (1985) 282-297. “They had a specific term *s3b* a texture term meaning “variegated” or “multicoloured” used for animals’ skins, birds’ plumage and snakes’ skins but apparently not for anything else.”

⁸⁰⁵ N. Kanawati (2001) *The Tomb and Beyond*, Warminster, 81: “Animals, birds, plants food items etc. were painted in the closest colour to the original.” C. Aldred (1980) *Egyptian Art*, London, 30: “In general, the chosen pigments imitate the natural colour of the object represented.” Though, S. Hodel-Hoenes (2000) *Life and Death in Ancient Egypt*, London, 20 appears to disagree - “the natural colour of any given object was not necessarily relevant.”

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and this is a common juxtaposition throughout several tombs. The painters seem to have dealt with the limitations and used their colours as economically as possible.

The colours⁸⁰⁶ used to illustrate scenes with horses range from red/brown (and variations on brown, in 24/25), black (2/25), white (grey, 11/25),⁸⁰⁷ dun (2/25), piebald (1/25) and skewbald (3/25).⁸⁰⁸ These figures are in keeping with the general number of these colours in a normal modern horse population.⁸⁰⁹

The occasional contrast between the colours of the mane and tail introduces doubts concerning the accuracy of the depiction of horse colour. A horse's colour is determined by the colour of its points.⁸¹⁰ In TT 86 (Menkheperasonb; Fig. 8.26), the near horse appears grey however its mane and tail are red/brown, an unnatural combination. It could be suggested that the artist has used the unnatural mane and tail colour to delineate the grey horse from the grey background.⁸¹¹ This situation occurs again in Senniferi's tomb (TT 99; Fig. 8.27) on the near horse of the further team whilst the others are dark chestnut, and on the Syrian horses in TT 100, (Rekhmire; Fig. 8.28) with chestnuts at the rear and at the front a grey horse with a chestnut mane and tail.

Paheri's (Fig. 8.29) horses are chestnut as are those of Userhat (TT 56; Fig. 8.30). Tjanuni (TT 74; Fig. 8.31) has one definitely black horse and two that might be bays,⁸¹² though the hogged manes appear to be two toned and they do not have typical bay black markings on their legs. The first and last undamaged horses might indicate variations on dun, but equally, might depict rare strawberry roans. Damage has made definitive identification difficult but Amenmose's team (TT 89; Fig. 8.32) seems to contain a full

⁸⁰⁶ See "Horse Terminology" for a definition of the colours.

⁸⁰⁷ A true "white" horse is an albino and a very rare occurrence. It is far more likely that what is meant is a plain grey, as no dappling or flecks are visible.

⁸⁰⁸ S. McBane & H. Douglas-Cooper (2009) *Horse Facts*, London, 34 for a general indication of the colours of horses.

⁸⁰⁹ This is based on anecdotal evidence, Claire Bridgewater, Eastside Riding Academy, Sydney, (personal communication). The investigation of horse colour is a new science and no colour percentages are available however a variety of modern sites indicate that certain colours are more prevalent than others, for example the American Quarter Horse Association lists 2006 Registrations by colour as Bay 18.69%, Sorrel (chestnut) 28.45%, Black (true) 3.54% Grey 7.06%, Dun 2.94%, <http://www.grullablue.com/colors/qhcolors.htm> accessed 10/5/2014.

⁸¹⁰ See "Horse Terminology."

⁸¹¹ M. Hartwig (2004) *Tomb Painting*, 21 "Color could be manipulated in order to differentiate forms and create overlapping figures and objects through alternating tones."

⁸¹² See "Horse Terminology."

grey as well as a chestnut. Haremheb (TT 78; Fig. 8.33) has the greatest variety with two chestnuts, two duns (or strawberry roans), one light skewbald and the only instance of piebalds (2) in tomb decorations. Menna (TT 69; Fig. 8.34) and Nebamun (TT 90; Fig. 8.35) have very lively skewbalds and chestnut (Menna) and dun (Nebamun) rear horses respectively. The fragments of the lost tomb of Nebamun (Fig. 8.36) have only the second instance of a black horse harnessed to a dark chocolate brown animal and Sobekhotep's (Fig. 8.37) tribute horses are grey and chestnut.

It is a great shame that there is so much damage to the images from the Amarna period as almost all the colour for which this period is so well known has been lost in the case of the horses.⁸¹³ The tombs of Any (AS 23), and Meryra I (AN 4; Fig. 8.38) contain images of chestnut horses. Those of Amenhotep Huy (TT 40; Fig. 8.39), the Painted Box of Tutankhamun (Fig. 8.40) and the fragments of Apuia's tomb (Fig. 8.41) are chestnut as are three of the four horses in Parennefer's tomb (TT-162-; Fig. 8.42) with a grey again with a chestnut mane on the near of the rear team. If the colours in the Beit el-Wali cast⁸¹⁴ of Ramesses II (Fig. 8.43) are correct, it has the only clearly defined bay horses, their manes are hogged and their tails (but not their legs) are very definitely black.

Colour is clearly used to define layered horses, as Haremheb's (TT 78; Fig. 8.33) horses vividly exemplify. This seems like a typical method used when depicting layered animals, as the herds of cattle in the Nebamun (Fig. 8.44) fragments illustrate.⁸¹⁵ Whilst it seems that in general the artists remained quite true to nature, when the need arose to better define an image, they were prepared to deviate from it,⁸¹⁶ occasionally resulting in unnatural colour combinations. Haremheb's (TT 78; Fig. 8.33) pinto horse with a chestnut mane and Tjanuni's (TT 74; Fig. 8.31) bay with a two toned mane are two such examples.

⁸¹³ In some cases the tombs were never finished.

⁸¹⁴ The colours of the cast may reflect reality to an extent in that it was made in 1825 by Joseph Bonomi an artist in Robert Hay's expeditions and it was coloured based on Bonomi's observations. It was repainted by D. Champion in 1952.

⁸¹⁵ R. Parkinson (2008) *The Painted Tomb of Nebamun*, London, fig. 109.

⁸¹⁶ H. Schäfer (2002) J. Baines (ed) *Principles of Egyptian Art*, Oxford, 71. In groups where the individual elements that are in fact the same colour obscure one another so that the eye could easily confuse them, as with wrestlers, teams of horses (...) artists do not scruple to paint the figures alternately light and dark. See also 181.

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Brewer et al.⁸¹⁷ indicate that cattle were painted with the same range of colours as horses, as illustrated by the herds in the tomb of Nebamun (Fig. 8.44).⁸¹⁸ This tomb's fragments⁸¹⁹ also show a chariot team made up of hinnys⁸²⁰ (Fig. 8.45) that are depicted in a pale bluish/grey unlike any of the colours used on horses that I can identify. Colour could then, perhaps, have been used to differentiate one species of *Equus* from another. It certainly was used in the case of donkeys and horses.

Aside from the morphological differences, the donkeys illustrated in the Mastaba of Ti⁸²¹ (No. 60; Fig. 8.46) at Saqqara are a pale tan with white underbelly and a black shoulder stripe. The First Intermediate Period mastaba of Iti⁸²² (Fig. 8.47) has a donkey that is two-toned being light brown and white, and a black shoulder stripe is visible. The donkeys at Beni Hassan (Fig. 8.48) are again two-toned, a pale grey colour with a white under body. Donkeys, though occasionally partially the same colour, such as red/brown, are quite often shown in different colours to horses and with definite two-toned treatment bearing a black stripe. The same principle applied to species that could easily be mistaken for horses for example the onagers (*Equus asinus*- the Asian wild ass) seen in the register below the horses in the fragments from Nebamun's tomb. They are a different colour to horses but the use of grey paint also differentiates them, (Fig. 8.45).⁸²³

The evidence, then, suggests that the Egyptian artists were economical in their use of paint colour and used their available palette to illustrate fairly accurately the various natural colours of horses that were in their environment in relatively natural proportions however, they deviated from this process as circumstances required.

⁸¹⁷ D. Brewer, D. Redford & S. Redford (1994) *Domestic Plants and Animals: the Egyptian Origins*, Warminster, 84 colours used in Egyptian tomb paintings to illustrate cattle were "black, brown, brown and white, black and white, white spotted with black and pure white." There does not appear to have been at least from a brief examination, any effort to distinguish between the three types of Egyptian cattle, the long horn, short horn and the hornless by means of colour.

⁸¹⁸ R. Parkinson (2008) *The Painted Tomb of Nebamun*, London, fig. 109.

⁸¹⁹ R. Parkinson (2008) *The Painted Tomb of Nebamun*, London, fig. 116. This also shows the distinct donkey like hindquarters and the shoulder stripe typical of the hinny hybrid.

⁸²⁰ See Horse Terminology.

⁸²¹ Osirisnet.com *The Mastaba of Ti*, No 60. Saqqara.

⁸²² Museo Egizio, Turin. 14354. A. Ghaffer Shedid (1998) "A House for Eternity-The Tombs of Governors and Officials," pl. 33 in R. Schultz & M. Seidel (eds.)(1998) *Egypt: The World of the Pharaohs*, Cologne.

⁸²³ R. Parkinson (2008) *The Painted Tomb-Chapel of Nebamun*, London, fig. 116.

8.4 ACCURACY AND MOVEMENT

8.4.1 GAITS

Throughout history, attempts have been made to observe the movements of a horse's feet in action without success. Debate still raged in the late 19th century about whether all four feet ever leave the ground at the same time.⁸²⁴ The issue was finally solved in 1877 when E. Muybridge⁸²⁵ used photography to examine the gaits of a variety of animals, including horses. To that time depictions of horse movements have to be classified as “artistic representations” and not reality. That being understood, the Egyptian artist no doubt tried to accurately depict what he saw within the bounds of his art.

A. STAND

This is not a gait as such, but the Egyptians illustrate it in a variety of ways. Standing can be defined as stopping or halting with all four legs on the ground with no forward movement indicated. There are two relatively different aspects of standing that are depicted: one is the “passive” stance and the other is the “active” stance.

A.I. THE PASSIVE STAND

The most obvious examples occur in the tombs of Tutu (AS 8; Fig. 8.49) Kenamun (TT 162; Fig. 8.50) and Horemheb (Saqqara; Fig. 8.52) with horses standing feeding from troughs with Kenamun's feeding on board a boat. Typically, the horses' heads are held below their withers, all four legs are on the ground and they are relaxed in their demeanour. There are only a few examples of this type of image. Horemheb's horses are standing with a standing groom leaning over them but their demeanour is more active than the other scenes. This effect has been achieved through raising their heads

⁸²⁴ S. Budiansky (1997) *The Nature of Horses*, New York, 186.

⁸²⁵ E. Muybridge (1887) *Animal Locomotion: an Electro-Photographic Investigation of Consecutive Phases of Animal Movements*, Philadelphia. S. Budiansky (1997) *The Nature of Horses*, New York, 186-189 has a clear summary of the results of Muybridge's work involving horse gaits, and I. Jaffe (1983) “The Flying Gallop: East and West,” *The Art Bulletin* 65/2 (1985) 183 also refers to Muybridge's work.

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and showing them on tiptoe with hind legs contracted, but there is no sense of forward movement.

A. II. THE ACTIVE STAND

The second type of standing posture occurs in the tombs of Tjanuni (TT 74; Fig. 8.53), Amenmose (TT 42; Fig. 8.54), Thutnefer (TT 80), Khaemhat (TT 57; Fig. 8.55), Menna (TT 69; Fig. 8.56), Nebamun fragments (Fig. 8.57), Anonymous A (TT 91), talatat from the Temple of the Aten, Amarna (Fig. 8.58), Panhesy and Seti I (Fig. 8.59). Ramesses III's horses (Fig. 8.60) are in a more active image. Whilst there is no movement forward, which is often indicated by the position of an individual directly in front of the horse(s), the position of the driver and the tension of the reigns, there is more activity conveyed by the body language of the horses themselves.

The horses in almost all cases have all four feet on the ground, though they are on tiptoe. The stance is not only upright but also tilted backwards with the head held high, the rear legs very compressed and the front legs bent. This type of image dates from Amenhotep II onwards and seems to attempt to convey more energetic and spirited animals. The most exaggerated example is that of Seti I at Karnak wherein Seti is seen mounting his chariot whilst holding on to prisoners in following chariots (Fig. 8.59). The king can hardly be interpreted as moving forward in this posture yet his horses are depicted as highly agitated and prancing which works to demonstrate the power of the king over the spirited and powerful team. It shows that there is more in the depiction of the teams than physical reality we see here the imprint of the owner's needs and the work of the artist to enhance the scene to convey more than just an image of what happened. So when trying to understand gaits there must be a consideration of context as well.

B. THE WALK

“The Walk is a four beat gait, executed in four time. Two or three legs are always on the ground.”⁸²⁶ There are four main types of walk, the *free walk*, the *collected walk* and the *extended walk*.⁸²⁷

Images in the tombs of Paheri (Fig. 8.62), Amenemhet (TT 123; Fig. 8.63), Anonymous B (TT 143; Fig. 8.64), Amenhotep Sisi (TT 75; Fig. 8.65) and the Karnak representation of Ramesses II (Fig. 8.66) give good examples of the depiction of the extended and collected walks. There do not appear to be images of free walks characterised by the lowering and extension of the horse’s head, even with the unharnessed horses seen in Amenemhet (TT 123). The basic movement of the walk is the stride forward with the horse’s rear legs overstepping the prints of the front feet. In Paheri and Amenemhet there is a clear move forward with fore and hind legs stepping out and this is paralleled by the action of the surrounding figures. The interesting thing here is the position of the head and the very upright position of the body that gives every indication of collection.⁸²⁸

The tombs of Anonymous B (TT 143) and Amenhotep Sisi (TT 75) and the Karnak temple scenes of Ramesses II show the collected walk. This is more energetic and elastic with the head held high and the hindquarters engaged. The hind feet do not overstep the prints of the forefeet and the images are of a much more constricted body containing pent up energy. Harris explains that “collection also implies heightened attention and awareness; in nature, it is seen in moments of excitement.”⁸²⁹ These images not only indicate the artist’s ability to show the horse and its movements accurately, but give an insight into the high level of equine training that the Egyptians were capable of.

⁸²⁶ S. E. Harris (1993) *Horse Gaits, Balance and Movement*, New Jersey, 32.

⁸²⁷ See Horse Terminology.

⁸²⁸ See Horse Terminology. K. Hansen (1992) “Collection in Ancient Egyptian Chariot Horses,” *Journal of the American Research Center in Egypt* 29 (1992) 173-179 gives a very clear explanation of collection in Egyptian horses and the means by which it was achieved.

⁸²⁹ S. E. Harris (1993) *Horse Gaits*, 78.

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C. THE TROT

“The trot is a two beat diagonal gait with suspension, executed in two-time. This means that the diagonal pairs of feet strike the ground together for one hoof beat, then the horse pushes off and is suspended in the air for a moment before the opposite diagonal pair of feet strike for the second beat.”⁸³⁰ There are four main types of trot⁸³¹ - the *working trot*, the *collected trot*, the *medium trot* and the *extended trot*. Interestingly, there is little evidence of the depiction of any form of the trot or in fact any depiction of the two beat diagonal in the tomb and temple images. One close example can be found in the tomb of Meryra I (Fig. 8.68), although this does not show the diagonal. The suggestion that this is a trot is based on the height of the off-side foreleg (it is too exaggerated and forward for a walk, but somewhat resembles the support phase). The whole body is too horizontal for it to be considered as a canter. There is obviously movement, suggested by the context and the short and energetic stride with extensive collection, very well engaged hindquarters and raised neck and head. Owing to its fast pace, the trot may have been a gait that artists found too difficult to identify accurately and therefore avoided.

D. THE CANTER

“The canter is a three beat gait with suspension, performed in a three time rhythm. It is a series of jumps or bounds with suspension between strides”⁸³² (Fig. 8.69). There are three types of canter, the *working canter*, *medium canter* and the *extended canter*. These can be seen on artefacts such as Tutankhamun’s plaque (Fig. 8.70) and fan (Fig. 8.71) and in the images in such locations as Ahmose’s tomb (AN3; Fig. 8.72) at Amarna, Ramesses II’s mortuary temple at Abydos (Fig. 8.73), at Abu Simbel (Fig. 8.74,) in Seti I’s battle reliefs at Karnak (Fig. 8.75) and at Medinet Habu (Fig. 8.76). There is a distinction to be seen between the gallop and the canter - the difference being in the height and the extension as well as the separation of the legs. In the canter, there is less evidence of collection (though it is present), the team’s hindquarters are engaged and the horses are balanced backward and light in the forehead. This would be consistent

⁸³⁰ S. E. Harris (1993) *Horse Gaits*, 35.

⁸³¹ See Horse Terminology.

⁸³² S. E. Harris (1993) *Horse Gaits*, 42.

with the forward “bounding” action of the gait. The heads are carried high and the three beats can be identified in the placement of the hoofs. The forelegs are off the ground but at only a small distance and typically they are separated, as are the hind legs, one of which remains on the ground and on tiptoe. This is a rhythmic gait that can be performed at a relatively slow pace and it appears to be well understood by the artists. The contexts indicate faster pace and a more “distance devouring speed” yet it is a more comfortable gait and would have been commonly used. Again the teams are shown with the spirit, excitement and power that is under the control of their drivers be they kings or commoners.

E. THE GALLOP

“The gallop is a four beat gait with suspension, with a leading side and executed in four time (Fig. 8.77). It is a series of jumps with suspension and is the horse’s natural speed gait. The gallop is an extended gait with long strides, great engagement and much flexion.”⁸³³

There appear to be two types of gallop shown in the Egyptian images a *lesser gallop* and the “*Flying Gallop*.”

The lesser gallop, which resembles a more natural realistic motion, is denoted by the forelegs being carried off the ground and the hind legs in most cases still in connection with the ground, usually with the hoofs flat on the ground and both hind legs extended rearward together. They resemble more the second and third beats of the gallop. The difference between the lesser gallop and the “*Flying Gallop*” is the height and the degree of extension of the legs, and the difference between the canter and the two styles of gallop seems to be the depiction of the hind legs. In the canter the hind legs are separate but in both gallops they are shown together. This suggests that the artists could accurately distinguish the difference between the basic phases of the separate gaits. The lesser gallop can be seen in the tombs of Neferhotep (TT 49; Fig. 8.78) Meryra I (AN 4; Fig. 8.79) and Panhesy (AN 6; Fig. 8.80).

⁸³³ S. E. Harris (1993) *Horse Gaits*, 49.

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F. “THE FLYING GALLOP”

The “*Flying Gallop*” has a long artistic history, though it appeared relatively late in Egypt and possibly resulted from the influence of Minoan art.⁸³⁴ If Harvey’s reconstruction of the Ahmose Pyramid Complex fragments is correct, then this may have been the first (or near first) occurrence of this style of image in Egypt. Initially, it seems to have been confined to the depiction of the actions of kings, particularly in relation to the battle narrative.

It has elements of the *leap forward* (Fig. 8.86) and the *jump* (Fig. 8.85). The leap forward sees the horse extended longitudinally releasing a great amount of energy. It may start from the hind legs acting together and the forelegs acting separately as the required step is established for the speed of the gait that the horse wishes to achieve. The head is relatively low and the body quite horizontal. The fore and hind legs are extended, but separately, which is where it differs from the “*Flying Gallop*”. In the “*Flying Gallop*”, the body is quite horizontal and there is a great amount of longitudinal extension with the exception of the neck and head which is where elements of the vertical phase of the *jump* exist.

The *jump* is also a great release of energy (Fig. 8. 85) but much of it is in a vertical or near vertical direction. In the *jump*, the hind legs are together for maximum thrust and the head is raised as the horse rises to address the *jump* whilst folding the forelegs to clear the obstacle.⁸³⁵ The “*Flying Gallop*” combines both of these aspects into one. The hind-quarters, head and chest are in the ‘takeoff’ phase of the *jump* but the barrel and forelegs are more nearly in the orientation of the *leap forward*. There is a level of understanding shown here, but what seems to be happening is that the artists have built the image up to enhance the high speed of the team, but also the power and stature they had. Whether this is intended to be just the first step of a gallop that is the take off, or a continuous action, is not known; it does seem, however, as if it is meant to be

⁸³⁴ S. Hood (1985) “The Primitive Aspects of Minoan Artistic Convention,” *Bulletin de correspondance hellénique*, 11 (1985) Supp. 23-24. See also H. Groenewegen-Frankfort (1987) *Arrest and Movement*, Cambridge, 84 and for a discussion of the image in world art over time, I. Jaffe (1983) “The Flying Gallop: East and West,” *The Art Bulletin*, 65 (1985) 2, 183-200. H. Schäfer (2002) *Principles of Egyptian Art*, suggests that the “new form of the jump was taken over from the Near East,” 15.

⁸³⁵ S. E. Harris (1993) *Horse Gaits*, 62.

continuous. If so, it is physically impossible for a horse to continue in this action. It is mostly kings who are shown in this manner (Figs. 8.82, 8.83, 8.84) but occasionally others are also shown doing this. Djehutyhetep⁸³⁶ at Debeira and Userhat (TT 56; Fig. 8.81) are seen hunting in this fashion and, although it seems there are only two instances,⁸³⁷ it appears it was not confined to the depictions of kings only.

The “*Flying Gallop*” is an attitude that can be seen as early as the Ahmose I pyramid temple complex, the Ahmose I axe, the Amenhotep I scarab-basel, the Thutmose I scarab and the fragments of the Thutmose II temple.⁸³⁸ It is obviously the one deemed most suitable for the depictions of a great number of the activities of kings in battle or at leisure but also those of their officials. It is consistently shown throughout the entire period covered in this work including the Amarna period and it extends right through into the large scale battle narratives of the 19th and later dynasty kings. Of all the gaits depicted it is the most unrealistic. Given the ability of generations of skilled artists to show relatively accurate images of horse gaits without the aid of photography this cannot be a failure of skill or understanding rather it is a deliberate effort to enhance the images with a sense of power, energy and prestige and is reflective more of the dictates of persons and circumstances.

G. COMPARISON OF GAITS

A comparison of the images shows clearly that the artists understood the basic actions of the natural gaits of horses but, like artists up to the 19th century, they were not able to depict them accurately. The faster gaits like the trot appear to have been avoided but there was an effort to differentiate between the actions of several gaits with varying levels of success. (Figs. 8.87, 8.88, 8.89, 8.90, 8.91). Additionally, other elements such as spirit, power and energy as well as prestige and narrative were incorporated into the images and these impacted on their realism.

⁸³⁶ Though much of this image is a reconstruction so some care must be taken in accepting this as a full flying gallop.

⁸³⁷ That can be clearly identified in the corpus.

⁸³⁸ See Chapter 4 catalogue and Chapter 4 (Vol. 2) for images.

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8.4.2 COLLECTION

Through an examination of the images, it appears that the Egyptians not only depicted *collection* but that they must have practised *collection* in their horses.

“When a horse flexes longitudinally in all his joints, he is said to be collected. In collection, the horse flexes all the joints of his hind legs more as he carries more weight on his hindquarters (...). The neck arches, raising the withers.... and the horse flexes at the poll bringing the head closer to the vertical position.”⁸³⁹ A great number of the images demonstrate collection. Horses can do this naturally so the artists may be showing something they saw. Nonetheless, horses do this very briefly to slow down or to change direction, so it is unlikely the artists would show (or even be able to show) something that brief. Sustained collection, which could be clearly observed, has to be trained into horses and it enables them to use their powerful hindquarters and to move more easily by developing the muscles in the topline.⁸⁴⁰ Collection can be seen in the *walk* in the tomb of Anonymous B (TT 143; Fig. 8.93) in the *trot* in Meryra I, (AN 4; Fig. 8.94) the *canter* in Ahmose (AN 3; Fig. 8.95) the *lesser gallop* in Meryra I (AN 4; Fig. 8.96) and the “*Flying Gallop*” at Abu Simbel (Fig. 8.97). This shows that the artists could see it (whether they knew what it was or not), that they could accurately depict it, and also, that the Egyptians actually trained for it.

Collection improves the topline in a horse, strengthens his back and gives him sustained power - all good for the horse - but it also results in a more impressive image. The horse's carriage is upright and the poll and the neck are flexed producing a more “noble” profile, he is lifted at the front and his body is more compressed like a coiled spring. “This puts the horse in a stronger position to engage his hind legs”⁸⁴¹ which enables him to manoeuvre more easily. The image is one of contained power - very desirable for the owners of the tombs and the kings in their efforts to impress. It also indicates that the horses were consistently trained to do this and it reveals features of the

⁸³⁹ S. E. Harris (1993) *Horse Gaits*, 92.

⁸⁴⁰ A. McLean & M. McLean (2008) *Academic Horse Training*, Clonbinane, 22.

⁸⁴¹ A. McLean & M. McLean (2008) *Academic Horse Training*, Clonbinane, 22.

man/horse relationship hitherto only hinted at in some texts, such as that of Amenhotep II's apparent activities training his horses.⁸⁴² The images attest to a detailed understanding of how horses move and the artist's ability to demonstrate this effectively.

8.4.3 UNNATURAL ACTIONS

In most cases, the movements of horses are shown in natural ways, especially later in the period under examination, but in some cases they were not and that was quite deliberate. The horses' appearances and actions are used artistically to specifically define the difference between the victorious Egyptians and the defeated enemies. In line with *mḥt*, the king and the Egyptian chariot ranks were seen to be in control and that is what the horses were: under control; but occasionally the way in which the horses were represented was used to underline the superiority and power of Egypt over its foes. Enemy horses, and the way they were depicted, assisted in demonstrating Egyptian victory and superiority. The temple walls, showing the victorious campaigns of successive kings, are where this type of display occurred most obviously. Enemy horses helped to enhance the "propaganda" aspects of the images found mostly on temple walls by contrasting the way they were shown with the way the horses of the Egyptian forces were represented.

The two images from the battle at Qadesh illustrate this point (Figs. 8.98: 8.99). The juxtaposition of the ordered lines of Egyptian chariotry with the disordered enemy teams is especially effective in conveying the message of the scenes. It is enhanced by the disposition of the enemy. Their horses are shown, with little real detail, bolting unharnessed, rearing, falling to the ground and collapsed on the ground in total disarray. The strong contrast between the Egyptian and enemy horses adds a clear message to the scenes: they form a vital part in conveying the battle narrative.

⁸⁴² K. Hansen (1992) *Collection*, 173-179 gives a discussion of the identification of collection in Egypt as well as the means by which the Egyptians obtained it through training and the use of specific equipment such as dropped nose bands, various types of bits etc.

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8.4.4 FRONTALITY

Frontal views of horse's faces are very rare and only found in fragments from Amarna (Fig. 8.100, 8.101) and Tutankhamun's Painted Box (Fig. 8.102).⁸⁴³ They are quite distorted as the bodies of the horses are seen from the side as normal but the heads alone are turned to the front. This may be an attempt at injecting some variety into the images, but it is invariably poorly executed.

8.4.5 MISTAKES

Occasionally, the artists made significant mistakes. In Userhat (TT 56; Fig. 8.103) the proportions of the horses in the funeral procession are extremely distorted. This may have been a result of attempting to fit the horses into the available space. In Horemheb's Saqqara tomb (Fig. 8.104) the groom leaning over the horses is, in fact, leaning over two horses! In Nebamun's tomb (Fig. 8.105), the head and neck of the rear horse is twisted around that of the first horse in an entirely unnatural arrangement and in the boating image in the tomb of Tia and Tia (Fig. 8.106), one horse is shown in full but the second horse has a head, going in the opposite direction to the other, but no body is in evidence and there is no room for one.

8.4.6 UNUSUAL IMAGES

Some images do not fit neatly into the rather regimented methodologies associated with depictions of horses. This has possibly been caused by their lack of context, as in the case of the two Amarna sculptures and in others because they were not necessarily meant to have been part of finished scenes.

Capart⁸⁴⁴ makes a comparison between the horses in the tomb of Suemnut (TT 92; Fig. 8.107) and that in Anonymous B (TT 143; Fig. 8.108) and suggests that the artist in TT 92 has used grid lines and then attempted to correct the animal's proportions whilst in TT 143 in a place normally not decorated, the artist has created a very lifelike and fluid image which "est vraiment merveilleux et rappelle ces dessins jetés sur le papier en

⁸⁴³ J. D. Cooney (1965) *Amarna Reliefs from Hermopolis in American Collections*, Brooklyn, 52 (Fig. 30a) includes a drawing of the relief by T. G. H. James.

⁸⁴⁴ J. Capart (1927) *Documents pour servir à l'étude de l'art Egyptien*, I. Paris, 49.

quelques traits de pinceau par les prodigieux animaliers de l' Extrême-Orient.”⁸⁴⁵ Baud⁸⁴⁶ gives a more detailed discussion of the image and suggests that the drawing is by a master who was practising and the sketch happened to escape later obliteration. What is striking is the more “natural” and fluid image that is more developed than in the formal images.

Another sketch exists in the Saqqara tomb of Horemheb⁸⁴⁷ and is of two horses one in some detail (Figs. 8.109 & 8.110) and again, it is of considerable subtlety and skill. Peck⁸⁴⁸ describes it as one of the finest.

What these show is that the artists were indeed capable of producing excellent images of horses that extend well beyond the boundaries of the general treatments of this animal. The subtlety and grace continue in the two images from Amarna (Figs. 8.111; 8.112) that reflect the period's more naturalistic style. The rough horse head discovered by Petrie⁸⁴⁹ which he described as a trial of a horse's head and another that Freed⁸⁵⁰ described as a “sculptor's model of a horse's head” both demonstrate the skill of the artist in depicting the horse. There is exceptional anatomical detail in the sculptor's model with the veining below the eye, the mouth and the muzzle and especially in the depiction of the Egyptian practise of “nose slitting.” (See Chapter 10). In addition there is the relief from Amarna (Fig. 4.160) showing a small herd of horses galloping freely unrestrained except by a register and those from the tomb of Ipuia (Fig.4.251) in a variety of very natural activities that demonstrate clearly the high level of understanding of horses and the skill that the Egyptian artist could apply when representing them.

⁸⁴⁵ J. Capart (1927) *Documents pour servir à l'étude de l'art Egyptien*, I. Paris, 49.

⁸⁴⁶ M. Baud (1935) *Les dessins ébauches de la nécropole thébaine*, *L'Institute Française D'Archéologie Orientale*, Cairo, 167-168. He suggests that it is a practice image that was corrected based on its position below the first register where there is normally no decoration as well as the quality of the image that he suggests is too good for an apprentice.

⁸⁴⁷ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, London, pl. 16 Scene 1.

⁸⁴⁸ W. Peck & J. G. Ross (1978) *Egyptian Drawings*, London, Fig 114: “Of the many representations of horses known from the New Kingdom, this ochre drawing, in situ in the tomb of Horemheb at Saqqara, must stand as one of the finest. The grace of the head and neck, the careful attention to details such as the dressing of the mane and the drawing of the eyes, nostrils and mouth give us a vivid picture of the animal.”

⁸⁴⁹ W. M. F. Petrie (1894) *Tell el-Amarna*, London, pl.1 (8)

⁸⁵⁰ R. Freed et al (ed.) (1999) *Pharaohs of the Sun*, Boston, Fig. 124.

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8.4.7 REWORKING OF IMAGES

Especially interesting is the treatment of some of the horses of Ramesses II at Luxor temple⁸⁵¹ (Fig. 8.114) and at the Ramesseum⁸⁵² (Fig. 8.115). In both battle images depicting the chariot teams of the king there is a very unusual treatment of the horse's heads. The features of the remainder of their bodies are consistent with the king's other horses and those of the army yet these two are quite different. The horse's heads, though damaged, are very short and quite leonine as are the teeth and the ears on the Luxor image. These may be reworking of the images but as they only occur on the faces, not the remainder of the bodies, they may represent an over enthusiastic attempt to make the horses look savage.

8.5 SUMMARY

A lot has been discovered by comparing the image of the Egyptian horse with reality. Keeping in mind the basic considerations relating to Egyptian art (see Chapters 6 and 7), the corpus of images firstly confirmed that the norms of the Canon provided the parameters within which artists worked when dealing with horses as registers, layering, ground lines, proportions etc. were all used. The images they created were in many ways excellent reflections of reality given the constraints of their time. Their use of colour, their ability to demonstrate horse behaviour and the natural gaits of horses was very accurate and indeed the examination revealed the fact that sustained collection in horses was not only noted by the artists but must have actually formed part of the training regimes of Egyptian chariot horses as it does in today's horses.

Their ability to render the physiological aspects of horses improved over time. Their first images were naïve, stiff and lacking in detail as a result of unfamiliarity with this new creature but as horses became increasingly common artist's skills in depicting their appearance became, in the best instances truly astounding and quite beautiful. Something more has been revealed. There is an indication of the actual "mechanics" of

⁸⁵¹ B. Porter & R. Moss (1994) (2nd ed.) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings, II The Theban Temples*, Oxford, Luxor, 202-203.

⁸⁵² B. Porter & R. Moss (1994) (second edition) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings, II The Theban Temples*, Oxford, Ramesseum, 10 (II).

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rendering revealed in the Amarna tombs, a regularity in the placement of certain anatomical points which suggest a more conformist approach or possibly the hand of a single master?

What is even more exciting is the revelation of a definite change in the “type” of horse that inhabited Egypt. Rommelaere described the early horse as “longeline” a gracile animal characterised by small size and fine features. It was later, after the reign of Amenhotep II to be generally replaced by the “breviligne” form, a heavier, more robust creature that also exhibited a more energetic if not aggressive demeanour and now there is confirmation of that. There developed six observable categories of images as time went on ranging from Categories 1 and 2 which were the very fine small horses of Renni and Menkheperresonb to the Category 6 ones of Amarna and Seti I. The most common were Category 4 beginning in the reign of Thutmose III and continuing to that of Ramesses III. These are larger more robustly built animals and this coincides with the textual evidence of a great influx of Near Eastern horses dating from Thutmose III’s reign and continuing from then on. This then had a profound effect on the type and number of horses existing in Egypt from that time and the images clearly demonstrate this. Because of the larger numbers of horses, artists became more familiar with them and were able to exercise their considerable skills in rendering the animals in far greater detail and accuracy. Not only that but they were able to imbue the images with the requirements of their patrons, their horses were energetic, often aggressive, noble, powerful but obedient and they were able to use their accurate renderings of horse behaviour and actions to help them to contrast the forces of Egypt and its enemies in battle. Egyptian artists made mistakes, some lacked in skill and many used “artistic license” in images like the “Flying Gallop” in their efforts to depict horses but the finest renditions that remain prove conclusively that they were capable of showing horses with remarkable accuracy within the strictures of their art.

CHAPTER 9: HORSE BEHAVIOUR

“Do you give the horse his strength or clothe his neck with a flowing mane? Do you make him leap like a locust, striking terror with his proud snorting? He paws fiercely, rejoicing in his strength, and charges into the fray. He laughs at fear, afraid of nothing; he does not shy away from the sword. The quiver rattles against his side, along with the flashing spear and lance. In frenzied excitement he eats up the ground; he cannot stand still when the trumpet sounds.”⁸⁵³

“Behaviour may be defined as an animal’s active response to its environment”⁸⁵⁴ and because it is an active response it can be observed. A horse demonstrates this response through physical, vocal and olfactory means. The physical and possibly vocal behaviours of ancient Egyptian horses can be investigated by means of the images in the tombs and temples and the findings demonstrate that the artists were very familiar with the horse and could accurately demonstrate its behaviour using its likenesses both natural and altered to achieve their aims.

Behaviour is demonstrated primarily through the body language (demeanour, deportment or pose) of the horse within the context of its environment. Evans uses the word “pose” and says that: “An animal’s pose is evaluated by considering the position of every part of its body: the angle of its head, placement of its mouth, ears, tail, legs or wings and the orientation of its torso in space.”⁸⁵⁵ Thus, an examination of an animal’s pose or body language will indicate its behaviour. Comparisons can be made between natural behaviour and that depicted by the artist to evaluate their accuracy and also to assess the level of impact of other factors involved in the depictions.

⁸⁵³ The Bible: Old Testament: Book of Job 39: 19-25

⁸⁵⁴ L. Evans (2010) *Animal Behaviour in Egyptian Art*, The Australian Centre for Egyptology: Studies 9, Oxford, 13.

⁸⁵⁵ L. Evans (2010) *Animal Behaviour in Egyptian Art*, Oxford, 15.

The primary categories of horse behaviour are *ingestive*, *contactual*, *agonistic*, *allelomimetic* (social facilitation) *eliminative*, *sexual*, *epimeletic* (care giving) *investigative* and *dominance/submission*.⁸⁵⁶ Of these, there is only evidence for the depiction of *ingestive*, *contactual* *agonistic* and *allelomimetic* behaviours in Egyptian art.

9.1 INGESTIVE BEHAVIOUR

Horses are non-ruminant herbivores and “trickle feeders” meaning that in the wild or in open paddocks they will feed continuously for around sixteen hours per day and occasionally through the night. Horses kept in stables are restricted and will feed according to an artificial program, but their demeanour whilst feeding will be essentially the same.

Horses’ eyes are positioned at the sides of their heads which allows them to see in an almost 360° range, even with their heads down,⁸⁵⁷ enabling them to detect predators. During grazing/feeding all four legs are on the ground with the head down, occasionally the head is raised, ears are held upright and the air is scented to check for predators. In general, the demeanour is relaxed yet watchful. Whilst there are no Egyptian images of horses feeding in unrestricted circumstances, there are five images of feeding horses attested.

The first, in the tomb of Meryra I (AN 4; Fig. 9.1) shows two horses feeding from a manger in a stable in the estate of the tomb owner⁸⁵⁸ and the second is the image of two horses feeding from a trough on the bow of a boat returning from Abydos in the tomb of

⁸⁵⁶ “Play Behaviour in Horses” www.myhorseuniversity.com/EE/December2012/Play accessed 2/8/2013. W. Gill (et al.) “Understanding Horse Behaviour” Institute of Agriculture www.utextension.utk.edu/4h/forms/acrobat/pb1654.pdf accessed 1/8 2013. There is some variation in the categories assigned to types of horse behavior though there is a general consensus.

⁸⁵⁷ S. Budiansky (1997) *The Nature of Horses*, New York, 111.

⁸⁵⁸ N. de Garis Davies (1903) *The Rock Tombs of El-Amarna. Part I – The Tomb of Meryre*, London, pl. XXV. Davies suggests that Petrie’s image of them is more suitable and that it may have been “a study for this very picture.” 39 (7) W. M. F. Petrie, (1894) *Tell el-Amarna*, pl. XI (1).

CHAPTER 9: HORSE BEHAVIOUR

Kenamun⁸⁵⁹ (TT 162; Fig. 9.2, 9.3). The horses in both images display normal feeding behaviour though the reality of the Kenamun image may be challenged in that the horses appear to be practically unrestrained on the deck of what seems to be a vessel that is underway, all sails set and oars manned. The next occurs in the tomb of Tutu (AS 8; Fig. 9.5), at Amarna where four horses feed from their mangers, again in a normal fashion,⁸⁶⁰ as do others shown in a sketch from the Amarna⁸⁶¹ palace (Fig. 9.4). Those in the Abu Simbel images of the battle of Qadesh⁸⁶² are much less naturally depicted (Fig. 9.6). They appear to be moving and their heads and tails are held at high angles, which is not typical of natural ingestive behaviour. It would be expected that there could be more stimulus for the horses in this context, however, there is a definite disconnection with reality. The animals could not feed at all in this pose. The artist has allowed the context of a busy, excited army camp atmosphere to influence his depiction of the horses in this instance.

9.2 CONTACTUAL BEHAVIOUR

9.2.1 PLAY

This is “related to seeking affection, protection or other benefits by contact with other animals.”⁸⁶³

In the first instance, it is play behaviour⁸⁶⁴ that is shown. Play in horses is generally confined to juveniles although adult horses do engage in such behaviours. There is only

⁸⁵⁹ Nina de Garis Davies (1963) *Scenes from some Theban Tombs, Nos. (38, 66, 162, with excerpts from 81)*, Oxford, 91.

⁸⁶⁰ N. de Garis Davies (1908) *The Rock Tombs of El-Amarna. Part VI – The Tombs of Parennefer, Tutu and Ay*, London, 13.

⁸⁶¹ W. M. F. Petrie (1894) *Tell el-Amarna*, London, pl. xi “from the palace.” “The execution of the horses is very slight and rough, but is true to nature; indeed it is remarkable how well the artists of Akhenaten succeeded with the horse.” 11. There is no more detailed indication of the source of this image other than the comments made by Petrie.

⁸⁶² C. Desroches-Noblecourt, S. Donadoni & E. Edel (1971) *Grand temple d’Abou Simbel: la bataille de Qadesh*, Cairo.

⁸⁶³ W. Gill (et al.) “Understanding Horse Behaviour” Institute of Agriculture www.utextension.utk.edu/4h/forms/acrobat/pb1654.pdf accessed 1/8 2013. 4.

⁸⁶⁴ D. Goodwin & C. Hughes (2005) “Equine Play Behaviour,” in D. S. Mills & S. M. McDonnell (eds.) (2005) *The Domestic Horse: The Origins, Development and Management of its Behaviour*, Cambridge, 150-161. “Play is frequently characterized through the performance of serious or adult behavior patterns in a non-serious context.” 151.

one instance of play behaviour that occurs in the tomb of Amenemhet (TT 123; Fig. 9.7) where two foals are shown cavorting unrestrained between two rows of adult horses being led forward by a groom.⁸⁶⁵ This seems to show social play behaviour that Goodwin and Hughes describe as including “play fighting, neck wrestling and chasing.”⁸⁶⁶ The foal’s actions are some of the liveliest images of horses in Egyptian art and one of only a very small number of foals illustrated. Unfortunately, the level of damage to the image prevents the details being examined. In this context, nonetheless, this behaviour as depicted is considered to be quite normal. There is another image of foals in the relief (Fig. 4.160) from Amarna where there are foals running under the bodies of adult horses.⁸⁶⁷ Together with the Amenemhet scene these two comprise some of the very rare informal and more natural images of Egyptian horses in the corpus.

9.2.2 COMMUNICATION

Horses use a variety of communication behaviours including body language, touch, smell and voice. Their evolution as herd creatures on open grasslands in direct visual communication with each other has resulted in vocal communication having only limited effectiveness. Horses have no distinguishable “language” similar to human language in that “there are not specific messages attached to specific calls.”⁸⁶⁸

In a very large number of tombs and on temple walls, horses can be seen with their mouths open (Figs. 9.8; 9.9; 9.10). This could be interpreted as an indication of the illustration of communication behaviour and in nature horses have a range of calls from

⁸⁶⁵ N. de Garis Davies (1932) “The Work of the Graphic Branch of the Expedition,” *Metropolitan Museum of Art Bulletin* 27 (1932) 3, 51-62. “The two frisking foals in figure 8 are set crosswise to one another and the resultant entanglement of lines was no doubt felt by the artist, as by us, as an artistic gain, both in itself and as a foil to the orderly march of the sedate mares.” Davies notes that the two horses under the first group is a later graffito, 54.

⁸⁶⁶ D. Goodwin & C. Hughes (2005) “Equine Play Behaviour,” in D. S. Mills & S. M. McDonnell (eds.) (2005) *The Domestic Horse*, Cambridge, 153.

⁸⁶⁷ Hanke. R. (1978) *Amarna-Reliefs aus Hermopolis: neue Veröffentlichungen und Studien*, Gerstenberg, 230-231. Plate 19.

⁸⁶⁸ M. Kiley-Worthington (2004) *The Behaviour of Horses*, London, 64. Though she does point out that “the roar of a stallion is slightly more common in sexual situations.” See also C. Feh (2005) “Relationships and Communication in Socially Natural Horse Herds,” in D. S. Mills & S. M. McDonnell (eds.) (2005) *The Domestic Horse*, Cambridge, 88 and S. Budianski (1997) *The Nature of Horses*, New York, 127-138 for discussions of the current findings of behavioral studies in this area. Budianski states that ornithological research may help to understand equine vocal communication through Morton’s work that “argues that asking what a sound accomplishes rather than what it means is the first step toward understanding what animals communication is all about.”

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a soft whicker to a roar.⁸⁶⁹ Some of these calls, like the neigh, can be delivered with the mouth open; others; such as the nicker, can be executed with the mouth closed - so these depictions cannot be understood as unequivocally identifying vocal communication.

As horses do not breathe through their mouth, exertion can be ruled out as a cause for the appearance of the open mouth. Horses inhaling very energetically do so through extended nostrils. A heightened level of excitement could also be indicated by this extension.

Horses will “work” a bit, have their mouths pulled by tightly drawn reins, exhibit submissive behaviour and simply open and shut their mouths - so scenes of open mouths are not distinctive indications of vocal communication. Raulwing suggests: “In nearly all ancient Egyptian pictorial representations of harnessed chariot horses, the jaws are held open.”⁸⁷⁰ This raises the possibility that the open mouths were a response to the use of a bit.⁸⁷¹ The bits that the Egyptians used were simple snaffles⁸⁷² (See Chapter 10), yet they also appear to have used nosebands that are designed to keep the mouth closed.⁸⁷³

Horses do not consistently extend their tongues when making vocal communication and there are only four examples of protruding tongues in the corpus: Puyemre (TT 39; Fig. 9.11), Neferhotep (TT 49; Fig. 9.12), on Tutankhamun’s Painted Box (Fig. 9.13) and on the wall of the Cour de Cachette at Karnak (Fig. 9.14). These could be interpreted as

⁸⁶⁹ C. Feh (2005) “Relationships and Communication in socially natural horse herds,” in D. S. Mills & S. M. McDonnell (eds.) (2005) *The Domestic Horse: the Origins, Development and Management of its Behaviour*, C Cambridge, 83-93. See also M. Kiley-Worthington (2004) *The Behaviour of Horses*, London, 61-65.

⁸⁷⁰ P. Raulwing & J. Clutton-Brock (2009) “The Buhen Horse: Fifty Years after its Discovery (1958-2008)” in *Journal of Egyptian History*, 2 (2009) 31. This comment is based on the evidence of the circular bits found in the royal tombs at Qustal in Nubia discovered by Emery in 1938. See W. B. Emery (1938) *The Royal Tombs of Ballana and Qustal*, Mission Archéologique de Nubie, 1929-1934 Cairo. Fig 92:1

⁸⁷¹ E. Esterson (2010) *The Ultimate Book of Horse Bits*, New York, 25 “...a busy mouth can actually be signs of discomfort. In an effort to remove the bit from his mouth or move it away from an area of pain, he may be excessively busy with his mouth, chewing fussing and playing.” See also “Bitless Treeless and Barefoot” www.equine-behaviour.com/Bitless_treeless_and_Barefoot1.htm accessed 8/8/2013. “...if you look at artworks from the time, they all seem to have open mouths, and a posture that is instantly recognizable as the result of a constant battle to evade the bit.” 2.

⁸⁷² See Horse Terminology.

⁸⁷³ S. Budiansky (1997) *The Nature of Horses*, New York, 66-68.

indications of vocal communication. The tongues are in proportion to the heads of the horses - Puyemre and Merenptah's horses are walking whilst Neferhotep's and Tutankhamun's are galloping and there seems to be no external reason for their tongues to protrude.

Exhaustion or illness in horses does not normally produce tongue protrusion. Problems resulting in the protrusion of the tongue are usually associated with pain or discomfort caused by the bit and the tongue being used to cushion the pain.⁸⁷⁴ Evans argues that "the isolated tongue was a graphic device by which to convey clearly and unambiguously to viewers the notion/experience of sound production - namely strident animal noises."⁸⁷⁵ This is possibly the intention in these three images, although it is not a normal behaviour and is modelled more on human methods of communication than on equine forms.

The open mouth is so consistently used throughout the whole period and in such a wide variety of circumstances from galloping teams to those standing still it must be an artistic device to indicate more than simple communication. It is again more characteristic of human behaviour when excited or experiencing physical stress and could therefore be a means by which the artists enhanced the images to indicate these conditions. In the most aggressive horses such as those of Tutankhamun on the Painted Box (Figs. 4.225, 4.226, 4.227, 4.228) and Seti I's Karnak chariot teams (Figs. 4.260, 4.261, 4.262) the mouths are again open but teeth are incorporated enabling a much more ferocious image which is demonstrably the aim here. Ramesses II's personal team on the temple at Luxor (Figs. 4.281, 4.282) not only shows a protruding tongue but multiple pointed predator-like teeth!

The open mouth was a means by which the artist demonstrated communication however it was also a way in which he could include other factors that enhanced the impression and the "message" contained in the image.

⁸⁷⁴ E. Esterson (2010) *The Ultimate Book of Horse Bits*, New York, 147-148.

⁸⁷⁵ L. Evans (2010) *Animal Behaviour in Egyptian Art*, Oxford, 193. Though the majority of the thesis is based on a study of Old Kingdom art she points out that, "A cursory examination of Egyptian art from other time periods has revealed that this motif was widespread and long lasting." 193.

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9.3 AGGRESSIVE BEHAVIOUR

The combination of body language elements indicating aggression in horses is the lowered head, extended neck, flattened ears, the skin on the face being tightened with the nostrils wrinkled up, the mouth open and the teeth showing. These are accompanied by lifting of the fore or hind leg in a threat display and will often be accompanied by kicking and biting.⁸⁷⁶

Horses are prey animals - their natural reaction to a threat is to run away⁸⁷⁷ - however there are situations in which they will exhibit aggression. A dam defending her foal, a horse unable to escape from a threat, establishing dominance within a herd situation and a dominant stallion will all engender aggressive behaviours ranging from threats to physical attacks. Stallions, especially, can be trained to exhibit aggression on command. The most familiar example of this is the medieval war-horse.

These behavioural elements can be seen clearly in images from the monuments of Seti I and Ramesses II, (Figs 9.15; 9.16; 9.17; 9.18). Whilst the ears are not flattened, there is detailed depiction of the tightening of the face and the wrinkling of the nostrils and muzzle. Bared teeth that are uncharacteristic of the dentition of horses and more appropriate to images of dogs or lions are clearly displayed. These elements are combined with upright postures and are included in battle contexts. Forward pointing ears are not characteristic of aggression when the ears are folded backwards to prevent injury, however, they do indicate attention and excitement and give the sense of willing and very aggressive animals that would be more suited to the type of message that the reliefs were attempting to convey. The artists well understood the indications of aggression but adapted the total image to suit the situation.

Interestingly there are no demonstrations of unrestrained aggression, all the horses that exhibit elements of aggressive behaviour are under the control of their masters be they grooms, owners, soldiers or kings and once again the images reinforce the theme of *mēt*

⁸⁷⁶ S. Budiansky (1997) *The Nature of Horses*, 91; S. McBane & H. Douglas-Cooper (2009) *Horse Facts*, 30; L. Bayley (2002) *What is My Horse Thinking?* London, 26.

⁸⁷⁷ L. Bayley (2002) *What is My Horse Thinking?* London, 12 and S. McBane & H. Douglas Cooper (2009) *Horse Facts*, London, 20-21; W. Micklem (2003) *The Complete Horse Riding Manual*, London, 42-43.

, power and energy, elements of chaos being restrained by Egyptian authority figures. In battle scenes these elements are lacking in the horses of Egypt's enemies.

9.4 FEARFUL BEHAVIOUR

Horses as prey animals are particularly sensitive to external stimulus, they have acute hearing⁸⁷⁸ almost 360° fields of vision⁸⁷⁹ and a highly developed sense of smell.⁸⁸⁰ The sights, sounds, smells and chaos of battle would normally incite fear if not panic and trigger the flight response.⁸⁸¹ Overcoming this, especially in a battlefield context, would involve a very high degree of training.⁸⁸²

A horse that is afraid will exhibit a range of behaviours depending on the severity of the threat. It may withdraw its tail, retract the corners of its mouth, have an open mouth and flattened ears.⁸⁸³ It may shy, throwing its head up. It may also buck, spin, rear or bolt.

Shying is when a horse startles at a real or imagined event or object and this may be accompanied by pricked ears, sweating, tail thrashing and shaking. Shying or “spooking” is a behaviour that is demonstrated in many images such as those in the tombs of Amenmose (TT 42; Fig. 9.19) and Meryra II (AN 2; Fig. 9.20). These contain scenes of grooms with shying horses shown with their heads especially elevated and the groom standing directly in front of them holding his hand up in a pacifying gesture.

The most fearful horses are those depicted in battle scenes such as that of Seti I attacking Yenoam at Karnak (Figs. 9.21; 9.22) and Ramesses II assaulting Qadesh at Abu Simbel (Figs. 9.23; 9.24). These animals are shown with various indications of great fear and pain, flattened ears, open mouths often bucking, bolting out of control

⁸⁷⁸ J. Brega (2005) *Essential Equine Studies: Book 1. Anatomy and Physiology*, London, 194. See also S. Mc Bane & H. Douglas-Cooper (2009) *Horse Facts*, London, 28-29.

⁸⁷⁹ S. Budiansky (1997) *The Nature of Horses*, New York, 109-125.

⁸⁸⁰ M. Kiley-Worthington (2004) *The Behaviour of Horses*, London, 21-24. See also W. Micklem ((2003) *The Complete Horse Riding Manual*, London, 45.

⁸⁸¹ L. Bayley (2002) *What is My Horse Thinking?* London, 12, 63, 65: See also J. Hermesen (2006) *The Complete Encyclopedia of Horses*, Lisse, 77: “The horse retains this instinct to take flight at a moment’s notice and they can accelerate rapidly. They do not wait until they have detected the danger themselves but will also react to signs from other horses.”

⁸⁸² As it does with modern police horses that undergo a long program of desensitization.

⁸⁸³ Various fear responses are described in several sources. M. Kiley-Worthington (2004) *The Behaviour of Horses*, London, 82-83, L. Bayley (2002) *What is My Horse Thinking?* London, 76, S. Price & J. Shiers (2007) *The Lyon’s Press Horseman’s Dictionary*, Connecticut, 199.

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and rearing. The artists clearly identified and accurately recorded fearful behaviour in horses and used it to enhance the level of fear and disarray exhibited by the enemies of Egypt in the course of their defeats at the hands of the kings and contrasted it with the brave and aggressive demeanours of the Egyptian whose teams show no signs of fear. The use of this illustration of horse behaviour makes the effect of the underlying message more realistic and powerful.

9.5 HERDING BEHAVIOUR

Horses are herd animals⁸⁸⁴ - the herd being the basis of their society and their safety. They follow a leader and belong to a hierarchy of dominance and are most comfortable in the company of their herd. This can be used to achieve desired behaviours such as willingness to do as the herd is directed.

There is only one image of “free”⁸⁸⁵ herding behaviour in the sources occurring in fragments from Amarna⁸⁸⁶ (Fig. 9.25). The reconstructed image is of a small herd comprising a stallion, four mares and two foals running in a herd the composition of which reflects the natural social grouping of horses. A natural herd grouping normally consists of a stallion, a dominant (“Alpha”) mare, other mares and their offspring.⁸⁸⁷ The image is a reconstruction of fragments so its context is unknown yet if valid it certainly indicates that some artists must have been familiar with unrestricted horse herding behaviour.

A different form of herding is demonstrated in a number of tombs, this being human directed herding or the leading of horses in groups. Horses are intensely social animals and this instinct has been put to use when managing groups of horses over time. There are a variety of contexts indicated in tombs and temples. These images occur in tombs

⁸⁸⁴ J. Draper, D. Sly & S. Muir (2004) *The Ultimate Book of Horse and Rider*, London, 28.

⁸⁸⁵ That is without the use of halters and lead ropes allowing the horses to run freely.

⁸⁸⁶ R. Hanke (1978) *Amarna-reliefs aus Hermopolis, : neue Veröffentlichungen und Studien* Gerstenberg, abb. 19.

⁸⁸⁷ C. Feh (2005) “Relationships and communication in socially natural horse herds” in D. S. Mills & S. M. McDonnell (eds.) (2005) *The Domestic Horse*, Cambridge, 84-87.

TT 145 (Nebamun),⁸⁸⁸ TT 123 (Amenemhet; Fig 9.26),⁸⁸⁹ TT 100 (Rekhmire; Fig 9.27),⁸⁹⁰ TT 84 (Amunedjeh),⁸⁹¹ TT 85 (Amenemheb),⁸⁹² TT 42 (Amenmose),⁸⁹³ Userhat TT 56,⁸⁹⁴ TT 74 (Tjanuni),⁸⁹⁵ TT 91 (Anonymous A),⁸⁹⁶ TT 90 (Nebamun),⁸⁹⁷ TT 78 (Haremheb; Fig.9.28),⁸⁹⁸ TT 63 (Sobekhotep),⁸⁹⁹ Ipuia⁹⁰⁰ and Ramesses II's Abydos temple⁹⁰¹ (Fig. 9.29).

Of the fourteen scenes encountered, five are tribute scenes, two reviewing livestock, two funeral processions, one of agricultural activity, two military, one of presentation of gifts and one of receiving Syrian booty. The scenes stretch throughout the period from Thutmose III to Ramesses II. The variety of contexts and duration of these scenes in tombs and eventually in temples indicates their suitability for inclusion in tomb decoration schemes and the level of the penetration of the use of the horse into Egyptian culture. The demeanour of the animals presented here is both obedient and compliant, whether shown in pairs or in larger groups. The method of layering⁹⁰² of the horses is an efficient means of avoiding illustrating every animal in the group and this technique was adopted by Egyptian artists who showed the near horse in full profile but the far horses as a series of outlines, consequently they all appear to be perfectly in step.

Schäfer suggests that this “lateral layering” is used for groups moving forward. This device results in an unnatural image that fails to convey the more random action of a

⁸⁸⁸ N. de Garis Davies (1932) “The Work of the Graphic Branch of the Expedition,” Metropolitan Museum of Art Bulletin, 27 (1932) 3 Part 2 51-62

⁸⁸⁹ N. de Garis Davies (1932) “The Work of the Graphic Branch of the Expedition” Metropolitan Museum of Art Bulletin, 27 (1932) 3 Part 2 51-62.

⁸⁹⁰ N. de Garis Davies (1944) *The Tomb of Rekh-Mi-Re*, North Stratford, pl. 11.

⁸⁹¹ N. de Garis Davies & N. de Garis Davies (1941) “Syrians in the Tomb of Amunedjeh,” *JEA* 27 (1941) 96-98.

⁸⁹² W. Wreszinski (1988 reprint) *Atlas zur altaegyptischen Kulturegeschichte* 1, Tafel 94 a-b.

⁸⁹³ N. de Garis Davies & N. de Garis Davies (1933) *The Tombs of Menkheperasonb, Amenmose and Another* (nos 86, 112, 42, 226) London, 27-34.

⁸⁹⁴ C. Beinlich-Seeber & A. G. Shedid (1987) *Das Grab des Userhat (TT 56)*, Mainz.

⁸⁹⁵ A. Brack & A. Brack (1977) *Das Grab des Tjannuni. Theben Nr. 74*, Mainz, Szene 15.

⁸⁹⁶ W. Wreszinski (reprint 1988) *Atlas zur altägyptischen Kulturgeschichte* 1, Geneva, Tafel 290.

⁸⁹⁷ N. de Garis Davies (1923) *The Tombs of Two Officials of the Reign of Thutmose the Fourth*. (Nos. 75 and 90) London, pls. 24-25.

⁸⁹⁸ A. Brack & A. Brack (1980) *Das Grab des Haremheb. Theben Nr. 78*, Mainz, Scene 8 tafel 87.

⁸⁹⁹ E. Dziobek & M. Abdel Raziq (1990) *Das Grab des Sobekhotep, Theban Nr. 63*, Mainz, tafel 3 Scene 4, tafel 2 Scene 4.

⁹⁰⁰ J. Quibell & A. Hayter (1927) *Excavations at Saqqara: Teti Pyramid, North Side*, Cairo, 35-37 pl. 12.

⁹⁰¹ Photographs, S. Turner.

⁹⁰² H. Schäfer (2002) *Principles of Egyptian Art*, Oxford, 177-189.

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group that is nevertheless being led by reins. The demeanour of the single horse in the image from Ramesses II's Qadesh relief at Abydos (Fig. 9.29) is that of a single animal experiencing stress, as indicated by its posture and although the context suggests the aftermath of a battle, the fact that it is "alone" would increase the animal's discomfort and result in the "balking" demonstrated. This pulling back, lowering of the hindquarters and raising of the head is typical of a horse that is stressed and uncooperative. The artists have accurately observed the compliant behaviour associated with a horse in a herding context as well as the demeanour of the single animal under stress and used it effectively to encode meaning into the scene.

In a sense battle scenes can be viewed as scenes of herding in that in many cases they demonstrate groups of horses exhibiting the "fight or flight" response. Massed Egyptian horses are shown behaving in the same fashion, herd-like moving together and behaving uniformly, calmly even aggressively, they it might even be interpreted as behaving with a "fight" response. Enemy horses however, as a group are quite often shown in the "flight" response- a panicked herd attempting to escape. Once again observed behaviour is put to a specific use.

9.6 MISSING BEHAVIOURS

Behaviours illustrated	Behaviours illustrated in enemy horses only	Behaviours not illustrated
Aggression to enemy	Fear/ panic	Mating/ sexual
Calm/ controlled/ obedient	Dead/ dying	Defecation
Feeding		Rolling
Shying – under control		Horse to horse fighting
Playing- foals only		Caring for young
Excited/ spirited		Grooming
Disobedient - 1 only (Apuaia) but under control.		
Herding (only 1 free herding)		

Table 9.1 Differentiation of displayed behaviours.

The behaviours illustrated reveal the underlying aims of the artists and those that commissioned their work and, almost without exception, the only behaviours

consistently shown are those in which there is a human/horse relationship. These can be subdivided into Egyptians and their horses and enemies and theirs. In the Egyptian contexts there is a cooperative relationship the animals are shown as noble, spirited, active and even aggressive and the accompanying Egyptians are always in control. In contrast, enemy horses are almost always dying, dead, bolting or panicked and fleeing from the field of battle, beyond the control of their drivers. There is a definite intention to use demonstrated behaviours to reinforce Egypt's dominant position and the "message" being conveyed on the large-scale temple reliefs. The motivation behind this consistent principle is the demonstration of the maintenance of *maat* - the most important of the underlying themes in Egyptian art. The depiction of the horse plays a vital role in the transmission of this theme in the tombs and temples of Egypt.

9.7 SUMMARY

An examination of the corpus of images gives a very clear understanding that the ancient Egyptians knew and understood the fundamental behaviours of their horses very well. What is most interesting are the specific behaviours that they chose to or not to show and what may have driven these choices. The behaviours they did not show at all are those that involve no interaction with humans for example rolling, defecating, mating etc. The tombs of Meryra I (Fig. 4.196, horses feeding in a stable inside Meryra's house) and Kenamun (Fig. 4.127, feeding on a boat) have scenes of minimal human contact if any and are rare. They show ingestive behaviour and its relaxed demeanour in almost "still" photographic images. More active "play" scenes such as those in Amenemhet (4.22) and the Amarna relief (Fig. 4.160) are also very rare. A larger number of tombs show herding in various forms but the dominant images are those that display behaviours that do more than just show horses. Scenes of tribute, officials carrying out duties, officials being rewarded, hunting or battle scenes with kings and multiple chariot teams make full use of the behaviours that enhance the message best. They use aggressive, fearful and communicative behaviours because they create more "positive" images, more active ones where the artist could insert elements of the behaviours into the images to make them more exciting, impressive, prestigious, active and interesting. The most common images are those that assert that the Egyptians are in control and once again they are emphasising the maintenance of *maat*. Egyptian

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artists were perfectly capable of identifying and indicating complex aspects of horse anatomy and behaviour including the behaviours that are not shown. They used selected behaviours as tools to achieve the goals they were set when their works were commissioned.

CHAPTER 10: THE HUMAN / HORSE RELATIONSHIP

*“The horse. Here is nobility without conceit, friendship without envy, beauty without vanity. A willing servant, yet never a slave.”*⁹⁰³

In all the images from temples tombs and artefacts and across all the texts reviewed in this study, there is not a single instance of the horse being used or mentioned as a beast of burden in a way similar to a donkey or other animal. The horse was always “special,” suited to “higher” purposes, although the methods used to achieve these purposes were often authoritarian, even cruel. It was used as the driving force for chariots as a speedy mount for messengers or scouts and it was bred, trained, maintained and used under the authority of tomb owners, armies and kings. The Egyptian relationship with the horse was essentially symbiotic.

10.1 HORSE SELECTION

What horses did the Egyptians prefer?

The reliefs and texts would initially suggest that there was an Egyptian predilection for the use of stallions, but in reality, several factors would determine the selection of horses for various activities.

A stallion is an entire male with penis, penis sheath and testes. The depiction of a penis alone provides evidence for the use of male horses possibly geldings, not necessarily stallions and the absence of any obvious genitalia may or may not indicate the presence of mares.

An examination of the corpus reveals 53 cases (Fig.10.1) where the genital area remains in the scene. There are 22 stallions indicated where a penis sheath and testes are in evidence (Fig. 10.2). There are 15 males possibly geldings, where a penis sheath is displayed but no testes are visible (Fig. 10.3) and 16 where no genitalia are visible so mares may be indicated (Fig. 10.4, 10.5). The absence of genitalia or elements of them may be explained in several other ways, however. Genitalia could have been omitted

⁹⁰³ R. Duncan (1964) *The Horse*, ©(Copyright of) the Ronald Duncan Literary Foundation.

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based on the level of detail required in the scene. In large scale scenes, great detail may not have been warranted, the artist may not have possessed a sufficient level of anatomical knowledge to include them, or there may have been a deliberate effort to indicate a certain gender or to avoid doing so. In examining these images, there needs to be an awareness of the non-photographic nature of Egyptian art (see above).

Examination of the table in Vol. 2, Appendix 6, “Gender,” reveals that after Amenhotep III, there is a greater number of gender defined horses in the images. The absence of this in earlier tombs may be due to the more extensive damage there. Later depictions could also reflect the increase in the number of horses in Egypt, the developing “trend” for depiction of them in the tombs and temples as well as the growth in the familiarity of the artists with their subjects. Additionally, later there may have been a greater emphasis on defining the sexuality of the horses to increase the “potency” of the image.

Of the nine kings shown with horses, all have stallions in at least one image (Fig. 10.6). Over all the available instances, 41.5% are stallions, 28% are male and 30% may or may not be mares as no genitalia are indicated. 69.8% of all the horses are defined as male and there is a concentration on the depiction of males from the time of Akhenaten onwards.

The corpus reveals that at least some teams seem to be composed of stallions. Male horses make up the greatest number of the horses in the images (and probably in reality) and some mares may have been used.⁹⁰⁴ An analysis of the names of horses indicates that at least in the royal teams, mares were rarely used.⁹⁰⁵ Egypt would require a

⁹⁰⁴ J. Hoch (1994) *Semitic Words in Egyptian Texts of the New Kingdom and Third Intermediate Period*, Princeton, 18 note 12 suggests that the relative numbers of the genders of the horses acquired as booty from Meggido indicates that unlike Egyptian horses of Ramesside times, the war horses of Meggido were mares. The number of chariots gained as part of this booty was around 892 and the number of mares was over 2000 - that would provide for two horses per chariot and some reserves. No mention is made of the acquisition of breeding stock other than the six stallions. Mares would be perfectly serviceable as chariot horses when not used solely for breeding especially as mares tend to possess more stamina than males. This gives an insight into the possible variety of approaches used at the time in the composition of chariot divisions in the region. See also D. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, Leiden, 34, note 203.

⁹⁰⁵ A. Eshmawy (2007) “Names of Horses in Ancient Egypt,” in J-C. Goyon & C. Cardin (eds.) (2007) *Proceedings of the 9th International Congress of Egyptologists, 6–12 September, 2004, Grenoble*, 665-676: “From the names of the horses mentioned above it is noticed that mares participated rarely in the wars.” He mentions only two instances when the horses of Ramesses II are given female names.

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successful breeding program in order to maintain its chariot divisions as there would be a large number of losses from wear, illness or injury either accidental or in battle. The natural ratio of male to female births in horses is about 50/50 and the gestation period in horses is 11 months, a mare will then have a foal at foot. Mares may be in season again as soon as 7-10 days after foaling⁹⁰⁶ and then can be bred again; yearly pregnancies are not unusual given correct management. The majority of the mares would thus necessarily be confined to breeding contexts. Mares are used for breeding based on their qualities and/or their bloodlines, so some mares may not have been as suitable and it could be these in small numbers that we see in the images. Only a relatively small number of stallions would be needed in a breeding program as one stallion can service two to three mares every day of the week.⁹⁰⁷ Fertility levels would, of course depend on factors such as the mare's health, age, food supply and time of the year. This would lead naturally to a prevalence of males (entire or gelded) available for the army and other activities.

Given the inherent difficulties of dealing with stallions, the images suggest that they were used in king's teams, but they appear at other levels as well. Most of the later images are in military contexts⁹⁰⁸ where there was a need for a horse that was naturally aggressive or could be trained to be so. The most aggressive in what is fundamentally a prey species is the stallion. However, stallions require the highest level of handling skill as they are dominant animals and will be affected by proximity to other horses, especially to mares in oestrus.

The presence of at least some stallions in the Egyptian forces may be confirmed by the actions of the prince of Kadesh during Thutmose III's Eighth Campaign. A mare was sent out from the besieged city to create havoc amongst Egypt's chariotry. To give purpose to this action, and to have any effect at all, the mare would have had to be in oestrus and there would have had to be a significant number of stallions in Thutmose's

⁹⁰⁶ P. Huntington, J. Myers & E. Owens (2004) *Horse Sense, the Guide to Horse Care in Australia and New Zealand*, second edition, Collingwood, 238.

⁹⁰⁷ P. Huntington, J. Myers & E. Owens (2004) *Horse Sense*, Collingwood, 247.

⁹⁰⁸ The great majority is either in king's teams, the chariots accompanying Akhenaten's movements at Amarna, or in battle contexts under Horemheb (official), Tutankhamun, Seti I, Ramesses II and Ramesses III.

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army.⁹⁰⁹ There is scholarly discussion regarding the use of stallions. Gabriel, based on Cantrell, says that chariot horses were geldings not stallions because stallions would have been too “competitive.”⁹¹⁰ However, this can be countered on natural levels as well as management levels. Firstly, in nature, stallions associate harmoniously with other stallions in “bachelor” groups and also in “alliances” in mixed bands often for extended periods until the arrival of mares and then occasionally even after that.⁹¹¹ Taking advantage of this natural behaviour would permit the close association of stallions in chariot teams by raising the horses together from an early age in the absence of mares.

Secondly, stallions that are given appropriate training can be successfully kept and used together⁹¹² as they are today in horse racing and other forms of competition and entertainment especially where mares are excluded.⁹¹³

Thirdly, an investigation of the harsh control methods used by the Egyptians would suggest that stallion behaviour could have been conditioned from a very early age to

⁹⁰⁹ Urk IV. 894.5-13; J. B. Pritchard (1955) *Ancient Near Eastern Texts*, New Jersey, 241. Here Amenemheb of TT 85 relates the events and in note 37 Pritchard suggests this was to “...stampede the stallions of the Egyptian chariotry.”

⁹¹⁰ R. A. Gabriel (2009) *Thutmose III: A military biography of Egypt's greatest warrior king* Washington, 179: “Chariot horses were not stallions but geldings.” Yet further down he states: “It is not impossible, then, that the horses of the king and other high ranking officers might have been stallions.” He then says that great efforts were made to “convince people that their leader’s horses were stallions.” In this he bases most of his opinion on D. Cantrell (2011) *The Horsemen of Israel, Horses and Chariotry in Monarchic Israel (Ninth-Eighth Centuries B.C.E.* Indiana, 24-26, whose discussion of gender in chariot horses concentrates on Assyrian and later period horses such as those in Pazyryk in the fifth century. Cantrell mentions nothing about Egypt other than the booty from Meggido. She also does not discount the fact that stallions could have constituted a number of chariot teams. Additionally, Gabriel and Cantrell (she is referring to Assyrian examples) state that the depiction of the genitalia of the stallions was not accurate in its placement, thus, “In this way, kings portrayed their gelded war horses as true stallions.” 180. This is expecting too much that Egyptian art was photographically accurate and it denies the Egyptian ability to adequately train horses even stallions, which is still very successfully done today. If Gabriel’s point is valid, it would make the release of a mare in season at Kadesh quite pointless. M. H. Pope (1970) “A Mare in Pharaoh’s Chariotry” in *Bulletin of the American Schools of Oriental Research* 200 (1970) 56-61 states in his discussion of the Biblical Song of Songs: “The purpose of this paper is to point out the implications for this verse of the well-attested fact that Pharaoh’s chariots, like other chariotry in antiquity, were not drawn by a mare or mares but by stallions hitched in pairs.”

⁹¹¹ L. Boyd & R. Keiper (2005) “Behavioural Ecology of Feral Horses,” in D. S. Mills & S. M. McDonnell (2005) *The Origins, Development and Management of its Behaviour*, Cambridge, 68-70.

⁹¹² A modern example of this is the Spanish Riding School in Vienna which uses (72) stallions exclusively and has been doing so for over four hundred years. <http://www.srs.at/en/tradition/the-spanish-riding-school/> accessed 29. 9. 2013.

⁹¹³ This would then make perfect sense of the Kadesh strategy.

respond appropriately by force to what was required. There is not sufficient reason to exclude the use of stallions.

There is no mention of the castration of male horses in any Egyptian texts. The much later opinion of Strabo in 44 BCE⁹¹⁴ discussing the Scythian practise of castration considers it a “peculiarity.” Gelding is a culture sensitive process that is practised more in some areas than others. The number of males without testes illustrated in the images might suggest that this was practised in Egypt. Castration certainly increases the ease of management of horses, but also decreases their aggression. Unfortunately no veterinary papyri exists that may have shed light on this question.

Mares unsuitable for breeding because of age, poor quality, infertility or other factors should also be considered for inclusion in chariot divisions and other contexts. The images available provide sufficient evidence to conclude that stallions, geldings and mares were used in both peaceful and warlike contexts in ancient Egypt with males including stallions being the majority used in official and military activities.

10.2 CONTROL

How did the Egyptians control their horses?

The Egyptians used a variety of authoritarian methods to control their horses.

10.2.1 JAW ROPES

This type of control appears quite rarely, the first evidence of it is in Renni’s chariot team and it seems to recur in those of Amenemhab (TT 85) and Amunedjeh (TT 84). It is known as a “Ghost Cord” or “Cherokee Bridle” and is not used today⁹¹⁵ because it is

⁹¹⁴ T. E. Page, E. Capps & W. Rouse (eds.) (1930) *The Geography of Strabo*, London, 7.4.8. There is also an Old Hittite legal text dating to the sixteenth century that indicates that most male horses were gelded early, see M. T. Roth (1997) “Law Collections from Mesopotamia and Asia Minor,” Society of Biblical Literature Writings from the Ancient World, 6 2nd edition, Atlanta, 226.

⁹¹⁵ This form of control was used widely by Native Americans in the United States in the 19th century.

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not efficient and can be very cruel indeed.⁹¹⁶ It is formed when a rope is run through a horse's mouth (through the "bars"⁹¹⁷) and tied in a slipknot under the chin groove. It does not appear after the reign of Amenhotep III however the level of damage to the faces of the horses in many tombs makes the confirmation of this form of control equivocal. Given its inefficiency it would be natural for it to be replaced by the use of bridles and halters.

10.2.2 HALTERS

A halter consists of a noseband and throatlatch to which a lead rope can be added providing a safe way to lead or restrain a horse when a bridle and reins are not being used. There is evidence of halters in the tombs of Puyemre (TT 39) and Amenmose (TT 42) where unharnessed horses are being led. There may be more examples of halters however in many instances the artist has depicted bridles on unharnessed horses not in the presence of chariots. This may have been the case, however, since halters were known and used it is much more likely that artists did not differentiate between the halter and the bridle and that halters were used more often than their number of specific depictions would indicate.

10.2.3 WHIPS

No whips exist in their entirety, with only the stocks or handles made from more robust materials being preserved. Four were found in the tomb of Tutankhamun⁹¹⁸ made of elaborately decorated ivory and wood (Fig. 10.7) and one in the Metropolitan Museum is dated to Amenhotep III⁹¹⁹ made from ivory, garnet and paint and is in the image of a horse (Fig. 10.8).⁹²⁰

⁹¹⁶ P. A. Rollins (1922) *The Cowboy: His Character, Equipment and His Part in the Development of the West*, New York, 152.

⁹¹⁷ The "bars" are the narrow gap between the incisor and molar teeth on which the bit sits.

⁹¹⁸ N. Reeves (1990) *The Complete Tutankhamun*, London, 173. The leather in the harnesses and the whips had decayed to a "black glutinous mass." These four whip stocks were gessoed and inlaid with gold, electrum and silver. Carter's drawing of the whips stock can be viewed at www.griffith.ox.ac.uk/gri/carter/ it is numbered 333-12.

⁹¹⁹ Whip handle in the shape of a horse ca. 1390-1352 Metropolitan Museum of Art, Accession number 26.7.1293.

⁹²⁰ There is another example of later date (late 20th – early 21st Dynasty): MMA 22.3.15, found in the coffin of the "shield-bearer of the general" Yoti-Amun; W. C. Hayes (1959) *The Scepter of*

Whips are very common indeed in the images in the tombs and temples. They seem to be similar to Tutankhamun's ones⁹²¹ about 51cm in length with one or two leather thongs attached. They are carried by a variety of persons from kings to drivers in at least 25 instances from Paheri (Fig.10.9) to Ramesses III (Fig. 10.10). The rider in the Saqqara tomb of Horemheb (Fig. 10.11) also carries one. Interestingly, they are very rarely depicted in use that is, striking the horses. There seem to be only two instances when this happens both from the Amarna period. In Meryra I (AN4; Fig. 10.12) where Davies notes: "The charioteer waits beside the chariot, reins in hand, but a *saïs* also holds the horses, threatening them with a bunch of fodder (?)." ⁹²² Given that much of the image has been damaged, this may be an instance of a whip rather than a bunch of fodder which of itself seems unlikely to be seen as a threat by the horses. In Panhesy's tomb (AN 6; Fig. 10. 13),⁹²³ Nefertiti is holding an unfurled whip preparatory to using it. This is the first depiction of a woman driving a chariot⁹²⁴ and the only one of a whip apparently being used giving rise to a question concerning gender roles in Egypt.

10.2.4 BITS

Extant ancient Egyptian bits are rare. None were discovered in the tomb of Tutankhamun either because they were robbed or because bitless bridles were used. There are some others that have been dated to the period under discussion⁹²⁵ two being single jointed snaffle bits (Fig. 10.14, 10.15).⁹²⁶ These bits can be used effectively without being harsh, but new research has indicated that depending on the way they are

Egypt Part II, The Hyksos Period and the New Kingdom (1675–1080 BC), New York, 407 and fig. 258; S. Petschel & M. von Falck (eds.) (2004) *Pharaoh Siegt immer: Krieg und Frieden im Alten Ägypten*, Bönen, 106, fig.96.

⁹²¹ N. Reeves (1990) *The Complete Tutankhamun*, London, 173. Two of them measure 0.503m and 0.51m.

⁹²² N. de Garis Davies (1903) *The Rock Tombs of El-Amarna. Part I – The Tomb of Meryre*, London, 22.

⁹²³ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna. Part II. The Tombs of Panehesy and Meryre II*, London, pl. XVI.

⁹²⁴ H. Köpp-Junk (2013) "The Chariot as a Mode of Locomotion in Civil Contexts," 134, in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots. Proceedings of the First International Chariot Conference, (Cairo 2012)*, Leiden.

⁹²⁵ A. Herold (1999) *Streitwagentheologie in der Ramses-Stadt, : Bronze an Pferd und Wagen* Mainz, 52-75.

⁹²⁶ E. Esterson (2010) *The Ultimate Book of Horse Bits*, New York, 96–101. These bits put pressure on the corners of the lips, the bars and the tongue. "...the single jointed snaffle is a perfectly effective and soft bit in the right hands. However, if the rider (driver) has hands that constantly pull, a single jointed snaffle can turn into a much harsher bit." "A snaffle is one in which pressure on the reins causes a direct impact on the mouthpiece of the bit." 99.

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used, they can be considered a harsh type of bit. The thinner the snaffle the harsher it can be but even a Hackamore (a bitless bridle which puts pressure on the poll and the nose) can be stronger than a bit. The harshness of a snaffle or a hackamore depends on its use and the nature of the horse it is used on. In Egyptian chariot harness, the reins attached to the bits did not lead directly to the hands of the drivers but passed through loops on the yoke saddles on the shoulders of the horses.⁹²⁷ These loops called “terets” enabled the reins to have greater leverage to pull the heads of the horses down and create an inverted “v” in the joint of the bit inside the horses’ mouth. This essentially creates a dull spike in the roof of the mouth a horse trying to lessen the pressure could open its mouth to decrease the angle of the “v” and to evade the bit thus possibly explaining 25 of the 38 instances⁹²⁸ in which a clear image of the mouth(s) is visible in which the horse’s mouths are open and their heads held in close proximity to their necks. It would appear from this that the Egyptians did use the snaffle or the bitless bridle and possibly in a harsh fashion. There does not seem to be any use of curb reins running on or near the brow band putting pressure on the poll which is a very harsh form of control.

The common open mouth can be explained in ways other than bit evasion. The use of copper bits⁹²⁹ encourages chewing which can indicate relaxation in a horse as well as excitement or interruption. Bits and nosebands alone do not necessarily confirm an exceptionally authoritarian attitude used by the Egyptians. However, in combination with other instruments, that attitude can be suggested with some confidence.

10.2.5 CHEEK PIECES

Cheek pieces⁹³⁰ found on bits dated to the period under discussion,⁹³¹ which are fitted with spikes that press on the outside of a horse’s mouth, deliberately cause pain when the bit is pulled or turned (Figs. 10.14; 10.15). These projections on the inside of the

⁹²⁷ M. A. Littauer & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Tut’ankhamun tomb series 8, Oxford, 103.

⁹²⁸ That is taking the battle images as one image each.

⁹²⁹ Which would have been attractive to tomb robbers explaining the absence of these in the archaeological record.

⁹³⁰ E. Esterson (2010) *The Ultimate Book of Horse Bits*, New York: “The metal rings or shanks that attach the bridle and the reins to the mouthpiece of a snaffle bit.” 160.

⁹³¹ A. Herold (1999) *Streitwagentheologie in der Ramses-Stadt*, Mainz, 52-75.

shanks could not be seen by artists and therefore do not appear in the images. Their use, if introduced early in a horse's training would condition it to obey a driver's relatively slight pressure on the reins.⁹³²

10.2.6 NOSE BANDS

Extant ancient Egyptian bits are rare, possibly because many were made of perishable material such as bone and leather. More robust bits were made of bronze a metal that was attractive to tomb robbers. A leather noseband or "cavesson" (Figs. 10.16a, b, c) can be used as a bridle, in concert with one or in fact merely as decoration. Its effectiveness centres on its use on the most sensitive pressure points on the horse's head: the nose, chin groove and the poll.

"By changing the bit or fitting a different type of noseband, the action of the bridle can be made stronger, so the rider has greater control over the horse and the way in which he carries his head."⁹³³ They can also be used to deter the horse from opening his mouth and evading the bit.⁹³⁴

Drop nosebands are in evidence in 23 of the 38 instances where there is enough of the scene preserved to reveal them. There is no evidence of a "flash" (Fig. 10.16b) or "Grackle" noseband (Fig. 10.16c) that have an additional strap running from the cavesson around the nose in front of the bit and under the chin coming back to the cavesson. This is used to keep the mouth closed and prevent bit evasion. It is extremely difficult to tell if the nosebands of the Egyptian horses extend beyond the end of the nasal peak (Fig. 10.17) onto the septal cartilage (Fig. 10.17) but if not fitted correctly nosebands can project beyond this point and adversely affect the breathing of the horse. This may have been a deliberate and a very powerful method of controlling the horse -

⁹³² Cheek pieces without spikes are used today to give a greater ability to turn the horse's head. They are not considered to be harsh. In G. Brownrigg (2006) "Horse Control and the Bit," in S. Olsen, S. Grant, A. Choyke & L. Bartosiewicz (eds.) (2006) *Horses and Humans: The Evolution of Human-Equine Relationships*, Oxford, 165-173, experiments on a horse with cheek piece replications resulted in: "The pointed studs pressing on her cheeks and on either side of her lips did not seem to upset her or cause her any discomfort as long as she responded obediently to slight rein pressure. Probably if she had misbehaved, the effect of the studs would have been even more effective."168.

⁹³³ J. Draper, D. Sly & S. Muir (2004) *The Ultimate Book of the Horse and Rider*, London, 424.

⁹³⁴ W. Micklem (2003) *The Complete Horse Riding Manual*, London, 390.

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it had to obey to have the pressure released and be able to breathe.⁹³⁵ These were methods that could have been used on particularly difficult animals such as stallions.

10.2.7 NOSE SLITTING

This is not a control method in and of itself and there is some difference of opinion regarding its use,⁹³⁶ yet, there are several examples of reliefs that indicate this was practised. The Amarna reliefs⁹³⁷ (Figs. 10.18; 10.19) and the relief from the Museum of Scotland⁹³⁸ (Fig. 10.20) show it quite convincingly.

If, in an effort to prevent bit evasion or to increase control of the horse, a nose band is placed too low down on the soft tissue of the nose, it will restrict the breathing and as horses do not breathe through their mouths the ancients might expect that slitting the nostrils would increase the amount of air that could be taken in. This exceptionally cruel practise is not effective in that it does not alter the breadth of the nasal passages and could conceivably cause loose flaps to be drawn into the nose and actually hinder the breathing. There is no evidence of this practise until the Amarna period where it is seen clearly in several contexts and it is traceable at least into the reign of Ramesses II (Fig. 10.21). Why this practise appeared at this time is not known. Investigation of the horse management practises in the Near East during the Amarna period might shed more light on it. Littauer has traced the practise into the 19th century AD.⁹³⁹

⁹³⁵ Horses do not breathe through their mouths they breathe only through their nostrils.

⁹³⁶ N. Hoveler (2004) "Zu der Darstellung eines Pferdes der Amarna-Zeit mit angeblich aufgeschnittenen Nüstern" in *Göttinger Miszellen* 198, 19-29, citing the relief of a horse head excavated by N. de Garis Davies from Amarna which is held to demonstrate the practice of nose slitting Hoveler suggests that the practice is "neither reasonable nor detectable." She bases this on her opinion that the Amarna relief is not realistic and that both potential infection and the fact that the process does not achieve its aims would discount it.

⁹³⁷ R. Freed, Y. Markowitz & S. D'Auria (1999) *Pharaohs of the Sun*, Boston, fig 241 and C. Aldred (1973) *Akhenaten and Nefertiti*, Brooklyn, fig 79, Note with the figure; "The heads of the horses have hogged manes and their nostrils are split to compensate (as the Egyptians thought) for the restricted breathing imposed by the nosebands of ancient harnesses, which pressed on the animal's nostrils."

⁹³⁸ Relief showing the heads of a chariot team dated to the late 18th to early 19th Dynasties. Edinburgh, The Trustees of the National Museums of Scotland, A. 1961.438.

⁹³⁹ M. A. Littauer (1969) "Slit Nostrils of Equids," in *Zeitschrift für Säugetierkunde*, 34 (1969) Hamburg, 183-186.

10.2.8 CHECK ROWELS

A check rowel is a spiked disk suspended on a thin rod running from the cheek area of the horse to the area of the yoke saddle (Fig. 10.22). Ten were found in Tutankhamun's tomb⁹⁴⁰ and another in a private house in Amarna.⁹⁴¹ It was first thought⁹⁴² that they could have been used on the outside of the necks to keep the horses travelling straight (which they could be used to achieve); however more recent studies⁹⁴³ have suggested their use on the inside of the necks to prevent the horses from biting each other, which stallions are inclined to do when harnessed together. The first appearance of check rowels in the corpus occurs in the tomb of Meryra I (AN 4; Fig 10. 23) where they are seen clearly on the outside necks of the teams of the king and the queen making the details of their use equivocal. It is possible that they were used on both sides of the necks of the horses to maintain the directional control of the reins. They continue throughout the period and are evident in images up to and including the reign of Ramesses III.⁹⁴⁴

10.2.9 BLINKERS

Blinkers are used to prevent the horse from being alarmed by external sights and sounds, especially from behind, and limit the horse's almost 360° field of vision. Additionally, they provide some protection from material in the air such as on a battlefield. They could also assist with controlling interactions between a harnessed team of stallions. The first image including blinkers is in the tomb of Khaemhat (TT 57) during the reign of Amenhotep III⁹⁴⁵ (Fig. 10.24). They are shown continuously to the

⁹⁴⁰ H. Carter & A. C. Mace (1922-33) *The Tomb of Tut.ankh.Amun*, 3 vols. London.

⁹⁴¹ Ashmolean Museum, Oxford, No. 1924.73 see M. A. Littauer & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Tut'ankhamun tomb series 8, Oxford, 84.

⁹⁴² H. Carter (1923-1933) *Tut.ankh. Amun*, 2, 59.

⁹⁴³ M. A. Littauer & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Oxford, 84.

⁹⁴⁴ They can be seen in images from the tombs of Meryra I, Panehesy, Huya, Mahu, Any, Tutu, Tutankhamun, Horemheb and in the temples of Seti I, Ramesses II and Ramesses III.

⁹⁴⁵ M. A. Littauer & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Oxford, 85 mention that blinkers "appear in Egyptian representations already under Amenophis II," however I cannot find these representations in any of the images accessible to me other than Rommelaere.

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reign of Ramesses III⁹⁴⁶ (Figs. 10.26,10.28) and several sets were included in Tutankhamun's tomb. (Fig. 10.27) They were made of a thin wood possibly with leather backing and they were decorated with gesso and gold.⁹⁴⁷ Blinkers are a benign method of control. A most interesting discovery was part of a horse blinker made of ivory inscribed with the name of Thutmose the sculptor found at Amarna⁹⁴⁸ with part of an inscription reading: “*n ḥsy ntr nfr ḥrj k3t s'nh dhwtj-ms*” (Fig. 10.25). This identifies them as belonging to “the favoured one, (of) the good god, having authority over the works, the sculptor Thutmose.” Most revealing about this is that if it is actually the case then it suggests that the sculptor Thutmose as head of works (in this case artistic works), had a horse (at least) and probably a chariot team that was available for his use. This would extend our understanding of the level of penetration that horses had in Amarna society.

10.2.10 TIGHT REINS

In almost every image of harnessed horses the reins of the team are held tightly and do not dip down onto the backs of the horses. Even when there is no driver in the chariot and in Amarna images when the drivers are facing in the opposite direction (Fig. 10.29), the reins are still held tightly. There are two instances when this is not the case. In the tomb of Meryra I (AN 4; Fig. 10.30) two teams are held loosely, the reins almost touching the horse's backs with the driver facing away from them but there is a groom at their heads holding them tightly and in Horemheb's Saqqara tomb (Fig. 10.31) where the groom is leaning over the backs of the horses, the reins could not have been drawn taught but the groom is in direct contact with the team.

Taught reins would indicate a high level of control and they also possibly indicate a normal level of contact with the mouth of a horse that is “working.”

The Egyptians routinely used whips, bits, cheek pieces, check rowels, nosebands and blinkers together with techniques like nose slitting that today are considered to be

⁹⁴⁶ Blinkers are in evidence in the tombs of Meryra I, Panehesy, Ahmes, Penthu, Mahu, Any, Tutankhamun, Neferhotep and the temples of Seti I, Ramesses II and Ramesses III.

⁹⁴⁷ M. A. Littauer & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Oxford, 85.

⁹⁴⁸ Blinker from the house of Thutmose the sculptor, Staatliche Museen zu Berlin AM 21193.

extremely cruel and drastic. Their use of these authoritarian methods underlines their high expectations of obedience from the teams that provided the chariot power upon which much of New Kingdom Egypt depended.

10.3 RELATIONSHIP

The control measures to all indications were very authoritarian even cruel, however, there are other indications that the relationship between the Egyptians and their horses had a much more amiable side.

10.3.1 CALMING GESTURES

In a large number of images there is an individual standing directly in front of a highly strung, nervous team holding his hand in front of their faces in a calming gesture. There is no indication of malice, no implication of striking or of the use of force. Examples can be seen in the tombs of Menkheperasonb (TT 86; Fig. 10.32), Rekhmire (TT 100; Fig. 10.33), in many reliefs from Amarna⁹⁴⁹ (Fig. 10.34) and continuing into the reigns of Ramesses II and Ramesses III. It is a gentle calming gesture not a control measure.

10.3.2 STEADYING HORSES

There are several images of steadying and gentling horses, Khaemhat (TT 57; Fig. 10.35), Meryra I (AN 4; Fig. 10.36), Huya, Penthu and Ramesses II (Fig. 10.37) and Ramesses III. Grooms hold the horses close to their heads but without threatening gestures or any hint of violence or struggle.

10.3.3 LOOSE LEAD REINS

Leading a horse with loose reins reflects confidence relaxation and compliance. This can be seen in TT 39 (Puyemre; Fig. 10.38), TT 74 (Tjanuni), TT 63 (Sobekhotep), TT

⁹⁴⁹ C. Aldred (1973) *Akhenaten and Nefertiti*, Brooklyn, fig. 61. The note attached states; "The grooms try to quiet the restive steeds by stroking their noses."

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78 (Haremhab; Fig. 10.39) and TT 90 (Nebamun). This is not shown in harnessed horses and may be understood as showing teams that are not “working” at the time.

10.3.4 BEING CASUAL

There are images of individuals being very casual and relaxed with the horses. Grooms and drivers are seen sitting down relaxing in the tomb of Kenamun (TT 162; Fig. 10.40), they are leaning over horses in Horemheb’s Saqqara tomb (Fig. 10.41) and possibly patting horses in TT 91 (Anonymous A; Fig. 10.42).

10.3.5 CONFIDENCE

Grooms and drivers are seen turning their backs on teams, as in the tombs of Panhesy (AN 6; Fig. 10.43) and Meryra I (AN 4; Fig. 10.44). This again would suggest a high level of confidence in their control over the teams and the good behaviour and excellent training of their horses.

10.3.6 ATTITUDE

Several texts within the period demonstrate the care for and appreciation of their horses by a variety of kings who identify them with names and proud descriptions of their characteristics. On Thutmose IV’s “Dream Stele,” his horses are described as “swifter than the wind.”⁹⁵⁰ Tutankhamun’s ostrich feathered fan describes the horses as “being like bulls (in their strength).”⁹⁵¹ Seti I takes care to emphasise that his horses are well fed.⁹⁵² But the most devoted was Amenhotep II: “Now when he was yet a young prince he adored horses and delighted in them. He was one who was tenacious in working them, who knew their nature and was conversant with their training, having close acquaintance with their disposition.”⁹⁵³ Paheri apparently boasted to all about his horses; the horses are referred to as “the excellent team of the mayor, the beloved of its

⁹⁵⁰ Urk IV, 1541. 12-13; B. Cumming (1982-1984) *Egyptian Historical Records of the Later Eighteenth Dynasty*, Warminster, 249.

⁹⁵¹ H. Beinlich & M. Saleh (1989) *Corpus der hieroglyphischen Inschriften aus dem Grab des Tutanchamun*, Oxford, 71, no. 242. T.G.H. James (2000) *Tutankhamun*, London, 186.

⁹⁵² R. Caminos (1968) *The Shrines and Rock Inscriptions of Ibrim*, Archaeological Survey of Egypt 32, Egypt Exploration Society, London, 85.

⁹⁵³ Urk IV, 1281.8-14; B. Cumming (1982) *Egyptian Historical Records of the Later Eighteenth Dynasty*, Warminster, 21. (1.1281).

lord, about which the mayor boasts to everyone.”⁹⁵⁴ The harsh control methods are balanced by care for and appreciation of these noble animals in the service of Egypt.

10.4 HORSE RIDING

The vast majority of images contain chariot teams but there are several instances showing men on horseback. Schulman⁹⁵⁵ lists a number of Egyptian artefacts that contain images of horses being ridden. Eight relief images⁹⁵⁶ can be seen, one from the tomb of Horemheb,⁹⁵⁷ (Fig. 10.45) three from the Seti I⁹⁵⁸ battle images at Karnak eg. (Fig. 10. 46) and four from Ramesses II’s campaign reliefs at the Ramesseum eg. (Fig. 10. 47) Luxor temple (Fig. 10.48) and Abu Simbel. Schulman argued against the idea that was current in his time that Egyptians did not ride and that images of such activity were only those of “grooms and orderlies.”⁹⁵⁹ He established that the images were more probably showing scouts and messengers. He also discussed images associated with divinities such as Astarte who was shown frequently on horseback.⁹⁶⁰

Together with other depictions the images in the eight instances cited above possess aspects that seem to reinforce Schulman’s ideas and are indicative of the overall situation in Egypt at least in the military sphere in the late Eighteenth and Nineteenth dynasties regarding the riding of horses.

⁹⁵⁴ J. J. Tylor & F. L. Griffith (1895) *The Tomb of Paheri at El Kab*, London, 13, pl. 3. (Author’s translation: “Stand (still), do not make ‘trouble’, excellent chariot team of the ‘mayor’, beloved of its lord, that the mayor boasts of to everyone.”).

⁹⁵⁵ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” *JNEA* 16 (1957) 263-27.

⁹⁵⁶ There are several other such images for example at Abu Simbel (see W. Wreszinski (1988) *Atlas* pl.169). They are listed and described together with other artefacts in Schulman’s (1957) work 268-271.

⁹⁵⁷ G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. I. The Reliefs, Inscriptions and Commentary*, London.

⁹⁵⁸ The Epigraphic Survey (1986) *Reliefs and Inscriptions at Karnak: The Battle Reliefs of King Seti I*, IV, The University of Chicago, Oriental Institute Publications, pls. 11& 34.

⁹⁵⁹ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom,” *JNEA* 16 (1957) 263.

⁹⁶⁰ Schulman’s discussion of Astarte can be added to with the excavation of the Tell el-Borg stela, see J. Hoffmeier & K. Kitchen (2007) “Reshep and Astarte in North Sinai. A Recently Discovered Stela from Tell el-Borg,” *Egypt and the Levant* 17 (2007) 127-137. Because of the limited space available this aspect of the investigation of the horse in Egypt has been left for later investigation. However, the extensive article by J. Leclant (1960) “Astarté a cheval d’après les représentations égyptiennes” *Syria* 37 (1960) 1-67 provides an excellent contribution.

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The small number of riders in battle reliefs confirms that riding was certainly not as common as horses being used in chariot teams. The image from the tomb of Horemheb (Fig. 10. 45) seems to confirm the use of riders as messengers and/or scouts⁹⁶¹ but Seti's Karnak scenes and those at the Ramesseum suggest something more dramatic. These images indicate that in Seti's time riders, though not Egyptian, were actually present in the thick of battle. In Figs 4.261 and 4.262 Asiatic riders can clearly be seen fleeing the Egyptian advance. Interestingly there are no Egyptian riders shown in the Seti reliefs. However at the Ramesseum the rider is Egyptian and he is definitely in the midst of the battle, (Fig. 10.47). Scouts would have been superfluous on a battlefield and as none of those shown appears to be actually fighting, their numbers are tiny and they carry whips (most likely for use on the horses), these images may depict battlefield messengers. If this is the case then it indicates a new understanding of an aspect of battlefield practise in the New Kingdom, that given the large scope of these battles and the use of chariot divisions, messages needed to be distributed over the battlefield with the utmost speed and manoeuvrability and men on horseback were ideal for the task.

In these images there is no trace of a saddle or even a blanket. Saddles and stirrups appear to have been developed much later however there is an Egyptian example of a what might be understood as a "saddle blanket" in the burial of the Theban horse that Lansing and Hayes suggested was a "saddle" for a horse that belonged to Senenmut.⁹⁶² It is the only example of its kind. Described by the excavators as "what might be considered the first saddle known to us. It is more like a saddle cloth, to be sure, being merely a rectangular piece of linen and leather with a projection toward the rear."⁹⁶³ Riders whether Egyptian or other are seated in the "donkey seat" with the Luxor rider oddly appearing to ride side-saddle (Fig. 10.48). This might be an error on the artist's part or it might be an accepted way of coping with an uncomfortable seat though its practicality is questioned because it is extremely difficult to control a horse from this position. This Luxor image is interesting in that it displays what Porter and Moss

⁹⁶¹ Martin identifies the rider in Horemheb's tomb as "a horseman, perhaps a dispatch rider," G. T. Martin (1989) *The Memphite Tomb of Horemheb, Commander-in-Chief of Tutankhamun. 1. The Reliefs, Inscriptions and Commentary*, London, 43. The Luxor and Abu Simbel examples are designated as "scout," – Wb 3, 31.10-11.

⁹⁶² A. Lansing & W. C. Hayes (1937) "The Egyptian Expedition 1935-1936, the Museum's Excavations at Thebes", *Bulletin of the Metropolitan Museum of Art* 32, Supplement, 10.

⁹⁶³ A. Lansing & W. C. Hayes (1937) "The Egyptian Expedition 1935-1936, the Museum's Excavations at Thebes", *Bulletin of the Metropolitan Museum of Art* 32, Supplement, 10.

identify as being made up of a “vizier in chariot and adjutant on horseback.”⁹⁶⁴ The context of the image is again military in nature being part of the scenes of Ramesses II’s Syrian campaigns but the nature of the rider might be better described as a messenger as there is little evidence to support the Porter and Moss interpretation of an “adjutant.”⁹⁶⁵

In Egypt images of riders can be traced back to the Ahmose axe⁹⁶⁶ and further onwards to the plaque dated to Thutmose III’s reign⁹⁶⁷ but they occur on individual artefacts that do not give an understanding of the context of the image. It is not until the late 18th and early 19th dynasties that riders can be seen in the large-scale narrative military reliefs. Firstly, they can be seen apparently as scouts, then later as probable messengers in Asiatic forces and later still as messengers in Egyptian army battle images. This development may be a means of tracing the progression of the use of riding by Egyptians firstly as scouts and then as messengers something they may have copied from the armies of the Near East.

What these depictions do show is the arrival of new uses for horses and the creation of new occupations associated with them as well as the limited amount of tack that was used and the style of riding suitable for the tasks. The images also confirm that there is no evidence for the existence of large bodies of cavalry in Egyptian armies at this time.

A recent discovery may, however, eventually alter our understanding of the practise and development of riding horses in Egypt. The discovery of the 13th Dynasty (ca.1650-1600BCE)⁹⁶⁸ tomb and body of the king Senebkay⁹⁶⁹ and the forensic analysis of his

⁹⁶⁴ B. Porter & R. Moss (1994) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings, II Theban Temples*, Oxford, 334, (205)-(206). See also Wreszinski (1988) 2, pl, 64.

⁹⁶⁵ An “adjutant” is defined as “an officer who acts as an administrative assistant to a superior officer.” The image provides no evidence of any “administrative” activities on the part of the rider. Given the activity level of the horse and its rider the man may be bringing a message to the vizier in the chariot or perhaps setting out with one.

⁹⁶⁶ British Museum 36766. J. Leclant (1960) “Astarté a cheval d’après les représentations égyptiennes” *Syria* 37 (1960) 36. See Chapter 4 (this work) AH I (2) Battle Axe for a discussion of the dating of this artefact.

⁹⁶⁷ A. R. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom” *Journal of Near Eastern Studies* 16/4 (1957) 263-271. This plaque is in the Metropolitan Museum of Art, 05.3.263.

⁹⁶⁸ This would be consistent with the Hyksos period of power in Egypt.

⁹⁶⁹ Penn Museum (2015) “Giant sarcophagus leads Penn Museum team in Egypt to the tomb of a previously unknown pharaoh,” <http://www.penn.museum/press-releases/1032-pharaoh-senebkay-discovery-josef-wegner.html> accessed 29/03/2015.

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remains have revealed that he exhibited muscle attachments in his hips and legs characteristic of someone who rode horses consistently.⁹⁷⁰ The injuries on his body also indicate that he was attacked possibly while he was on horseback.⁹⁷¹ If this is correct then the Egyptians, or at least some kings were riding horses considerably earlier than previously suspected, one wonders if this has a correlation with the use of chariots too.

10.5 SUMMARY

The Egyptians seem to have had a concentration on the use of male horses in their chariot teams with a number identifiably stallions though mares have a small but definite presence in the evidence. Given the requirements of breeding programs this would seem to be normal.

Horses were high status animals and deliberate injury to them would be counter-productive. But, they are nervous, spirited, large and powerful animals whose natural reaction to any threat is flight. Harnessing them together (especially stallions) in battle and other contexts places them in decidedly unnatural situations from which they would normally flee or occasionally cause them to fight. The avoidance of these reactions and the expectation of their appropriate performance would therefore depend on a high degree of training and control and led to what is apparently very authoritarian forms of horse management. There is also a demonstration of the underlying theme in the images of Egyptian control over nature that is in keeping with the whole concept of *mꜥt*. There was a need not only to be in control, but to be seen to be in control. Nonetheless, this was not the totality of the Egyptian's relationships with their steeds: the cruelty was not without the counter balance of a high level of pride, confidence in and affection for these beautiful animals.

⁹⁷⁰ Penn Museum (2015) "New Forensic Evidence confirms violent death of pharaoh Senebkay," <http://www.penn.museum/press-releases/1180-senebkay-forensic-evidence.html> accessed 29/03/2015. "Another surprising result of the osteological analysis is that muscle attachment on Senebkay's femurs and pelvis indicate he spent a significant amount of his adult life as a horse rider."

⁹⁷¹ Penn Museum (2015) "Giant sarcophagus leads Penn Museum team in Egypt to the tomb of a previously unknown pharaoh," <http://www.penn.museum/press-releases/1032-pharaoh-senebkay-discovery-josef-wegner.html> accessed 29/03/2015. "The patterns of wounds to Senebkay's body suggest he was attacked while in an elevated position relative to his assailants, quite possibly mounted on horseback."

10.6 HORSE PRESENTATION

Though there are no images of the grooming of horses, there is evidence that there was considerable care and pride taken in their presentation.

Grooming has two main purposes: firstly, the achievement of the best possible appearance of the horse and secondly, it forms part of the proper care and management of the horse.

Horses in the natural environment are capable of keeping themselves fit, healthy and self-sufficient, however removed from this environment, it becomes necessary to care for and manage them artificially. Grooming “cleans and massages the skin, promotes good circulation and healthy skin and hair and prevents sores and galls.”⁹⁷² It also enables the early detection of injuries or infirmity. There is insufficient evidence available to make definite conclusions regarding the care, management and presentation of the Egyptian horse, however the reliefs and paintings do provide some insights into how this may have been done.

The relatively warm climate of Egypt would not give rise to a heavy winter coat and there is no indication of a variation in the seasonal thickness of the coats of the horses depicted. The most useful indicators of human action are the forelock, mane and tail.

In the fragments from the temple of Thutmose II ⁹⁷³ a chariot team is shown with banged forelocks⁹⁷⁴ (Fig. 10.49). The mane, tail and forelock of a horse protect against insects and in cool climates keep the horse warm. A forelock and mane can become thick, long, untidy and a site of insect infestation and banging (cutting) the forelock would make it more manageable as well as tidy and more aesthetically pleasing. Banged forelocks appear in the tombs of Menkheperresonb (TT 86; Fig. 10.50), Amunedjeh (TT 84), Rekhmire (TT 100) and in the sketch in the tomb of Horemheb (Saqqara). However, from about the time of Amenhotep II, banging seems to have been replaced by partially or completely hogged forelocks paralleling the treatment of manes. Though

⁹⁷² S. E. Harris (2008) *Grooming to Win, How to Groom, Trim, Braid and Prepare your Horse for Show*, New Jersey, 41.

⁹⁷³ B. Bruyère (1952) “Deir el Médineh Année 1926, *Sondage au Temple Funéraire de Thotmés II (Hat Ankh Shesept)*, FIFAO 4/4 1952, pl. 2, fragment 7.

⁹⁷⁴ See Horse Terminology for a definition of “banging.”

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it reappears again in the Egyptian horses in the reliefs of Ramesses II at Kadesh at Abydos.

The mane is another area where human action can be detected. In the images dating from the reign of Thutmose III and the tomb of Amenemhet (TT 123), all the manes are shown as “draped” or in their natural condition that is falling from the crest of the horse’s neck. In Menkheperresoneb’s tomb (TT 86; Fig. 10.50) they are shown in great detail coloured red/brown and with lines indicating the texture of the hair. The tombs of Nebamun (TT 145), Paheri, at El Kab and Senneferi (TT 99; Fig. 10.51) all contain horses with draped manes, those of Senneferi having coloured and lined manes. The horses shown include those presumably owned and used by Egyptians, Amenemhet (TT 123), Nebamun (TT 145), Paheri as well as those brought into Egypt from outside as tribute, as in the tombs of Menkheperresoneb (TT 86) and Senneferi (TT 99).

In the tombs dated to the reign of Amenhotep II, there is the first appearance of the hogged (roached) mane.⁹⁷⁵ Amenmose’s tomb (TT 42; Fig. 10.52) contains representations of three horses, two of which have hogged manes. Draped manes continue to be identified in the tombs of Amunedjeh (TT 84), Anonymous B (TT 143), Rekhmire (TT 100), Suemnut (TT 92) and Pehsuker (TT 88), whilst the horse in Penhet’s tomb (TT 239) and the king’s own team (Fig. 10.53) (Amenhotep II Luxor block) exhibit partially hogged manes (manes that stand up). From this time forward it is very rare to identify a draped mane. One is found in the horse sketch in the Saqqara tomb of Horemheb and another in a Karnak scene of Seti I attacking the Hittites (Fig. 10.55) where some of the Hittite horses exhibit draped manes. This variation may have been a way of differentiating them from Seti’s Egyptian teams, perhaps conveying disarray or untidiness and stressing the theme of chaos in the enemy as they fled before the king - or perhaps simply showing them as they really were. This raises the question of why manes and forelocks would have been hogged either partially or completely. There are four possibilities: health, convenience, prestige or fashion (or a mix of all four).

⁹⁷⁵

See Horse terminology.

10.6.1 DISEASE

A disease known as Summer Seasonal Recurrent Dermatitis (Sweet Itch) “is caused by an allergic reaction to the bites of flies of the genus *Culicoides* - the midges. The disease is an intensely irritant dermatitis, the lesions of which have a characteristic distribution. They are found along the dorsal midline, mostly in and at the junction of long hair and short hair, forelock, mane, saddle region, trunk and tail base.”⁹⁷⁶ The main symptom is excessive rubbing of the withers and the tail that results in hair loss, sores and thickened skin. It is most common in warm damp environments similar to the Delta and the Valley. In ancient Egypt, effective treatment would have been to remove the hair. The tail is needed but the mane can be cut or shorn. It could be suggested that the earliest concentrations of horses were in the Delta and the Valley - the ideal environments for midge attacks. The hogging of the manes and forelocks was, thus, an effort to control this. Later horses seem to have been kept in the south where it is dryer but by the time horses penetrated the south in numbers hogging had become the norm.⁹⁷⁷

10.6.2 CONVENIENCE

Long manes and forelocks (Fig. 10.56) can become tangled in bridles and harnesses causing hair loss and handling difficulties. Hogging the mane and forelock would reduce this problem and reduce hair matting and grooming time. The disadvantages of this activity would be that a hogged mane provides no protection for the horse and the mane needs to be hogged about once per month. A completely hogged mane will stand

⁹⁷⁶ K. P. Baker (2002) “The Skin and Its Diseases,” in H. Hayes (2002) *Veterinary Notes for Horse Owners*, (18th ed.) New York, 145. In Australia this is still an issue for horse owners in warm damp climates. Known locally as “Queensland itch” it leads to scratching and rubbing of the mane and tail and can eventually result in a horse becoming unworkable. The scratching causes the destruction of the mane and tail and is very disfiguring. See also K. A. Houpt (2005) “Maintenance Behaviours” in D. S. Mills & S. M. McDonnell (2005) *The Domestic Horse*, Cambridge, 102.

⁹⁷⁷ J. Hoffmeier (personal communication July 15 2014) “BTW, on a recent trip to Tanis in the NE Delta, my military guard (who was returning to his home there) pointed out a lush field with about 6 beautiful stallions and said, those belong to a Sheik from Saudi who believes that Egypt’s Delta was the best place to graze his horses.” The Delta may have been so in the past too and so keeping horses there would have necessitated mane hogging.

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up like an extended brush as it regrows and the evidence suggests this is the condition that the horses were kept in from about the time of Amenhotep II. The stallions of Ramesses II (Fig. 10.57) clearly have a section of the partially hogged mane remaining.

10.6.3 PRESTIGE

Hogging a mane can also work to improve the appearance of a horse adding bulk and stature to a smaller horse if kept at its upright stage (Fig. 10.58). It can augment the appearance of a horse with a “ewe” neck, one that has an undeveloped crest.⁹⁷⁸

Chariot teams were gifts from the king and prerogatives of office but the faunal and iconographic evidence suggests that Egyptian horses were relatively small. There was much prestige associated with these animals and their appearance could be improved considerably with simple grooming techniques. Hogging would improve a horse’s appearance by tidying up a damaged mane, adding height (when partially or fully hogged) and giving the impression of better conformation, reducing maintenance time and effort and perhaps satisfying the requirements of fashion. This treatment became the norm.

Horses in the tribute scenes in the tombs of Menkheperresonb TT 86, Senniferi TT 99, Amunedjeh TT 84 and Rekhmire TT 100 originating from states in the Levant where the environment was dryer than in the Delta are all shown with draped manes. Given the climates in their areas of origin the draped mane and forelock may not have allowed the development of dermatitis making hogging unnecessary.

After Amenhotep III even horses presented in tribute in the tombs of Anonymous A TT 91, Nebamun TT 90, Horemheb (Saqqara) have hogged manes as do the Hittite horses being brought back to Egypt by a triumphant Seti I (Karnak south wall west wing bottom register.) It could be suggested that the tribute then was in its “proper form” that is, in a condition more suitable to the Egyptians, with the manes hogged and this trend may also have “caught on” in the Levant as a result.

⁹⁷⁸ V. Watson (2008) *Manes and Tails*, Shrewsbury, 12.

10.6.4 TAILS

Tails are generally depicted at three different angles: low, high and very high. This has more to do with the demonstration of action/demeanour than presentation and has been discussed elsewhere. There is no evidence of “banging”⁹⁷⁹ of tails throughout the period. In many images the tails appear to be in a natural condition, however in several at least, there appears to be some evidence of tail pulling. A natural tail (Figs. 10.54, 10.55) is thick with both long and short hairs up to and including the dock. If the long hairs of the tail are damaged or thin the tail can be enhanced by removing or thinning the short hair for a distance of four to six inches on the dock giving the skirt a much fuller appearance and emphasising the carriage of the tail⁹⁸⁰ (Fig. 10.59, 10. 60, 10.61). This can be seen in the case of Ramesses II’s team at Beit el-Wali (Fig. 10.62).

a. Tail plaiting/ braiding

In the Broad Hall of the tomb of Rekhmire (TT 100; Fig. 10.63) on the north western wall facing the door is a depiction of Syrians bringing tribute including two horses. The near horse shows evidence of tail pulling and it is also being presented with the only example so far identified of tail plaiting. It appears to be a relatively short example of French “inside” braiding or plaiting.⁹⁸¹ The custom of tail braiding is said to have originated in England at a much later date⁹⁸² but this example would suggest that the practise is much older.

b. Tail banding- decoration

Very little archaeological evidence exists for this feature however, occasionally indications of it might be discerned (though more investigation needs to be undertaken). In the First Court of the temple of Seti I at Abydos⁹⁸³ (Fig. 10.64) and in a scene of

⁹⁷⁹ S. E. Harris (2008) *Grooming to Win*, 233.

⁹⁸⁰ S. E. Harris (2008) *Grooming to Win*, 234.

⁹⁸¹ S. E. Harris (2008) *Grooming to Win*, 228-232.

⁹⁸² S. E. Harris (2008) *Grooming to Win*, 207.

⁹⁸³ B. Porter & R. Moss (2002) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings*, 6, Upper Egypt: Chief Temples, 3-6.

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Ramesses II at Abu Simbel (Fig. 10.65)⁹⁸⁴ a small amount of raised relief can be seen at the base of the horse's tail.

Though the paint on the reliefs in the temples has now vanished, H. J. Redoute's coloured copy of Ramesses III at Medinet Habu⁹⁸⁵ (Fig.10.66) Ippolito Rosellini's image of Ramesses II at Abu Simbel⁹⁸⁶ (Fig. 10.67) and E. Prisse D'Avenne's rendering of Ramesses II's horses from the Ramesseum⁹⁸⁷ (Fig. 10.68) indicate the practise of tail banding with the application of a narrow coloured band at the base of the tail. It is possible that some colour remained on the reliefs in the early 19th Century that was observed by these individuals and recorded. Their illustrations of it are numerous enough to suggest that they are based on reality. There does not seem to be a practical purpose for this other than for decoration and it is still practised today (Fig. 10.69). It is visible in horses dating from the reign of Ramesses II (Fig. 10.70) but may also be indicated on the king's horses on Tutankhamun's Painted Box.⁹⁸⁸ (Fig. 10.71.)

10.7 PRESENTATION AND KINGS

Naturally, the most impressively maintained and presented horses belonged to the kings. Their teams are named, are very often stallions and they are equipped with chariots apparently made of gold and silver and highly decorated,⁹⁸⁹ the finest harnesses, plume bonnets and colourful, possibly defensive blankets and other trappings. They are always depicted in spirited, occasionally aggressive fashion and in proportion to their royal master. Additionally Calvert⁹⁹⁰ and Hoffmeier suggest that the

⁹⁸⁴ T. G. H. James (2002) *Ramesses II*, Vercelli, 11-14.

⁹⁸⁵ C. Miller (1997) (transl.) *Description de l'Égypte*, Köln, A. II, pl. 12.

⁹⁸⁶ H. Rosellini (1977) *Monumenti dell' Egitto e della Nubia. Volume I. Monumenti Storici, storici (Reprographie de l'edition originale), Collection des Classiques égyptologiques*, Éditions de Belles-Lettres, Genève, LXXXI.

⁹⁸⁷ C. Roehrig & F. Serino (2003) *Ancient Egypt. Artists and Explorers in the Land of the Pharaohs*, Vercelli, 294. This image is from the works of E. Prisse d'Avennes however I have not been able to find the original or an accurate reference to it.

⁹⁸⁸ Nina de Garis Davies & A. H. Gardiner (1962) *Tutankhamun's Painted Box*, Oxford, plates 1,2,3,4.

⁹⁸⁹ See A. Calvert (2013) "Vehicle of the Sun: The Royal Chariot in the New Kingdom," 45-71 in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots. Proceedings of the First International Chariot Conference, (Cairo 2012)*, Leiden.

⁹⁹⁰ A. Calvert (2013) "Vehicle of the Sun: The Royal Chariot in the New Kingdom," 46 in A.

chariot, the king himself and the horses' trappings were the only areas available for the application of apotropaic emblems. If this is so, the horses through their carriage of these emblems took actual part in protecting the life of the king in more than a practical sense: "it is logical when under such constraints to embellish essential components with apotropaic devices, thus allowing them to serve double duty"⁹⁹¹ and, "literally almost every element that made up the chariot of the king including the horse trappings, was ornamented to serve an apotropaic function."⁹⁹² The use of plumes can be seen from a pragmatic perspective in that they, with the "bonnet" by which they are attached to the horse's heads, would have provided some protection in battle,⁹⁹³ an easily identifying feature on the battle field and a method for distinguishing royal from non-royal teams. Plumes would have added height, colour, movement and decoration further enhancing the visual impact and prestige of the royal chariots. Hoffmeier referring to the royal horses in the Ahkenaten temple images suggests that the plumes also exercised an apotropaic function revealed through their association with an apparent feathered headdress worn by the guardian god Bes as well as with martial deities such as Montu.⁹⁹⁴ He also draws attention to the presence of what appears to be a *mnit* – like necklace on the chariots depicted in Plate 20 (TS 1428 and TS 1459). These are royal

Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots. Proceedings of the First International Chariot Conference, (Cairo 2012)*, Leiden, "...literally almost every element that made up the chariot of the king including the horse trappings, was ornamented to serve an apotropaic function." Also 57, "This might explain the existence of more thickly layered protective decorative elements on the chariot and its horse trappings. It is logical when under such constraints to embellish essential components with apotropaic devices, thus allowing them to serve double duty." J. K. Hoffmeier (1988) "The Chariot Scenes," in D. B. Redford (1988) *The Akhenaten Temple Project. Vol. 2. Rwd-Mnw and Inscriptions*, Aegypti Texta Propositaque 1, Toronto, 35-45.

⁹⁹¹ A. Calvert (2013) "Vehicle of the Sun: The Royal Chariot in the New Kingdom," 57 in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots. Proceedings of the First International Chariot Conference* (Cairo 2012) Leiden.

⁹⁹² A. Calvert (2013) "Vehicle of the Sun: The Royal Chariot in the New Kingdom," in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots, Proceedings of the First International Chariot Conference* (Cairo 2012) Leiden, 45.

⁹⁹³ The "poll" of a horse being especially vulnerable to injury.

⁹⁹⁴ J. K. Hoffmeier (1988) "The Chariot Scenes" in D. B. Redford (1988) *The Akhenaten Temple Project, Vol 2. Rwd-mnw, Foreigners and Inscriptions*, Aegypti Texta Propositaque 1, Toronto, 41.

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chariots and he cites Bleeker who suggested that these beads may have had magical power which might have provided added protection for royalty.⁹⁹⁵

This work has not included discussions of the trappings of chariot teams as they have been exhaustively discussed in the scholarship (see the extensive work of Littauer and Crouwel).⁹⁹⁶

The elaborate presentation of the king's horses demonstrated the pride their owners placed in them as well as their effective use of the horse's inherent nobility and power to enhance the "public face" of the king and of Egypt and to provide additional protection to the monarch (Fig. 10.65).

10.8 SUMMARY

A number of insights can be gleaned from the overview of the human/horse relationship in Egypt. Similar to today, the Egyptians also appeared to have had an appreciation of the horse on an emotional level. The texts and images demonstrate affection certainly on the part of the kings and the elite but also by those who dealt more directly with them, their drivers and grooms.

Horses were a means to enjoyment through their use in hunting, in weapons practise and the speed and manoeuvrability of the chariots they powered made them the equivalent of the "fast cars" of their day. These elements did not prevent the Egyptians from using harsh methods to train, use and control their horses which they did to great effect, enabling them to be used extremely successfully in both peaceful pursuits and in war.

The use of the light spoke wheeled chariot transformed Egypt providing a new and much more effective form of locomotion for both short and long distance travel

⁹⁹⁵ J. K. Hoffmeier (1988) "The Chariot Scenes" in D. B. Redford (1988) *The Akhenaten Temple Project, Vol 2. Rwd-Mnw and Inscriptions*, 37. C. J. Bleeker (1973) *Hathor and Thoth: Two key Figures of Ancient Egyptian Religion* (Numen Supplements XXVI; Leiden, 1973) 59.

⁹⁹⁶ M. Littauer. & J. H. Crouwel (1985) *Chariots and Related Equipment from the Tomb of Tutankhamun*, Oxford. M. Littauer & J. H. Crouwel (1988) "A Pair of Horse Bits of the Second Millenium B.C. from Iraq" *Iraq* 50 Journal of the British Institute for the Study of Iraq, (1988) 169-171. These are only few works associated with the study of chariots and their trappings.

facilitating the conduct of administrative, communication and diplomatic activities. As Heidi Köpp-Junk points out, “the chariot was the status symbol par excellence and the supreme mode of locomotion, both for private and public appearances and travel.”⁹⁹⁷ As chariots devolved either directly or indirectly through offices, they were a sign of royal favour, accomplishment and wealth and it was the horse that made the chariot work.

“Both the chariots and their draught animals were highly suitable for lavish decoration, thus catering for the love of ostentation of the kings and an elite class,”⁹⁹⁸ which can be seen in the methods by which they presented the horses. The most ostentatious and obvious horses were those that made up the teams of the kings and that featured so prominently on the walls of the great temples. Their appearance there demonstrated the dependence that the kings and Egypt itself had on the horse as the source of the power that drove the Egyptian victory in war and in the acquisition and maintenance of the empire, as well as the iconography of its kings. Inherently the ancient Egyptian human/horse relationship was symbiotic.

⁹⁹⁷ H. Köpp-Junk (2013) “The Chariot as a Mode of Locomotion in Civil Contexts,” 132, in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots. Proceedings of the First International Chariot Conference, (Cairo 2012)*, Leiden.

⁹⁹⁸ J. Crouwel (2013) “Studying the Six Chariots from the Tomb of Tutankhamun- an Update,” 74, in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots. Proceedings of the First International Chariot Conference, (Cairo 2012)*, Leiden.

CHAPTER 11: THE IMPACT OF THE HORSE

*“Horses lend us the wings we lack.”*⁹⁹⁹

“The process of innovation - or the process of adoption of new technology - is invariably much more complicated, involving not merely the acquisition of new technological ‘packages’ or inventions but also, in each case the emergence of a sympathetic set of social and economic conditions.”¹⁰⁰⁰ The introduction of the horse and chariot resulted in just such an emergence. It had a profound domestic impact on Egypt giving rise to a series of new occupations, hierarchies, establishments, industries, crafts, services, offices, terminologies, skill sets, wisdom and influence on the environment itself. Additionally, it exercised an immense impact on Egypt’s standing in the international community.

11.1 DOMESTIC IMPACT

At the time of the Egyptian acquisition of the light, spoke wheeled chariot and team this new military technology was changing the nature of war and the balance of power in the Near East and it seems from the faunal, iconographic and textual evidence that the need for Egypt to possess this weapon was not lost on the kings of the early 18th dynasty. Ahmose I acquired at least one chariot and its team.¹⁰⁰¹ Thutmose I¹⁰⁰² and Thutmose II¹⁰⁰³ seemed to have been able to bring them back in increasing numbers from their Asiatic campaigns and Thutmose III seized thousands of horses¹⁰⁰⁴ as a result of his

⁹⁹⁹ “Anonymous” quoted in K. Maffei (2007) *Horses*, New York, 22.

¹⁰⁰⁰ I. Shaw (2001) “Egyptians, Hyksos and Military Technology: Causes, Effects or Catalysts?” in A. Shortland (ed.) (2001) *The Social Context of Technological Change: Egypt and the Near East, 1650–1550 BC*, Oxford, 60.

¹⁰⁰¹ *Urk*, IV, 1-1; in *Urkunden IV*: K. Sethe (ed.), *Urkunden der 18. Dynastie*, fasc. 1-16 (Leipzig, 1927-30) reprinted in 4 vols. (Berlin & Graz, 1961); W. Helck, *Urkunden der 18. Dynastie*, fasc. 17-22 (Berlin, 1955-61). J. B. Pritchard (1955) *Ancient Near Eastern Texts Relating to the Old Testament*, Princeton, (ANET) 233.

¹⁰⁰² “The Tombos Stele,” *Urk* IV, 82-87;

¹⁰⁰³ The battle scene fragments remaining from Thutmose II’s temple in Western Thebes depict horses and Asiatic figures in conflict. B. Bruyère (1952) “Deir el Medineh Année 1926, Sondage au Temple Funéraire de Thotmés II (Hat Ankh Shesept)”, *FIFAO* 4/4 pls II, III and IV. See Chapter 5 for a more in depth discussion of the fragments.

¹⁰⁰⁴ *Urk* IV, 663.8-11; J. B. Pritchard (1955) *ANET* 237, and D. B. Redford (2003) *The Wars in Syria and Palestine of Thutmose III*, 34.

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incursions and ensured, through the levying of tribute¹⁰⁰⁵ that included horses, that the supply would continue. These kings may have also acquired individuals who like the earlier Hurrian Kikkuli had specialised skills and knowledge relating to the care and training of chariot teams and who would have been responsible for establishing a horse and chariot “industry” in Egypt as well as helping to create and develop a whole new division of Egypt’s military.

Conquest and tribute were not reliable sources for the numbers of horses that would have been necessary for Egypt to compete with the powers of the Near East so a domestic breeding program would have needed to be introduced.

11.1.1 HORSE BREEDING

Domestic breeding programs would have been needed for a steady, dependable, quality supply of horses if Egypt was to maintain its standing in an era characterised by chariot warfare. Unfortunately, archaeological evidence of such programs has not been uncovered making conclusions quite speculative but at the heart of the process were the horses themselves and today horses are still the same species and have the same biology as Egyptian horses. It is possible, on this basis, at least mathematically and in the light of practical biological factors to speculate on Egypt’s capacity to breed horses for its own use.

If one breeding pair of horses (a mare and a stallion) was acquired as early as the reign of Ahmose I, using Pascal’s Triangle¹⁰⁰⁶ a mathematical tool for calculating probability, it is possible to calculate that this pair could have been the progenitors for approximately 1500 horses over some 70 years from the end of Ahmose I’s reign to Year 22 when Thutmose III led his first Asiatic campaign. This figure makes no allowance for variables such as sickness, infertility, stillbirths, accidents etc. Conservatively, eliminating 500 of these animals as a result of the effects of these

¹⁰⁰⁵ *Urk* IV 1442.3-5, “I crossed Upper Retjenu behind my lord and I taxed Upper Retjenu in silver, gold, lapis lazuli and all (kinds of) precious stones, chariots and horses without number.” B. Cumming (1984) *Egyptian Historical Records of the Later Eighteenth Dynasty* Fasc. II Warminster, 139.

¹⁰⁰⁶ This is a triangular array of binomial coefficients. It is named after the French mathematician Blaise Pascal. It is mainly used in probability and algebra. See A.W. F. Edwards (2002) *Pascal’s Arithmetical Triangle: The Story of a Mathematical Idea*, Boston.

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variables still permits Egypt to have approximately 1000 horses resulting from the single original pair by Year 22.¹⁰⁰⁷ Whilst this is mathematical probability, it does show that a well organised and successful breeding program could have comfortably provided for all the animals that Thutmose would have needed, as well as maintaining the breeding stock remaining within Egypt itself. Further support for this lies in the excavation of the stables attributed to Ramesses II and later kings at Qantir/ Per-Ramesses which are estimated to have housed up to 418 horses.¹⁰⁰⁸ This could not have been the only such structure and its size implies that Egypt was fully capable over considerable time of domestically producing numbers of horses requisite to its needs. Once such a program was begun it would then have set in motion a chain reaction of other developments that would have been needed in order to maintain and increase the supply of horses and chariots not only for military purposes but also for the escalating domestic uses for this new technology.

11.1.2 LOGISTICS ASSOCIATED WITH THE HORSE

Given the above statement, there is scant evidence in the archaeology concerning the logistics associated with horses in Egypt. Nevertheless, “a horse is a horse” and with concessions to our understanding of the morphology of the Egyptian horse, parallels can

¹⁰⁰⁷ C. Bridgewater. Eastside Riding Academy (Sydney), suggests that depending on the conditions under which the horses were maintained there may have been 1000 out of the 1500 lost over the period. Even so, this would still have resulted in 500 progeny for each breeding pair. (Personal communication 5/4/2013).

¹⁰⁰⁸ A. Herold (1998) “Piramesse – Northern Capital: Chariots, Horses and Foreign Gods,” 138 in J. G. Westernholz (ed.) (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29, 1996, Jerusalem, Israel*, 129-146: See E. Pusch (1991) “Recent Work at Northern Piramesse, Results of Excavations by the Pelizaeus-Museum, Hildesheim, at Qantir” in E. Bleiberg & R. Freed (eds.) (1991) *Fragments of a Shattered Visage: The Proceedings of the International Symposium on Ramesses the Great*, Memphis, 199-216 and D. Aston & E. Pusch, (1999) “The Pottery from the Royal Horse Stud and its Stratigraphy” in M. Bietak (ed.) (1999) *Egypt and the Levant*, 9 (1999) 39-77. There are also references in T. Rehren, E. Pusch & A. Herold (2001) “Qantir-Piramesse and the Organisation of the Egyptian Glass Industry,” in A. Shortland (ed.) (2001) *The Social Context of Technological Change*, Oxford, 223-238 and E. Pusch (1993) “Pi-Ramesse geliebt von Amun, Hauptquartier deiner Streitwagentruppen,” 126-139 in A. Eggebrecht (1993) *Pelizaeus-Museum (Hildesheim). Die ägyptische Sammlung (Antike Welt Sondernummer)* Mainz.

be drawn from the modern world regarding these logistics.¹⁰⁰⁹ These will allow some appreciation of the domestic impact of the horse.

What were the feeding requirements of the horses?

A grazing horse needs 31 litres of clean, fresh water and an absolute minimum of 1.5-3.1% of its body weight in food each day.¹⁰¹⁰ The fodder should be grass (hay) interspersed with other vegetation which is all the horse needs in the wild to maintain health and normal activity. When placed in a controlled environment, a paddock or stable, horses need these things to be provided artificially. Should activity levels be increased, additional foods need to be provided. Horses are “trickle feeders” so to maintain their digestive health they must be fed several times each day. Large amounts of grass (hay)¹⁰¹¹ are the basis of the diet but additional grains such as oats and barley would be needed.¹⁰¹² If the average Egyptian horse weighed approximately 500 kilos, a figure supported by the faunal remains,¹⁰¹³ then it would need an absolute minimum of 8.3 kilos of food and 31 litres of water each day. The table below (also Fig.11.1 in Vol.2) gives an indication of the quantities needed by just 100 horses. Ramesses II’s stable complex at Pi-Ramesses was estimated to accommodate over four times this

¹⁰⁰⁹ C. Layton B.Sc. M.Ed (Equine Nutritionist) <http://www.balancedequine.com.au/> personal communication 4/11/13. Also National Research Council (2007) *Nutrient Requirements of Horses* (6th Ed.) The figures mentioned here are absolute minimums required and there are a vast number of different estimations that are dependent on factors such as the level of work, the individual’s metabolic rate, the quality and nature of feed and many others. An extremely detailed discussion of these can be found in the text mentioned above.

¹⁰¹⁰ This would be an animal doing no work at all. A. Spalinger (2005) *War in Ancient Egypt*, Oxford, 35 has a detailed discussion of the logistics associated with providing for chariot horses on campaign and cites “22 kilos of forage and 30 liters of water” as the minimum required per day for each animal. The figure for water is the same as that of the National Research Council publication (see above) however Spalinger’s fodder estimation is almost double. Spalinger references J. Roth (1999) *The Logistics of the Roman Army at War (264 BC- AD 235)* Leiden, 62-7 and D. Engels (1978) *Alexander the Great and the Logistics of the Macedonian Army*, Berkeley, 126-130 and 145 as the sources for these figures. Engels 18, Appendix 1 and Appendix 5 (126-130) Table 2 (145) quotes approximately 20lbs of food per day per horse (approximately 9.07 kilos per day per horse). Roth, also referenced by Spalinger, cites 9.5-14 kilograms per horse per day, Table 4, 62-67. Roth cites Engels and Engels estimates are based on Army Veterinary Department, Great Britain (1908) *Animal Management*, London. It would seem that Spalinger, 35, has not converted pounds to kilograms as this would bring his estimates in line with all of these others given that there is a range of figures determined by the size and work levels of the horses concerned.

¹⁰¹¹ Hay is grass, legumes and other herbaceous plants.

¹⁰¹² Barley needs to be cooked, rolled or crushed before being fed to horses.

¹⁰¹³ The faunal remains (See Chapter 3) indicate that the Egyptian horse was finely built and approximately 14 hands in height which given adequate feed would be in the vicinity of 500 kilos.

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number.¹⁰¹⁴ The amount of pasture, crops and water supplies set aside to support even this relatively small number of horses gives a general insight into the huge impact the acquisition of the horse and chariot had on the domestic capabilities of the Egyptian state.

Horses	Water (mixed hay and grain diet)	Water (forage only)	Feed (grass/hay- light work)	Feed (grass/hay- heavy work)	Waste (manure)	Waste (urine)
1	31 litres	33.5 litres	8.3 kg	13.3 kg	8-10kg	12-14 litres
10	310 litres	330.5 litres	80.3kg	130.3 kg	80-100kg	120-140 litres
100	3100 litres (3+ tonnes)	3300.5 litres (3+tonnes)	800.3kg	1300.3 kg	800-1000kg	1200-1400 litres

Table. 11.1 Daily Nutritional Requirements

Horses of similar build to Egyptian horses in light work make 8 to 10 kilograms of manure per day¹⁰¹⁵ per horse and this would need to be removed and disposed of. In the stables at Pi-Ramesse, basins in the floors have been found that have been identified as receptacles for urine collection.¹⁰¹⁶ Urine production at these stables amounted to 12 to 14 litres per animal per day¹⁰¹⁷ and it was collected and like the solid waste probably used for fertiliser.

¹⁰¹⁴ See E. Pusch (1991) "Recent Work at Northern Piramesse," in E. Bleiberg & R. Freed (eds.) (1991) *Fragments of a Shattered Visage: The Proceedings of the International Symposium of Ramesses the Great*, Memphis, E. Pusch (1993) "Pi-Ramesse geliebt von Amun, Hauptquartier deiner Sretitwagentruppen," 126-139 in A. Eggebrecht (1993) *Pelizaeus-Museum (Hildesheim) / Ägyptische Sammlung*, Mainz. A. Herold (1998) "Piramesse-Northern Capital: Chariots, Horses and Foreign Gods," 138 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions Proceedings of the Symposium held on May 27-29 1996 Jerusalem*, Israel, and A. Herold (1999) *Streitwagentechologie in der Ramses-Stadt: Bronze an Pferd und Wagen*, Mainz, for a very detailed examination of the archaeology at the site.

¹⁰¹⁵ C. Bridgewater, Eastside Riding Academy, personal communication, 12 .10. 2012 based on actual weighing of the waste from a horse of similar height and weight to Egyptian horses.

¹⁰¹⁶ A. Herold (1998) "Piramesse-Northern Capital: Chariots, Horses and Foreign Gods," 135 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29 1996 Jerusalem*, Israel.

¹⁰¹⁷ A. Herold (1998) "Piramesse-Northern Capital: Chariots, Horses and Foreign Gods," 135 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29 1996 Jerusalem*, Israel. Herold uses for her reference in Note 11, Prof. Dr. H. Meyer, *Tierärztliche Hochschule Hannover*, Institut für Tierernährung, per Fax 29.01.1995.

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Supplies of fresh water and fodder on a large scale would have been necessary as would the removal of substantial amounts of solid and liquid waste not only to prevent build up, but also to avoid insect activity and disease.

These figures, while estimates, have archaeological and authentic biological support and give some insight into the massive planning, organisation and work required to provide for horses at least during the early 19th Dynasty.¹⁰¹⁸ The economic impact would have been extraordinary. Obviously the resources would have been built up over time but the allocation of grazing land and the production of fodder for stabled and “working” animals, the creation of reliable water supplies and the establishment of chariot and equipment making industries would have stimulated the economy and altered patterns of land use and human activity in selected areas.

The workforce needed to conduct these activities would have varied in scale and diversification according to the number of horses being kept. The stables at Pi-Ramesse are very large but there is also evidence of much smaller ones in official contexts. Papyrus Lansing, dating from the 20th Dynasty, mentions the scribe Raia having “horses in the stable”¹⁰¹⁹ and the tomb of Meryra I (AN 4; Fig. 11.2) features an image of horses feeding in a stable in the grounds of the tomb owner’s estate. In both cases the number is small possibly only one team but stable hands and grooms would feed, groom and clean the horses as well as the stables and the tack associated with them.¹⁰²⁰ These would be also needed in large scale installations like Pi-Ramesse and stable masters would be needed to organise all activities such as dental, veterinary treatment¹⁰²¹ and

¹⁰¹⁸ The stables seem, based on inscriptions discovered there to have been in use from at least Ramesses II to Sethnakht, A. Herold (1998) “Piramesse-Northern Capital: Chariots, Horses and Foreign Gods,” 135 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29 1996 Jerusalem, Israel*.

¹⁰¹⁹ M. Lichtheim (1976) *Ancient Egyptian Literature, Vol II, The New Kingdom*, Berkeley, provides a translation of the Papyrus Lansing: A Schoolbook. P British Museum, 168-175. The horses are in a stable attached to the scribe’s house.

¹⁰²⁰ A. Herold (1998) “Piramesse-Northern Capital: Chariots, Horses and Foreign Gods,” 135 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29 1996 Jerusalem, Israel*. Herold conducted an experiment and discovered that it took “approximately three minutes to empty the “toilet.” This was the urine collection basin in the stables. No doubt a job conducted by an individual with relatively low status.

¹⁰²¹ There are no veterinary texts extant that relate to the treatment of horses but this is not to indicate that they did not exist. Experience would also have been a factor in the veterinary treatment of horses.

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farriers, oversee fodder, water supplies and waste removal. They would also have been responsible for the maintenance of the required numbers of horses including any “special” animals such as those in the teams of royalty or the elite.

Experienced trainers and drivers would exercise and train animals, a process that would have begun with young horses and been long term and intensive to build stamina, cooperation, familiarity with a chariot and the commands of the driver, to “desensitise” the horses to the noise and chaos of battle¹⁰²² or other uses. Again, there is no archaeological material to support this process, but nevertheless the training of horses in the modern world necessitates the setting aside of large tracts of land for training and exercising and it is expected that the same areas were provided in Egypt.

Craftsmen made, fitted and repaired tack and chariots - a process that seems to have taken place close to the stables.¹⁰²³ The tombs of Hepuseneb (TT 67; Fig. 11.3), Puyemre (TT 39; Fig. 11.4) and Mery (TT 95; Fig. 11.5) attest to these activities.

The breeding and management of mares, stallions and foals would have necessitated both staff and organisation to guarantee quality and reliable supply and large areas of grazing land would have been allocated, not only to grazing itself, but also to the supply of suitable fodder for confined stock. Fresh clean water was needed for consumption as well as for washing horses and cleaning stables and stables, fencing and storage facilities had to be constructed.

Very little remains in the archaeological record to provide evidence for this, however, the confirmation of its existence and scale resides in the images of well maintained highly trained horses of the elite and in the chariot divisions of the kings of the 18th and

¹⁰²² A process similar to that undertaken with modern police horses.

¹⁰²³ See E. Pusch (1991) “Recent Work at Northern Piramesse,” in E. Bleiberg & R. Freed (eds.) (1991) *Fragments of a Shattered Visage: The Proceedings of the International Symposium of Ramesses the Great*, Memphis: E. Pusch (1993) “Pi-Ramesse-geliebt-von-Amun, Hauptquartier deiner Sretitwagentruppen,” 126-139 in A. Eggebrecht (1993) *Pelizaeus-Museum (Hildesheim) / Ägyptische Sammlung*, Mainz: A. Herold (1998) “Piramesse-Northern Capital: Chariots, Horses and Foreign Gods,” 138 in J. G. Westernholz (1998) *Capital Cities: Urban Planning and Spiritual Dimensions Proceedings of the Symposium held on May 27-29 1996 Jerusalem*, Israel: A. Herold (1999) *Streitwagentheologie in der Ramses-Stadt*, Mainz, 136-139 for a very detailed examination of the remains of the extensive workshops associated with chariot and harness construction at the site.

19th Dynasties. The impact on the domestic economy would have been huge with changes to agriculture, the construction of facilities, the supply of services and the creation of completely new skills, “industrial” activities, occupations and hierarchies.

11.3.1 OCCUPATIONS ASSOCIATED WITH HORSES

The arrival of the horse necessitated the creation or extension of a variety of occupations.

A. DRIVERS/ CHARIOTEERS

The light spoke-wheeled chariot used in Egypt was essentially a two-passenger vehicle transporting a warrior and a driver (Fig. 11.7).¹⁰²⁴ Kings such as Seti I and Ramesses II are shown in their chariots alone¹⁰²⁵ firing arrows with the reins of their stallions tied around their waists as they charge through their enemies (Fig. 11.6). Such activities would have posed too much danger in reality and would have been highly unlikely.¹⁰²⁶ A driver would have been necessary, though there is not one in any image of a king in his chariot yet Ramesses II himself gives the name of his driver in his Kadesh Victory

¹⁰²⁴ K. Jones-Bley (2006) “The Evolution of the Chariot,” in S. Olsen, S. Grant., A. Choyke & L. Bartosiewicz (eds.) (2006) *Horses and Humans: The Evolution of Human-Equine Relationships*, BAR International Series, 1560, Oxford, 186.

¹⁰²⁵ Although Ramesses II does admit to being accompanied by a shield bearer “Menena” at the battle of Kadesh, M. Lichtheim (1976) *Ancient Egyptian Literature: Volume II: The New Kingdom*, Berkeley, 70: “It was they (his horses) whom I found in the midst of battle, And charioteer Menena, my shield-bearer.” An earlier passage relates the conversation between Menena and Ramesses when they were surrounded, 68.

¹⁰²⁶ A. Calvert (2013) “Vehicle of the Sun: The Royal Chariot in the New Kingdom,” 45-71, in A. Veldmeijer & S. Ikram (2013) *Chasing Chariots*, Leiden, 46. She supports this opinion on the basis of safety. This is also this writer’s opinion based on the fact of the natural movement of the horse. When horses walk they extend their heads and a rider needs to extend their arms to maintain rein contact with the horse’s mouth. In a faster gait, this action is extended, meaning that the faster a horse travels, the more the reins need to move to maintain the contact. There are three ways of controlling a horse: the rider’s weight shifting, the action of the legs and the movement of the reins. These are called the “aids.” When driving a chariot two of the three are not available so direct and flexible contact with the horse’s mouth through the reins is the only way to guide the team. Having reins tied rigidly with such apparent tension about the waist would prevent this control and make steering the chariot impossible. The motif of “reins about the waist” seems more likely to be a way of having control appearing to be in the hands of the king but having him able to draw his bow, smite enemies whilst having his hands free. It is an artifice.

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Poem.¹⁰²⁷ This is perfectly in accordance with Egyptian kingly iconography as “it is the king alone who is shown as sole victor and conqueror for the glory of Egypt and the gods.”¹⁰²⁸ This has more to do with the public image of the king than reality, although from the time at least of Amenhotep II horsemanship seems to have been elevated “from casual reference to true royal tradition.”¹⁰²⁹ Kings were expected to be competent horsemen.

We cannot know if everyone who is seen driving a chariot had the necessary skills to do so, but in a variety of circumstances, a driver would have been necessary. In many cases tomb owners, Djehutyhetep (Debeira), Amunedjeh (TT 84), Userhat (TT 56; Fig. 11.8) and Amenhotep Sisi (TT 75) can be seen driving themselves especially in hunting contexts. But occasionally the owner is in the chariot with a driver while the official carries out his duties an example being Mahu (AS 9; Fig. 11.9) chasing offenders. Any’s driver Tjay (Fig. 11.10) is the only official’s driver named.¹⁰³⁰

In many tombs a driver is pictured alone in charge of a chariot¹⁰³¹ when the owner is not present and in most cases the driver is on the ground, not in the chariot itself (Figs. 11.11, 11.12, 11.13). In this sense the driver acts in the role of a “chauffeur” to the tomb owner. As the use of chariots by the elite became ubiquitous, there had to be an expansion in the number of individuals employed to carry out this driving function and those persons would have had to be skilled to at least a competent level. This implies that some training of drivers¹⁰³² would have been undertaken.

¹⁰²⁷ M. Lichtheim (1974) *Ancient Egyptian Literature II, The New Kingdom*, Berkeley, 70, in his Victory Poem “And charioteer Menena, my shield bearer, And my household butlers, who were at my side.”

¹⁰²⁸ J. Crouwel (2013) “Studying the Six Chariots from the Tomb of Tutankhamun- an Update,” 73-93 in A. Veldmeijer & S. Ikram (2013) *Chasing Chariots*, Leiden, 86: “In fact, in Egypt artisans were not permitted to represent any mortal other than another member of the royal family or a deity in a chariot together with the pharaoh.”

¹⁰²⁹ P. Der Manuelian (1987) *Studies in the Reign of Amenophis II*, Hildesheimer Ägyptologische Beiträge 26, Hildesheim, 198.

¹⁰³⁰ N. de Garis Davies (1908) *The Rock Tombs of El-Amarna, Part 5. Smaller Tombs and Boundary Stelae*, London, 10.

¹⁰³¹ These images are present in the tombs of Pahari, Thutnefer TT 80, Anonymous B TT 143, Renni, Nebamun (fragments), Menna TT 69, Khaemhat TT 57 and Meryra I.

¹⁰³² This is not to imply a “school” as such in most cases instruction would have been on rather a small-scale by an experienced individual. Army training may have been on a larger and more organized level.

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The first appearances of these individuals can possibly be traced iconographically to at least the time of Tutankhamun when two warriors can be seen in the chariots in battle scenes on the Painted Box from his tomb.¹⁰³³ In historical texts the term for charioteer is *ktn*.¹⁰³⁴

B. THE MILITARY

The pre-existing military adjusted their activities in response to the advent of the horse and chariot. In the Amarna Period, the royal “security” forces that may have existed before Akhenaten were now demonstrated as accompanying the king and his family in chariots, increasing their speed and manoeuvrability compared to those “guards” running on foot. They can clearly be identified in the tomb of Panhesy (AN 6; Fig. 11.14). Whatever may be interpreted from this large, highly mobile armed force accompanying the king, what can be seen is that the security of the monarch and his family was enhanced by the use of chariots and sections of the armed forces were transferred to chariot activities.

The army was the most profoundly impacted by the arrival of the horse and the chariot it powered. New ranks and duties were established to develop, maintain and prepare this new weapon.¹⁰³⁵ Entire divisions such as those Ramesses II used (Fig. 11.15) were developed as weapons of war and these put Egypt on an equal footing with the chariot-using cultures of the Near East.¹⁰³⁶ The logistical support mechanisms to supply and maintain these divisions were instituted on a massive scale creating entirely new hierarchies, skills, occupations and ranks.¹⁰³⁷ Drivers, shield bearers (Fig. 11.16), mobile archers (Fig. 11.17) messengers and scouts¹⁰³⁸ (Fig. 11.18) rode in the new

¹⁰³³ N. Davies & A. Gardiner (1962) *Tutankhamun's Painted Box*, Oxford. Plates 1,2,3,4. (Figs. 4.219, 4.220, 4.221, 4.222.

¹⁰³⁴ Wb.V, 148. See A. Al-Ayedi (2006) *Index of Egyptian Administrative, Religious and Military Titles of the New Kingdom*, Ismailia, 2072ff.

¹⁰³⁵ A. R. Schulman, (1963) “The Egyptian Chariotry: A Reexamination,” *Journal of the American Research Center in Egypt* 2 (1963) 75-98, lists twelve official military ranks covering both actual active officers as well as administrative.

¹⁰³⁶ See A. R. Schulman (1963) “The Egyptian Chariotry: a Reexamination,” *JARCE* 2 (1963) 75-98 Spalinger. A. J. (2005) *War in Ancient Egypt: The New Kingdom*, Ancient World at War Series, Oxford, for detailed examinations.

¹⁰³⁷ A. R. Schulman (1964) *Military Rank, Title, Organisation in the Egyptian New Kingdom*, Münchner ägyptologische Studien 6 Berlin.

¹⁰³⁸ A. R. Schulman, (1963) “The Egyptian Chariotry: A Reexamination,” *Journal of the American Research Center in Egypt* 2 (1963) 84.

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chariots under the command of a much more mobile and effective king, who was also greatly empowered by the use of the chariot and its team (Fig. 11.19).

B. CHARIOT WARRIORS

*Snn*y is translated as “chariot warrior.”¹⁰³⁹ The task of these individuals was to shield the drivers and to provide an aggressive aspect to the chariot by using weapons such as arrows to harass the enemy. They can be clearly seen carrying out these functions in the reliefs at the Abydos temple of Ramesses II (Fig. 2.262 – holding a shield) and in the Kadesh reliefs of Ramesses II at Abu Simbel (Fig. 11.17 – firing arrows at the enemy.) Hoffmeier cites one of the earliest appearances of this word and thus the occupation that it relates to as occurring in the reign of Thutmose III in the tomb of one of his officials Menkheperresonb who identifies his father as *snn*y n *hm.f* “chariot warrior of his majesty.”¹⁰⁴⁰ This would be appropriate as Menkheperresonb’s father may have served Thutmose II and Thutmose III in his early reign in periods when military campaigns in the Levant would have made the Egyptians aware of these individuals and perhaps inspired them to copy them. Hoffmeier points out also that possible confirmation of this comes from the appearance of a six-spoked wheel chariot in the reign of Amenhotep II. The added weight of the second person may have necessitated the development of a stronger wheel for support.¹⁰⁴¹

C. GROOMS

Essential to the maintenance of the horses were the grooms who can be differentiated from drivers in that they are not in the chariots and not in contact with the reins. They are not driving, but directly associated with the horses and doing other jobs. In Tjanuni’s tomb (TT 74; Fig. 11.20), they present them for counting; in Kenamun’s (TT 162; Fig. 11.21) they wait while the horses feed; and in Khaemhat’s tomb (TT 57; Fig. 11.22) and on the walls of Ramesses II’s Abydos temple (Fig. 11.23), they are calming

¹⁰³⁹ J. K. Hoffmeier (1976) “Observations on the Evolving Chariot Wheel in the 18th Dynasty,” *JARCE* 13 (1973) 44. Wb.III, 459, 17-19. It is listed here as “Streitwagenkämpfer.” See also A. Al-Ayedi (2006) *Index of Egyptian Administrative, Religious and Military Titles of the New Kingdom*, Ismailia, 1686-1687.

¹⁰⁴⁰ N. Davies (1933) *The Tombs of Menkheperresonb, Amenmose and Another* (Nos. 86, 112, 42 and 226), London, pl.24.

¹⁰⁴¹ J. K. Hoffmeier (1976) “Observations on the Evolving Chariot Wheel in the 18th Dynasty,” *JARCE* 13 (1976) 44.

them. These images give an insight into the types of employment that were created because of the arrival and usage of the horse.

A more detailed understanding of the relative status of the drivers and grooms may be reflected in images where drivers are shown in some tombs as larger in size than the grooms.¹⁰⁴² This occurs in the tombs of Meryra I (AN 4; Fig. 11.24) and Ay (AS 25; Fig. 11.25); however, contrary evidence comes from the Saqqara tomb of Horemheb (Fig. 11.26).¹⁰⁴³

D. BREEDING STAFF/ STABLE HANDS

Breeding staff and stable hands are not associated with chariots at all and are seen only in scenes of unharnessed horses and doing things like herding or walking with them. They can be seen leading horses in an “outdoor” context in the tombs of Amenemhet (TT 123; Fig. 11.27), Anonymous A (TT 91; Fig. 11.28), Puyemre (TT 39), Nebamun (TT 145), in reliefs from the tomb of Ipuia at Saqqara and on relief fragments from Amarna (Fig. 11.29).¹⁰⁴⁴

E. TRAINERS

The training of chariot teams would have been a process that began very early in the horse’s life and would have been intensive especially with regard to stallions. Whilst there are no extant Egyptian texts regarding the training of horses, there were Hittite texts such as that of Kikkuli¹⁰⁴⁵ that indicate that the training of chariot horses was a serious professional activity. There is no reason to think that it would not have been so in Egypt; skilled and experienced trainers would have been needed.

¹⁰⁴² It is well established that size denoted rank in Egyptian art.

¹⁰⁴³ The interpretation of this image is that there seems to be two drivers and one groom, the individual in direct physical contact with the horses.

¹⁰⁴⁴ This image is from a reconstruction of several fragments by R. Hanke (1978) *Amarna-reliefs aus Hermopolis*, Gerstenberg, 231.

¹⁰⁴⁵ A. Kammenhuber (1961) *Hippologia hethica*, Wiesbaden, translated the text. The method of horse training has since been carried out experimentally by A. Nyland (1993) *The Kikkuli Method of Horse Training* PhD. University of New England, Australia, and discussed by scholarship extensively see P. Raulwing (2009) *The Kikkuli Text. Hittite Training Instructions for Chariot Horses in the Second Half of the 2nd Millennium B.C. and Their Interdisciplinary Context*. www.Irgaf.org/Peter_Raulwing_The_Kikkuli_Text_Masterfile_Dec_2009.pdf accessed May 10/2011.

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F. “VETERINARIANS”

There are no Egyptian veterinary texts extant dated later than the Middle Kingdom¹⁰⁴⁶ and naturally none deal with horses. It is not suggested that there was a specific group designated as veterinary practitioners. These activities were probably within the purview of the trainers and grooms, however, some accumulated veterinary knowledge and skill would have been necessary.

Horses, especially chariot teams, would have been susceptible to wounds, accidents, diseases, lameness, rough handling, infestations and wear and tear. Additionally, horse's teeth would have needed attention such as filing¹⁰⁴⁷ so they would have needed some type of “medical” treatment. As the horse became ubiquitous in Egypt, there would have been an accumulation of technical knowledge and skill associated with its breeding, maintenance and training and individuals would have earned their living by providing these services.

G. FARRIERS

There is no evidence for the shoeing of horses in the images or the archaeology however, unshod hoofs in confined animals still need maintenance such as trimming and this again was possibly undertaken by grooms and stable hands.¹⁰⁴⁸

It is unfortunately unlikely that any trace of many of these individuals or occupations remains to be found in the archaeological record and written evidence gives scant mention to the people who kept the machine running but it did keep running and was extremely successful for a long period of time and this is what is most likely to be the fact that verifies the speculation.

¹⁰⁴⁶ The only veterinary papyrus extant is the Kahun Papyrus dated to the Middle Kingdom. Papyrus UC 32036: M. Collier and S. Quirke (eds.) 2004 *The UCL Kahun Papyri: Religious, Literary, Legal, Mathematical and Medical* BAR International Series 1209, Oxford, 54-57.

¹⁰⁴⁷ P. Huntington, J. Meyers & E. Owens (2004) *Horse Sense*, Collingwood, 25-28: “Horses need regular dental care if they are to get the maximum benefit from their feed and thus perform well.”

¹⁰⁴⁸ Shoeing of horses with metal shoes is not meant here. Horses that are unshod still need to have their hooves attended to when kept in an unnatural environment. See J. Draper, D. Sly & S. Muir (2004) *The Ultimate Book of the Horse and Rider*, London, 237-238: “It is important to remember that horses who are unshod [...] still need regular attention from the farrier. Being confined in a paddock is not the same as being free to roam in search of food and the horse's hooves will not wear down as they will in the wild.”

H. OFFICIALS

Officials are a group that are more likely to appear in the evidence. The arrival of horses and their incorporation into the fabric of Egypt resulted in the creation of management structures and a hierarchy associated with them. The most significant change would have been in the military where an entirely new force – the chariot division was created. The existing military hierarchy would have been duplicated but there would have been a dramatic increase in the numbers of individuals within the military in order to cope with the special needs of this new technology. This is attested by a variety of titles associated specifically with horses ranging from the basic “Charioteer” such as Neferhotep¹⁰⁴⁹ to Ta, “Scribe of the Pharaoh’s Horses,”¹⁰⁵⁰ to Suemnut TT 92 “Stable-master,”¹⁰⁵¹ “Overseer of the Horses,” Menna¹⁰⁵² and the “Overseer of All the Horses of His Majesty,” Ay (the later king) at Amarna,¹⁰⁵³ and there appears to have been a career path opened through the chariot divisions that could lead to civilian offices.¹⁰⁵⁴ There were a large number of other officers; “Overseer of Scribes of Horses,”¹⁰⁵⁵ “Deputy of the Overseer of Horses,”¹⁰⁵⁶ “Chief of Horses,”¹⁰⁵⁷ “Servant of the Overseer of Horses,”¹⁰⁵⁸ as well as the officials associated with the stables (*ihw*) in addition to the

¹⁰⁴⁹ Ruffle, J. (eds) (1979) “The Family of Urhiya and Yupa, High Stewards of the Ramesseum. Part I. The Monuments,” in Ruffle, J. et al. (1979) *Glimpses of Ancient Egyptian Studies: Studies in Honour of H. W. Fairman*, Orbis Aegyptiorum Speculum, Warminster, 50-70. Also Louvre C 148. For *kdn* “charioteer” in its various combinations see Abdul Rahman Al-Ayedi (2006) *Index of Egyptian Administrative, Religious and Military Titles of the New Kingdom*, Ismailia, nos. 2073-2090. 619-625.

¹⁰⁵⁰ S. R. K. Glanville “Scribe’s Palettes in the British Museum,” *JEA* 18 (1932) 59, figs 11,12, pl. VII. Also BM 5514. “Scribe of the horses of pharaoh,” *sš n.y p3 htr n.y pr.w-3* A. Al-Ayedi (2006) *Index of Egyptian Administrative, Religious and Military Titles*, No. 1788, 528.

¹⁰⁵¹ PM (2) 1:1 122-23. “Stablemaster,” *hr.y ihw* in its various combinations A. Al-Ayedi (2006) *Index*, Nos. 1245-1252, 368-372.

¹⁰⁵² W. M. F. Petrie (1935) *Shabtis*, London, 49 pl. VIII. For *im.y-r3 ssm.t* “overseer of horses” in its various combinations (incl. overseer of all the horses of his majesty) see A. Al-Ayedi (2006) *Index*, Nos. 376-380, 114-116.

¹⁰⁵³ N. de Garis Davies (1908) *The Rock Tombs of El-Amarna, Part VI, The Tombs of Parennefer, Tutu and Ay*, London, (The Tomb of Ay) 24.

¹⁰⁵⁴ O. D. Lagenbach (2009) “Exkurs: Aufbau und Organisation der ägyptischen Streitwagentruppe,” in R. Grundlach & C. Vogel (eds.) (2009) *Militärsgeschichte des pharaonischen Ägypten*, Paderborn, 346-356. “Wie die prosopographischen Belege zeigen, konnten erfahrene Offiziere problemlos in zivile Ämter wechseln umgekehrt ist dies praktisch nie der Fall.” 351.

¹⁰⁵⁵ A. Al-Ayedi (2006) *Index*, *im.y-r3 sš ssm.wt* “Overseer of scribe(s) of the horses” No. 395, 119-120.

¹⁰⁵⁶ A. Al-Ayedi (2006) *Index*, *idnw n.y im.y-r3 ssm.wt* “Deputy of the Overseer of Horses” No. 639, 185.

¹⁰⁵⁷ A. Al-Ayedi (2006) *Index*, *hr.y ssm.wt* “Chief of Horses” Nos. 1377-1378, 406-407.

¹⁰⁵⁸ A. Al-Ayedi (2006) *Index*, *sdm n.y im.y-r3 ssm.t* “Servant of the Overseer of Horses” No. 1978, 591.

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“Stablemaster” the “Scribe of the Stable,”¹⁰⁵⁹ and the “Deputy of the Stablemaster of the Residence.”¹⁰⁶⁰ These office bearers would have been in control of the logistical programmes for breeding, raising and training of foals, fodder production and distribution, training, maintenance of horses in and out of service and replacement of sick or injured horses and the supply, repair and replacement of harnesses. The creation of these positions would have had a profound effect on the, military, social and economic systems in Egypt.

11.1.4 STRUCTURES ASSOCIATED WITH HORSES

The horse is a nomadic grazing animal and to be trained for human purposes, it must be restrained. In ancient Egypt this would have involved the construction of appropriate structures to assist in management such as fencing, stables, exercise yards, training grounds, workshops, barns (storage facilities for fodder and tack), water supplies and the devotion of pasturage to grazing and fodder production. Few of these structures remain in the archaeological record, however, the excavation of stables attributed to Ramesses II and later kings at Qantir/Per-Ramesses (Fig. 11.30) suggests very sizable structures did exist that were capable of housing up to 418 horses and were directly

¹⁰⁵⁹ A. Al-Ayedi (2006) *Index, sš n.y iḥw* "scribe of the stable" No. 1782, 572.

¹⁰⁶⁰ A. Al-Ayedi (2006) *Index, idnw n.y p3 ḥr.y iḥw n.y hnw* "Deputy of the Stablemaster of the Residence" No. 645, 187.

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associated with chariot-related workshops.¹⁰⁶¹ Other stables at Elephantine and Middle Egypt are hinted at based on textual and iconographic evidence.¹⁰⁶²

Another horse-related site may have existed in the vicinity of the Malkata palace of Amenhotep III where a 4.1km long x 120m wide cleared area has been suggested is a “chariot race-course.”¹⁰⁶³ Once again, the scale of these emplacements reflects the relative position of the owners from kings to officials, however structures would have been necessary to accommodate the use and maintenance of the horses.

11.1.5 GRAZING/ FEEDING

The Delta with its vast and rich agricultural land would have been very suited to horse grazing, though the humidity may have caused some issues. Humid areas give rise to insect infestations such as midges, the bites of which cause “sweet itch” (see above) and the hogging or cutting of the manes clearly visible in the tombs and temples were a response to this and may provide evidence supporting the use of the Delta as an early grazing area.

¹⁰⁶¹ A. Herold (1998) “Piramesse – Northern Capital: Chariots, Horses and Foreign Gods,” 138 in J. G. Westernholz (ed.) (1998) *Capital Cities: Urban Planning and Spiritual Dimensions. Proceedings of the Symposium held on May 27-29, 1996, Jerusalem, Israel*, 129-146: See E. Pusch (1991) “Recent Work at Northern Piramesse, Results of Excavations by the Pelizaeus-Museum, Hildesheim, at Qantir,” in E. Bleiberg & R. Freed (eds.) (1991) *Fragments of a Shattered Visage: The Proceedings of the International Symposium of Ramesses the Great*, Memphis, 199-216 and D. Aston & E. Pusch, (1999) “The Pottery from the Royal Horse Stud and its Stratigraphy” in M. Bietak (ed.) (1999) *Egypt and the Levant*, 9 (1999) 39-77. There are also references in T. Rehren, E. Pusch & A. Herold (2001) “Qantir-Piramesse and the Organisation of the Egyptian Glass Industry,” in A. Shortland (ed.) (2001) *The Social Context of Technological Change*, Oxford, 223-238 and E. Pusch (1993) “Pi-Ramesse geliebt von Amun, Hauptquartier deiner Streitwagentruppen, Ägypter und Hethiter in der Delta-Residenz der Ramessiden” in: A. Eggebrecht (ed.) (1993) *Pelizaeus-Museum Hildesheim*,” 126-139 in *Die ägyptische Sammlung, (Antike Welt Sondernummer)* Mainz.

¹⁰⁶² O. D. Langenbach (2008) “Exkurs: Aufbau und Organisation der ägyptischen Streitwagentruppe,” in R. Gundlach & C. Vogel (eds) (2008) *Militärgeschichte des pharaonischen Ägypten*, Paderborn, 345-356, Footnote 28. “Ich vermute eine Stallanlage bei Elephantine, wo offenbar Teile von Infanterie und Streitwagentruppe stationiert waren und ebenso weitere Ställe in Mittelägypten da im pWilbour zwei Orte namens, der Stall)P3-jh= und ein anderer names, die Häuser der Pferdeburshen, sowie 48 Pferdeweiden erwähnt sind, die vor allem zwischen dem Fayum im Norden und bis auf die Höhe des heutigen Bahasna und Schech Fadl liegen. Vgl, Gomaa-Müllerß Wollermann-Schekel, Mittelägypten, 140-156 und Hofmann Fuhrwesen 126-130.”

¹⁰⁶³ B. Kemp (1977) “A Building of Amenophis III at Kôm el’ Abd,” in *JEA* 63 (1977) 71-82.

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A horse's natural food is grass but when kept in enclosed pasture or stabled and in heavy work, they need additional food every day.¹⁰⁶⁴ As the number of horses increased and especially as the use of large numbers of chariot horses in the army became the norm there must have been considerable areas set aside for the production of these types of fodder and additional grains such as barley and oats. This is attested by the mention of 48 "horse pastures" in the vicinity of the Fayum.¹⁰⁶⁵ Also, as horses can drink a minimum of 33 litres of water per day per horse,¹⁰⁶⁶ there would have had to be a well-organised and suitable supply of fresh water.

11.1.6 CHARIOT MAKING

Chariot and harness making was a specialised and complex process.¹⁰⁶⁷ The variety of skills needed and the multitude of different components and materials necessary (based on Tutankhamun's and other extant examples) such as wood, leather, gold, glue and many others indicate the great range of production regions, resources and skills accessed in the process.¹⁰⁶⁸ Each of these would need to have been sourced in considerable quantities again providing stimulus for the economy. The complexity of the production can be seen clearly in the tombs of Hepuseneb (TT 67; Fig. 11.31) Amenhotep (TT 73), Menkheperresonb (TT 86; Fig. 11.32) Puyemre (TT 39), Mery (TT 95) and Hepu (TT 66; Fig. 11.33) and work in Pi-Ramesse has revealed very extensive chariot making workshops and activities on an industrial scale.¹⁰⁶⁹

¹⁰⁶⁴ P. Huntington, J. Myers & E. Owens (2004) *Horse Sense, the Guide to Horse Care in Australia and New Zealand*, second edition, Collingwood, 120.

¹⁰⁶⁵ O. D. Langenbach (2008) "Exkurs: Aufbau und Organisation der ägyptischen Streitwagentruppe," in R. Gundlach & C. Vogel (eds) (2008) *Militärsgeschichte des pharaonischen Ägypten*, Paderborn, 348 Footnote 28 (see above Note 252.)

¹⁰⁶⁶ P. Huntington, J. Myers & E. Owens (2004) *Horse Sense*, 121.

¹⁰⁶⁷ I. Shaw (2001) "Egyptians, Hyksos and Military Technology: Causes, Effects or Catalysts?" in A. Shortland (ed.) (2001) *The Social Context of Technological Change: Egypt and the Near East, 1650–1550 BC*, Oxford, 63. Here he cites R. Drenkhan (1976) *Die Handwerker und ihre Tätigkeiten im alten Ägypten*, Wiesbaden, 130.

¹⁰⁶⁸ This would include foreign imports as Shaw (2001) "Egyptians, Hyksos and Military Technology: Causes, Effects or Catalysts?" in A. Shortland (ed.) (2001) *The Social Context of Technological Change*, Oxford 63-65 shows clearly. He gives a very comprehensive discussion of the sources of various component materials involved in chariot making.

¹⁰⁶⁹ See E. Pusch (1991) "Recent Work at Northern Piramesse," in E. Bleiberg & R. Freed (eds.) (1991) *Fragments of a Shattered Visage: The Proceedings of the International Symposium of Ramesses the Great*, Memphis, 199-216 and D. Aston & E. Pusch (1999) "The Pottery from the Royal Horse Stud and its Stratigraphy" in M. Bietak (ed.) (1999) *Egypt and the Levant*, 9 (1999) 39-77. There are also references in T. Rehren, E. Pusch & A. Herold (2000) "Qantir-Piramesse

Shaw makes the point that “the Egyptian adoption of chariotry ...might have been as much a question of Egypt’s access to suitable horses as the process of technological innovation implied in the use of chariots themselves.”¹⁰⁷⁰ Without the horse, chariot making is pointless. Egypt needed to develop resources, workshops, skills and experience if it was to fully realise the potential that the horse driven chariot offered.

11.1.7 TRANSPORTATION

Although obviously a chariot and team were essentially a mode of transport and networks of roads crossed Egypt,¹⁰⁷¹ it was much easier to travel by water, especially over long distances. Beginning in the reign of Thutmose III horses can consistently be seen being transported by boat. In the reign of Thutmose III, Paheri¹⁰⁷² (Fig. 11.34), as Nomarch of Nekheb and Anyt,¹⁰⁷³ would be expected to have travelled often and with a retinue in several ships. In his tomb, although damaged, two groups of two horses (probably chariot teams) can be discerned, apparently unenclosed, on the foredecks of his boats.

By the time of Amenhotep III, in the tombs of Haremheb (TT 78;¹⁰⁷⁴ Fig. 11.35) and Khaemhat (TT 57;¹⁰⁷⁵ Fig. 11.36) horses, again seemingly unenclosed, are all shown on the foredeck of the boats with their chariots carried on top of the cabin and Kenamun’s

and the Organisation of the Egyptian Glass Industry,” in A. Shortland (ed.) (2001) *The Social Context of Technological Change*, Oxford, 223-238; and E. Pusch (1993) “Pi-Ramesse-geliebt-von-Amun, Hauptquartier deiner Streitwagentruppen,” 126-139 in A. Eggebrecht (1993) *Pelizaeus-Museum (Hildesheim) / Ägyptische Sammlung*, Mainz.

¹⁰⁷⁰ I. Shaw (2001) “Egyptians Hyksos and Military Technology,” 66. Chariot workshops and artifacts have been found directly associated with the Piramesse stable complex. See E. Pusch (1991) “Recent Work at Northern Piramesse,” in E. Bleiberg & R. Freed (eds.) (1991) *Fragments of a Shattered Visage: The Proceedings of the International Symposium of Ramesses the Great*, Memphis, 199-216; and D. Aston & E. Pusch, (1999) “The Pottery from the Royal Horse Stud and its Stratigraphy” in M. Bietak (ed.) (1999) *Egypt and the Levant*, 9 (1999) 39-77. There are also references in T. Rehren, E. Pusch & A. Herold (2000) “Qantir-Pirameses and the Organisation of the Egyptian Glass Industry,” in A. Shortland (ed.) (2001) *The Social Context of Technological Change*, Oxford, 223-238.

¹⁰⁷¹ R. Partridge (1996) *Transport in Ancient Egypt*, London, 78-82 gives a general discussion of roads and their place in Egypt.

¹⁰⁷² J. Tylor (1895) *Wall Drawings and Monuments of El-Kab: The Tomb of Paheri at El Kab*, London, pl. III.

¹⁰⁷³ J. Tylor (1895) *The Tomb of Paheri*, London, 3.

¹⁰⁷⁴ A. Brack & A. Brack (1980) *Das Grab des Haremheb. Theben Nr. 78*, AV 35, Mainz, Scene 11 pl. 88. This is an unfinished section of the tomb painting and the horses have been outlined in red for later completion in the same manner as the persons to their right.

¹⁰⁷⁵ W. Wreszinski (reprint 1988) *Atlas zur altägyptischen Kulturgeschichte*, Geneve, pl. 189.

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TT 162;¹⁰⁷⁶ Fig.11.37) horses are clearly being fed from a trough on the foredeck of a boat attended by a relaxed groom.

In the reign of Tutankhamun the great Viceroy of Nubia Amenhotep Huy (TT 40)¹⁰⁷⁷ is seen journeying with at least four chariot teams visible (Fig. 11.38, 11.39) and in these images they are restrained in elaborate, highly decorated stalls close to the mid-point of the ships that appear to have been specially constructed.

Though there are no horses on the deck of the boat in his tomb, Neferhotep (TT 49;¹⁰⁷⁸ Fig. 11.40), an official of Horemheb, is depicted in other scenes driving in his chariot having been rewarded by the king. On the deck of the boat in his tomb is an open compartment that might have been used to accommodate his horses. It is similar in appearance to those of Amenhotep Huy¹⁰⁷⁹ (TT 40; Figs. 11.38, 11.39). In Parennefer's tomb (TT-162-;¹⁰⁸⁰ Fig. 11.41), there are at least six horses, two travelling in a stall on the deck of a large boat and, for the first time, there are two teams being carried in smaller boats which appear to be specifically designed for their transport.

In his wildly disproportionate boat, Khons (TT 3;¹⁰⁸¹ Fig. 11.42) is seen to be transporting four "royal"¹⁰⁸² horses again enclosed in a stall on the foredeck. Tia and Tia at Saqqara¹⁰⁸³ (Fig. 11.43), the sister and brother-in-law of Ramesses II, have two horses again in stalls on the deck that are oddly shown with their heads facing in opposite directions.

¹⁰⁷⁶ N. de Garis Davies (1963) *Scenes from some Theban Tombs (Nos. 38,66, 162 with excerpts from 81)* London, pl.18.

¹⁰⁷⁷ N. Davies & A. Gardiner (1926) *The Tomb of Huy Viceroy of Nubia in the Reign of Tutankhamun, (No. 40)* The Egypt Exploration Fund, The Theban Tombs Series, 1st Memoir, London, pl. 10.

¹⁰⁷⁸ N. de Garis Davies (1933) *The Tomb of Neferhotep at Thebes*, I & II, New York, 1. 33.

¹⁰⁷⁹ N. de Garis Davies (1933) *Neferhotep at Thebes*, I & II, New York, 1. 33. Davies describes this as "There is an open but railed compartment aft, probably to carry horses."

¹⁰⁸⁰ E. Hofmann (2004) *Bilder im Wandel. Die Kunst der ramessidschen Privatgräber*, Theban XVII, Mainz, Abb 3, pl.2.

¹⁰⁸¹ N. de Garis Davies (1948) *Seven Private Tombs at Kurnah*, Mond Excavations at Thebes 2, London, pl.12.

¹⁰⁸² All four can be seen wearing plume bonnets characteristic of horses either belonging to the king or directly engaged in his service.

¹⁰⁸³ G. T. Martin (1997) *The Tomb of Tia and Tia. A Royal Monument of the Ramesside Period in the Memphite Necropolis*, London, pl. 47.

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The earlier tombs attest to horses being carried on open decks, but this would have proven unsatisfactory and as horse possession by the elite grew, new and often ostentatious enclosures were constructed generally towards the bow in the larger ships and sensibly closer to the middle of the smaller ones. They seem from the scenes in the tombs of Paheri (Fig. 11.34) and Khaemhat (TT 57; Fig. 11.36) to have their chariots loaded on top of the deck cabins.

The images provide good evidence for the development and manner of horse transportation in Egypt in the 18th and 19th Dynasties. Early in the period, horses appear to have been carried and fed on the foredeck of ships without specifically constructed enclosures though in reality travelling with an easily frightened animal weighing around five hundred kilos unrestrained on the open deck of a moving boat would be problematic. Later elaborately constructed and specially decorated stalls are attested. The weight of the animals possibly required stalls to be constructed closer to the mid-point of the small ships, whilst some stalls remained on the foredecks of the larger vessels. By the reign of Horemheb there is evidence of the development of boats that were designed and constructed specifically for the purpose of transporting the horses of the elite. Over time there is an increase in the number of depictions of horses on boats as well as an increase in the number of horses being transported.

There were many reasons for the transportation of horses by boat that can be seen in the tombs. Religious activities feature quite prominently¹⁰⁸⁴ such as pilgrimages to Abydos illustrated in the tombs of Kenamun (TT 162) and Khaemhat (TT 57), funerary rituals in those of Horemheb (TT 78) and Tia and Tia at Saqqara and transporting personages such as Khons (TT 31) High Priest of Mont, to festivals for their gods. There are also several other images that depict the carrying out of duty by officials. Paheri travels to his province with his horses and Amenhotep Huy (TT 40) is accompanied to Nubia by the horses which will no doubt assist in the execution of his duties but probably also impress the locals and it is not unexpected that Horemheb (TT 78) one of whose titles was “Master of Horse” should be accompanied by them even while travelling by river.

¹⁰⁸⁴ Care must be taken here as the images occur in tombs which were by their very nature religious structures so there would have been a “skewing” of the subjects of the illustrations.

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The chariot and its team permeated almost every aspect of administrative, religious and military life as its use spread over time through the upper echelons of Egyptian society.

11.1.8 THE ELITE

There is no extant image of a horse in direct association with other than a member of royalty, the elite, administrative officials, the military or their subordinates. The horse and chariot were items of prestige and visual reinforcements of the existing hierarchy. Seventy officials were demonstrated as having associations with horses and chariots and these were investigated in terms of their titles to try to discern which offices were most directly associated with their possession and use.¹⁰⁸⁵ (See Appendix 7 for the complete table of officials). The examination of titles in Egypt is fraught with difficulties as knowledge of them is dependent on damaged material remains resulting in an incomplete assemblage. Many titles were honorific and involved no actual activity. Officials acquired and/or accumulated titles during the course of their careers making it difficult to discover which title was specifically associated with the acquisition of the horse and chariot depicted in a tomb and titles in themselves changed over time and under different kings. Certain titles had various dimensions for example the title of “First Prophet of Amun” involved the performance of religious ritual but was primarily administrative whilst some appear to have been temporary appointments. It was necessary to assign titles to categories for analysis and a review of the scholarship concerning titles was conducted.¹⁰⁸⁶ Binder’s scheme¹⁰⁸⁷ for categorising sectors has

¹⁰⁸⁵ In order to identify the titles ascribed to the tomb owners whose tombs give evidence of association with horses and chariots, several sources were consulted. These were, B. Porter & R. Moss (1994) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts, Reliefs and Paintings*, Vols 1:1, 2, 3, Oxford; N. de Garis Davies (2004) *The Rock Tombs of El-Amarna 1,2,3,4,5,6*; L. Manniche (1987) *City of the Dead. Thebes in Egypt*, London, 132-145; and A. Al-Ayedi (2006) *Index of Egyptian Administrative, Religious and Military Titles of the New Kingdom*, Ismailia.

¹⁰⁸⁶ E. Cruz-Urbe (1994) “A Model for the Political Structure of Ancient Egypt,” in D. Silverman (ed.) (1994) *For His Ka. Essays Offered in Memory of Klaus Baer*, Chicago, 45-53 gives an overview of the changes to the political structure over most of Egyptian history. D. O’Connor (2001) “New Kingdom and Third Intermediate Period 1552-664 BC,” in B. G. Trigger, B. J. Kemp, D. O’Connor & A. B. Lloyd (2001) *Ancient Egypt A Social History*, Cambridge, 183-279 gives a detailed schematic of the sectors of the government in that period. S. Binder (2008) *The Gold of Honour in New Kingdom Egypt*, Australian Centre for Egyptology: Studies 8, Oxford, 221-228 has developed a schematic that is more appropriate to the current study.

¹⁰⁸⁷ S. Binder (2008) *The Gold of Honour in New Kingdom Egypt*, Australian Centre for Egyptology: Studies 8, Oxford, 222.

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been adopted with the alteration of combining the Central and Provincial administration categories into one.

Categories	Letter representing a category	Number of titles claimed by the officials by category	Percentage of the total
Armed Forces/Military	M	77	9.9%
Temples/Temple Economy	T	231	29.9%
Building program	B	19	2.4%
Territories/Foreign Lands	F	16	2.0%
Administration- Central and Provincial	A	142	18.4%
Royal Estate, Personal Service, Royal Family	K	215	27.8%
Honorific	H	71	9.2%
Total		771	

Table.11.2. Categories of Titles of Officials in Possession of Horses in the New Kingdom. (Vol. 2. 11.44)

There were 70 officials with demonstrated associations with horses and chariots or horse related material such as chariots or chariot making and these individuals claimed 465 separate titles. The men claiming them ranged in the hierarchy from the highest, the Vizier (Rekhmire TT 100) and the Viceroy of Kush (Amenhotep Huy TT 40) to what might be considered some of the lowest - “Scribe of Recruits” (Haremheb TT 78).¹⁰⁸⁸ The 70 officials from Ahmose I to Ramesses III acquired, in total, 771 titles whilst there was a great range in the number of titles ascribed to each official. The heavily damaged tomb of Anonymous B (TT 143) yielded no titles although it must be assumed that he did have some, whilst Horemheb (Saqqara) has at least 86, Kenamun (TT 93) has 52 and Rekhmire (TT 100) has 47 that can be discerned. The condition of the evidence allows only the most elementary analysis, but it generally indicates that the two categories most frequently associated with horses and chariots are those connected closely with the king (K) and the temple (T), comprising 57.8% of the total. Given the

¹⁰⁸⁸ Haremheb (TT 78) also occupied the offices of “Royal Scribe,” “Tutor of Prince/Princess,” “Overseer of Horses” and “Superintendent of the Sacred Cattle.” The source of his horses and chariot seems to be obvious with the office of “Overseer of Horses” but there is no evidence to suggest that his title as “Scribe of recruits” didn’t come with these items too. All that can be deduced from the remaining evidence is that a man with these titles had use of a chariot team that may have been associated with one if not more of the offices that he occupied.

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channels of resource distribution in Egypt, these indications are unsurprising. Gifting of chariots by the king is evidenced in Kenamun's tomb (TT 93) as he mentions "a chariot which His majesty gave as a favour."¹⁰⁸⁹ However, considering the time period covered, the relatively few connected with the military is surprising.

The first to pictorially demonstrate the possession of horses is Renni (El-Kab 7) the Mayor of El Kab in the reign of Amenhotep I followed by Amenhotep (TT 73) in the reign of Hatshepsut who was "Overseer of 2 Obelisks," "Chief Steward," "Veteran," "Overseer of the Cattle of Amun" and "Warrior." Renni also held the first religious office in the corpus to be identified with horses and chariots as the "Overseer of the Priests of Nekhbet" followed again by Hatshepsut official Hepuseneb (TT 67), as "First Prophet of Amun." Renni is also the first provincial official with a team though Djehutyhetep of Debeira is the first provincial attested using the team for a personal pursuit, hunting.

Renni's is the only known horse and chariot image in the early rock cut tombs of Thebes or the provinces before Hatshepsut's reign, but their appearance in the tombs of Amenhotep (TT 73), Hepuseneb (TT 67) and Djehutyhetep at Debeira suggests that at or about this time horses were in sufficient numbers in Egypt for them to have begun being assigned to officials either as part of their equipment for the performance of their offices - the "executive package" or as favours. The evidence would suggest that the conferring of a chariot and its team was aligned with the close proximity of the official to the king and the temples, however, the nature of the evidence would make this conclusion far from unequivocal.

In addition to the creation of official positions directly connected with horses there was almost from the earliest acquisition, a growing distribution of teams to office bearers that would have facilitated the various duties of Egyptian officials and enhanced their participation in religious activities such as funerary processions and festivals and displayed the benefits of their position and their efforts. Paheri and Menna inspect agrarian activities and Rekhmire accepts foreign tribute. Mahu is shown in almost

¹⁰⁸⁹ N. de Garis Davies (1930) *The Tomb of Ken-Amun at Thebes, I*, The Metropolitan Museum of Art Egyptian Expedition Publications: V, New York, 47.

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narrative form carrying out his duties as “Chief of Police in Akhetaten.” Parennefer is rewarded. Amenhotep Huy journeys to Nubia with his horses to take up his post, Horemheb carries out his role as general, Khons journeys to the celebration of the festival of the god Mont and Tia and Tia travel to Abydos with their horses.

The beginning of the devolution of horses and chariots can be traced iconographically to the reign of Amenhotep I and they become regular subjects for inclusion in the illustration of the performance of duty in the tombs of the officials consistently from then onwards. The acquisition of a chariot would have profoundly affected the way in which official activities were conducted by extending the pace, efficiency and range of official capacities and its mere possession would have greatly enhanced the prestige of the individuals and contributed to the demonstration of their maintenance of *mꜣt* in life and in death. It also gave officials a heightened opportunity to enjoy leisure pursuits such as hunting as is so beautifully illustrated in the tomb of Userhat. With the possible exception of the kings and the military it was the official class that gained the most diverse and improved impact and reinforcement of their social position from the introduction of the horse and chariot in both their private and public lives.

11.1.9 OTHERS

The discovery of part of an ivory horse blinker at Amarna inscribed with the name of Thutmose “Overseer of Works and Sculptor”¹⁰⁹⁰ suggests that there may have been a broader distribution of horse usage than otherwise might be indicated. At least in the Amarna context high officials, the military and overseers of major works of a wide variety had horses but so did at least individuals such as Thutmose, the overseer of sculptors who we have some evidence for. He seems to have been the overseer of sculpting works but what is of interest is the scale of his stewardship which might possibly indicate the extent to which the use of the horse and chariot had penetrated the official classes of Egypt by this time. There is no evidence whatever that horses were the property of any person of less than official status.

¹⁰⁹⁰

R. Freed, Y. Markowitz & S. D’Auria (eds.) (1999) *Pharaohs of the Sun*, Boston, 123.

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11.1.10 ROYAL HORSES

Horses were associated with kings from the first evidence of the Egyptians possessing them. The Kamose Stele,¹⁰⁹¹ the inscription in the tomb of Ahmose son of Ibana¹⁰⁹² and the scarabs and scaraboids attributed to Amenhotep I¹⁰⁹³ and Thutmose I¹⁰⁹⁴ and the temple fragments of Thutmose II¹⁰⁹⁵ all closely connect Egyptian kings with the acquisition and use of horses and chariots. The reconstructed scenes from the Ahmose I temple complex at Abydos¹⁰⁹⁶ demonstrate that even this early king used the chariot and horses to enhance the public image of his activities as do most¹⁰⁹⁷ of the sixteen kings reigning within the time period of this examination. A variety of texts and scenes demonstrate their extensive use in battle, in sporting pursuits such as hunting and target practise as well as in religious contexts and they are directly linked to the ancient kingly iconographic tradition of “smiting” the enemies of Egypt and fulfilling the requirements of the maintenance of *mꜣt* .

The depiction of royal horses conforms to the rendering of officials’ horses and they experience the general artistic changes those horses go through over time. Royal horses are always shown (when directly associated with the king) as by far the largest in each scene and in proportion to the king. They are always shown as spirited¹⁰⁹⁸ and often in great detail.¹⁰⁹⁹ Their actions, standing, walking, galloping and performing the “Flying

¹⁰⁹¹ “I am seizing their chariot teams,” H. S. Smith & A. Smith (1976) “A Reconsideration of the Kamose Texts,” in *Zeitschrift für ägyptische Sprache und Altertumskunde*, 103 (1976) 60.

¹⁰⁹² “Thus I used to accompany the Sovereign-life, prosperity, health! – on foot, following his excursions in his chariot.” J. Pritchard (1955) *ANET*, New Jersey, 233.

¹⁰⁹³ BM57929.

¹⁰⁹⁴ BM17774.

¹⁰⁹⁵ B. Bruyère (1952) *Deir el Medineh Année 1926, Sondage au Temple Funéraire de Thotmés II (Hat Ankh Shesep)* FIFAO (1952) 4/4pls. II, III and IV.

¹⁰⁹⁶ S. Harvey (1998) *The Cults of King Ahmose at Abydos*, Pennsylvania, Figs. 95, 95, 97. It is not clear who the chariots might belong to in these scenes. Nevertheless, it is unlikely that if the Egyptians were in fact in possession of this new weapon and it had been used in the defeat of the Hyksos that they would have left their own chariots out of the decoration of such a monument.

¹⁰⁹⁷ The disappearance of the monuments of several of the earlier monarchs makes it impossible to generalize.

¹⁰⁹⁸ H. A. Groenewegen-Frankfort (1987) *Arrest and Movement, Space and Time in the Art of the Ancient Near East*, Cambridge, 122.

¹⁰⁹⁹ The granite block of Amenhotep III in the Cairo Museum JE 36360 shows considerable detail on the head of the horses, particularly the nose and the mouth and eyes. A surviving *talatat* block from Akhenaten’s reign outlines the musculature and limb definition, C. Aldred (1973) *Akhenaten and Nefertiti*, Brooklyn, fig 76, and Ramesses II’s horses at the Ramesseum (B. Porter & R. Moss (1994) *Topographical Bibliography of Ancient Egyptian Hieroglyphic Texts*,

Gallop” also conform to those seen in the officials’ tombs though on a much grander scale. Their harnesses are far more elaborate than lesser teams and these are shown clearly in the Beit el-Wali Cast¹¹⁰⁰ (Fig. 11.45). The complex and colourful blankets¹¹⁰¹ worn by Ramesses II’s horses appear often in images of his teams and can first be seen in colour on Tutankhamun’s Painted Box¹¹⁰² and also in relief in the many Karnak images of Seti I’s horses.¹¹⁰³

The most common element identifying royal horses is the “plume.” The first evidence of this is contained in two scarabs featuring Thutmose III, one with the king in a chariot¹¹⁰⁴ (Fig. 11.45) and the other with a person, possibly the king, on horseback.¹¹⁰⁵ (Fig. 11.46) There appear to be three plumes in the first image and only one in the second. In the reign of Thutmose IV¹¹⁰⁶ four constricted plumes sit above the partially hogged mane. The plumes seem to be attached to a crest which itself is attached to the headpiece of the bridle and no bonnet is visible. Under Amenhotep III the plumes seem slightly larger whilst the manes remain hogged and there seem to be a number of straps connected to the bridle to secure the plumes. However these are badly depicted and they

Reliefs and Paintings, II, Oxford, 434 (10) show very detailed facial expressions complete with teeth resembling those of a predator, like a lion not a horse.

¹¹⁰⁰ Beit el-Wali cast in the British Museum
<http://www.ancientegypt.co.uk/pharaoh/explore/main.html>

¹¹⁰¹ This can be described as “bardings” which essentially is armor for horses however it is a term more associated with medieval equipment though it may have performed a protective function during Ramesses’ time. One example might be depicted in the tomb of Kenamun TT 93 pl. XXII in N. de Garis Davies (1930) *The Tomb of Kenamun*, New York. More can be seen on the sides of Thutmose IV’s chariot.

¹¹⁰² N. Davies & A. H. Gardiner (1962) *Tutankhamun’s Painted Box*, Oxford.

¹¹⁰³ The Epigraphic Survey (1986) *Reliefs and Inscriptions at Karnak: The Battle Reliefs of King Sety I*, Chicago, pl. 25. The damage and loss of paint on these images make a blanket difficult to discern however there are tassels under the horses that may indicate the presence of one as they do in the Medinet Habu images of Ramesses III setting out on his Libyan Campaign, see The Epigraphic Survey (1930) *Earlier Historical Records of Ramses III*, Medinet Habu vol. I, The University of Chicago, Oriental Institute Publications VIII, Chicago, pl. 16.

¹¹⁰⁴ P. Newberry (1905) *Ancient Egyptian Scarabs, an introduction to Egyptian seals and signet rings*, Chicago, pl. 28, no. 10. Newberry notes “I believe [this is] peculiar to the reigns of Thotmes I and Hatshepsut” 146. This has been revised to Thutmose III, see J. K. Hoffmeier (1988) “The Chariot Scenes” in D. Redford (1988) *The Akhenaten Temple Project, 2, Rwd-mnw, Foreigners and Inscriptions*, Toronto, 41. These images have not been analysed in Chapter 4 because of the severe distortion of the horses caused by the need to fit them into the available space.

¹¹⁰⁵ A. Schulman (1957) “Egyptian Representations of Horsemen and Riding in the New Kingdom” *JNES* 16 (1957) 4, 264. Schulman discusses this glazed steatite plaque in the Metropolitan Museum of Art (Acc. No. 05.3.263) listed as being from the reign of Thutmose III in the context of investigations of riding depictions but the horse is clearly adorned with a single plume.

¹¹⁰⁶ H. Carter & P. Newberry (1904) *The Tomb of Thoutmôsis IV*, with contributions by G. Maspero and G. Elliot Smith, London, fig. 2, pl.10.

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might equally indicate the presence of a bonnet. Akhenaten's horses are similar but the plume itself seems larger and in some images the mane has disappeared completely yet in others,¹¹⁰⁷ a hogged mane remains in part and a bonnet or straps or both may be present. The presence of a bonnet is suggested by the complete removal of the mane's lower section on a horse in the tomb of Meryra I.¹¹⁰⁸ Clearly, only royal horses are equipped with plumes as there are none evident on any horses attributed to officials.¹¹⁰⁹ Seti I, Ramesses II (Fig. 11.45) and Ramesses III have the largest and most elaborate plumes and plume bonnets with those of Ramesses II providing evidence of great colour and detail (Fig. 11.45). The combined result of this equipment together with the presentation of the horses would be to vastly enhance the height and overall impressiveness of the team as well as the richness of its caparison. The plumes may also have been part of trappings that served an apotropaic function.¹¹¹⁰ Additionally Hoffmeier cites a possible link between martial gods such as Montu and the use of chariots and their plumes.¹¹¹¹ If this was the case then the trappings of the king's horses provided a new opportunity for the inclusion of these elements and exercised far more significant functions than merely decoration. The equipment evidenced in images of king's horses would have been the finest and most expensive requiring the services of specialised and highly skill craftsmen using the richest of resources and this in itself would have impacted Egypt's sourcing of these materials and the training of the craftsmen.

¹¹⁰⁷ P. Germond & J. Livet (2001) *An Egyptian Bestiary, Animals in Life and Religion in the Land of the Pharaohs*, London, pl.104.

¹¹⁰⁸ Best seen in the colour image in P. Germond & J. Livet (2001) *An Egyptian Bestiary*, pl. 104.

¹¹⁰⁹ There are some in the tomb of Haremheb TT 78 but these cannot be attributed to him personally. See also A. Schulman (1957) "Egyptian Representations of Horsemen and Riding in the New Kingdom" *JNES* 16 (1957) 4, 264, "However, the horse is adorned with a plume identical to those plumes which are found on the chariot horses of the king in reliefs and paintings of the Empire, and not to my knowledge on any of the chariot horses of non-royal personages" and J. K. Hoffmeier (1988) "The Chariot Scenes" in D. Redford (1988) *The Akhenaten Temple Project, 2, Rwd-mnw, Foreigners and Inscriptions*, Toronto, 41, "such plumes are never found on the chariots of foreigners."

¹¹¹⁰ It may be that the plumes as part of the overall trappings of the royal horses served to provide divine protection for the king. See Chapter 10, 344-347 for a fuller discussion of the apotropaic function of the trappings of king's horses.

¹¹¹¹ J. K. Hoffmeier (1988) "The Chariot Scenes" in D. Redford (1988) *The Akhenaten Temple Project, 2, Rwd-mnw, Foreigners and Inscriptions*, Toronto, 41. "So Montu, a falcon deity, is both linked to chariotry and to plumes." He cites Leibovitch, "quelques elements de la decoration égyptienne sous le Nouvel Empire: griffon II," *BIE* 26 (1944) 232.

The king's horses are often stallions. Of the sixteen kings for whom images remain, nine have one or more images that contain stallions. Many scenes are damaged, in some the near hind leg obscures the area or they are identifiably male having a penis sheath but no testes or in others no genitalia appear at all. There is a stereotypical expectation that the king would have had only stallions: "The chariot was ... the means that allowed the king to show his strength and bravery: the reliefs suggest that he won battles single-handedly,"¹¹¹² and as the stallion represents the strongest and most virile exemplar of its species they could be viewed as the most appropriate gender for the horses of a king. However, textual references suggest that mares may have made up at least some of the king's chariot teams. Eshamwy¹¹¹³ carried out an exhaustive survey of the names of king's horses at Karnak, Medinet Habu and other sites and found: "From the names of the horses mentioned it is noticed that mares participated rarely in the wars like *Anath herti* (Fig. 11.47) from the time of Seti I (Fig. 12.45) and *Mut herti* (Fig. 11.48) from the time of Ramesses II the names referring to female horses; also the depictions showing no male or female organs."¹¹¹⁴ Based on the evidence, it seems that king's horses were predominantly male and often stallions, but mares may have been used occasionally.

¹¹¹² A. Sacco (2013) "Art and Imperial Ideology: Remarks on the Depiction of Royal Chariots on Wall Reliefs in New-Kingdom Egypt and the Neo-Assyrian Empire," 203-215, in A. Veldmeijer & S. Ikram (eds.) (2013) *Chasing Chariots, Proceedings of the First International Chariot Conference, Cairo 2012*, Leiden.

¹¹¹³ A. Eshmawy (2007) "Names of Horses in Ancient Egypt," in J. Goyon & C. Cardin (eds.) (2007) *Proceedings of the 9th International Congress of Egyptologists, 6-12 September, 2004*, Grenoble, 665-676. See also H.G. Fischer (1977) "More Ancient Egyptian Names of Dogs and Other Animals," *Metropolitan Museum Journal*, 12 (1977) 173-178.

¹¹¹⁴ A. Eshmawy (2007) "Names of Horses in Ancient Egypt," in J.C. Goyon & C. Cardin (eds.) *Proceedings of the 9th International Congress of Egyptologists, Grenoble, 2004, Leuven*, 665-676. However this identification is not definite. The interpretation of these names is problematical. Does a name like "Mut-is-content" or "Anat-is-content" necessarily have to be that of a team of mares just because they are formed with the names of female deities? Mut and Anat were goddesses who are associated with war and will have been chosen for that reason. Seti's team is actually labelled *htr ʿ3 tp.y n.y hm=f Imn.w-hr-wd-n=f-p3-kn dd.=tw n=f ʿnt-hr.ti* "The first great team of his majesty 'Amun decrees him the victory' which is called 'Anat is content'" (KRI I, 7.14). Ramesses II's horses are just labelled *htr ʿ3 tp.y n.y hm=f Mw.t-hr.ti n.y ih[.w Wsr-m3ʿ.t-Rʿ.w stp.n Rʿ.w mri.y Imn.w]* "The first great span of his majesty 'Mut is content' of the stab[le of Usermare setepenre, beloved of Amun]" (KRI II, 153.15). B. Ockinga, (personal communication, 15/5/2014).

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11.1.11 KINGS AND THE ROLE OF THE HORSE

Kings used chariots to indulge in sport, a tradition exemplified by Amenhotep II through images of his firing at targets whilst charging in his chariot¹¹¹⁵ and he “may well have elevated horsemanship from casual reference to true royal tradition.”¹¹¹⁶ Thutmose IV “would pursue his leisure taking recreation, shooting at a target of copper and hunting lions and game whilst travelling on his chariot, his horses being fleetier than the wind.”¹¹¹⁷ Tutankhamun¹¹¹⁸ on his Painted Box and Ramesses III¹¹¹⁹ at Medinet Habu show evidence of having continued this tradition.

During Akhenaten’s reign, royal chariot teams proliferate in tomb scenes as they provide the means by which the king, queen, the royal family and their officials and guards take part in rewarding ceremonies,¹¹²⁰ the presentation of tribute¹¹²¹ and travel to and from the religious ceremonies in the temple¹¹²² (Fig. 11.49). The Amarna period is the only one in which this last usage is illustrated and the only period when the king shares his chariot with a member of his family, as can be seen in the images of Akhenaten and Nefertiti together in a chariot in Mahu’s tomb.¹¹²³ Thutmose IV shares his with the god Montu in the images on the side of his chariot.¹¹²⁴ In general though, it is solely the king who is in control of his steeds.

Interestingly it is also the reign of Akhenaten which breaks with another tradition - he is the only king whose chariot mounted image is not associated with scenes of battle or sport effectively illustrating the different orientation of the king’s concerns. The scenes

¹¹¹⁵ Karnak Temple, 18th Dynasty ca. 1410BCE; red granite: Luxor, The Luxor Museum of Ancient Egyptian Art, J129.

¹¹¹⁶ P. Der Manuelian (1987) *Studies in the Reign of Amenophis II*, Hildesheim, 198.

¹¹¹⁷ URK IV, 1541. 11-13.

¹¹¹⁸ N. Davies & A. Gardiner (1962) *Tutankhamun’s Painted Box*, Oxford, pls. 3 and 4.

¹¹¹⁹ R. Schulz & H. Sourouzian (1998) “The Temples- Royal Gods and Divine Kings,” in R. Schulz & M. Seidel (eds.) (1998) *Egypt. The World of the Pharaohs*, Cologne, pl. 94.

¹¹²⁰ N. de Garis Davies (1903) *The Rock Tombs of El-Amarna. Part I. The Tomb of Meryre*, London, pl. 25.

¹¹²¹ N. de Garis Davies (1905) *The Rock Tombs of El-Amarna. Part II. The Tombs of Panhesy and Meryre II*, London, pl. 37.

¹¹²² N. de Garis Davies (1903) *The Rock Tombs of El-Amarna. Part I. The Tomb of Meryre*, London, “The Royal Visit to the Temple,” pl. 10.

¹¹²³ N. De Garis Davies (1906) *The Rock Tombs of El-Amarna. The Tombs of Penthu, Mahu and Others. Part IV.* pls 12c & 20.

¹¹²⁴ H. Carter, P. Newberry, G. Maspero & G. Smith (1904) *The Tomb of Thoutmosis IV*, London, pl. 10.

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in the royal tomb and the tombs of his officials use the horse and chariot as powerful enhancements of the images of the worship of the Aten and the operations of the court of Akhetaten.

The most obvious impact that the arrival of the horse and chariot had in Egypt almost from the very beginning was its great contribution to the public image, the propaganda that was associated with the heroic king in battle. With the exception of Hatshepsut¹¹²⁵ and Akhenaten¹¹²⁶ kings were either shown, mentioned in texts or both using horses and chariots in battle. Kamose seized the horses of the Hyksos and Ahmose I commemorated his defeat of the Hyksos by decorating his pyramid complex at Abydos with images of chariot warfare. Both Thutmose I and Thutmose II attacked their enemies in chariots and the records of the campaigns of Thutmose III and Amenhotep II make myriad references to the kings using chariots themselves and fighting at the head of major chariot divisions. The chariot of Thutmose IV itself is emblazoned with the victorious king smiting enemies whilst in his chariot and the image is repeated through the 18th Dynasty and especially into the 19th.

Through these images, the king demonstrated his power, his commitment, success, prowess and his maintenance of *ma'at*. "Order must be constantly defended against the encroaching and interpenetrating threat of disorder."¹¹²⁷ As Redford points out, "the measure of their (the king's) legitimacy is their ability to succeed, both in wiping out the opposition and by benefitting their people."¹¹²⁸ It was not enough that they did this, they needed to be seen to do it by advertising it in enormous, permanent and public scenes on the walls of the temples. The images of the horses, those of the king, his army, and those of his enemies were integral to this process not only in representation but also in fact.

¹¹²⁵ There are no images of Hatshepsut in a chariot.

¹¹²⁶ There are representations of this king smiting in the traditional fashion D. Redford (1975) "Studies on Akhenaten at Thebes II," A Report on the Work of the Akhenaten Temple Project of the University Museum, The University of Pennsylvania, for the Year 1973-4," *JARCE* 12 (1975) pl. 6b.

¹¹²⁷ D. P. Silverman (1995) "The Nature of Egyptian Kingship," 57-155, in D. O'Connor & D. P. Silverman (eds.) (1995) *Ancient Egyptian Kingship*, Leiden. Silverman identifies this as part of kingly duty as far back as Dynasty "0," 115.

¹¹²⁸ D. Redford (1995) "The Concept of Kingship during the Eighteenth Dynasty," 156-183 in D. O'Connor & D. P. Silverman (eds.) (1995) *Ancient Egyptian Kingship*, Leiden.

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The heroic image of the king smiting his enemies is one of the oldest in dynastic Egypt¹¹²⁹ dating at the very least to the Narmer Palette and extending to the reign of Ramesses III and beyond. Johnson notes that these initially tended to be “static” and “stock” images, divorced from spatial and temporal reality, the reason being that:

“The primary objective of the ancient Egyptian artist was to represent, and as a result, to perpetuate ritually, the king’s divine power, the source of which existed out of normal time and space. Symbolic, ideogrammatic depictions of even specific military events communicated and perpetuated for eternity the abstract concept of “the king victorious,” the only significant point considered ritually necessary to make.”¹¹³⁰

The acquisition of the horse and chariot was to change this situation for the better. Static images continued to be used, such as that of Thutmose III smiting enemies on the Sixth Pylon at Karnak¹¹³¹ but with the addition of horses and chariots, such as those on the sides of Thutmose IV’s chariot,¹¹³² the old static image is combined with a new more dynamic one enabled by the action inherent in the fast moving chariot and spirited and powerful horses.¹¹³³ In the older “static” images the king is the largest figure and the centre of the action. He is beating down his enemies through his own personal efforts. He is fit, strong, aggressive, skilful, brave, young and active and larger than others. The scene as a whole is dramatic and filled with sound and fury but it shows a king on the ground, on the same surface as both his enemies and his own forces. He is strong and kingly but he is one individual among many and his power is very personal. The focus is narrow and tells only the immediate part of the story and it is confined to one place. Compare it to the images of Thutmose IV or Ramesses II; the horse and chariot lift the king above the action; he is now well above all other combatants. Together with the king the horses and chariot are shown on a much larger scale than any other and the

¹¹²⁹ This can be found in the Gerzean Period in Tomb 100 at Hierakonpolis. J. Quibell & F. Green (1902) *Hierakonpolis 2*, British School of Archaeology and Egyptian Research Account Publications, vol. 5, London.

¹¹³⁰ R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramsesside Battle-Narrative Tradition*, Chicago, 84.

¹¹³¹ PM II 88. 235 & 239 and in the images from the Theban memorial temples of Thutmose I and II, B. Bruyère (1926) “Sondage au Temple Funéraire de Thotmes II (Hat Ankh Shepsept),” *FIFAO* 4/4 (1926) 40-2, pls. 2,3, and 4.

¹¹³² H. Carter & P. Newberry (1904) *The Tomb of Thoutmôsis IV*, London, pl. 11.

¹¹³³ This is what Johnson denotes as the “chariot idiom.”

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combination enables the king's image to dominate the scene even more effectively. He is still fit, strong, aggressive, skilful, brave, young and active but now he is charging into battle at great speed aboard an amazing vehicle with the reins of two huge powerful steeds tied around his waist and is able because of the scale difference to crush proportionally more enemies under the feet of these aggressive horses that he controls so easily. The dramatic action has been enhanced tremendously. The prestige of possessing horses, their nobility and raw natural power and energy has attached to the king and enhanced his image as conqueror. The "Flying Gallop" attitude of the horses exudes power and speed. The magnificent chariot and harnesses of the horses contribute richness and colour and the whole makes a clear statement about the king's possession of the newest technological innovations and his enhanced mobility and power. This is a much more impressive and indeed exciting scene enabled by the addition of chariot and horses.

The new image was not a revolution but an adaptation and incorporation of traditional features to suit a new reality not only in Egypt but also in a wider world. This is part of a developmental process in the iconography and propaganda associated with the image that the kings wanted projected and it acted as an adjunct to the traditional image incorporating the new height in military technology as well as a sense of drama and movement. It is also a statement about the change to the power of the Egyptian state itself as an imperial entity wealthy and powerful beyond any period in its history.

Johnson also points out an additional change to this traditional genre in the Amarna period,¹¹³⁴ clearly illustrated in the tomb of Meryra I (AN 4; Fig. 11.49) where there are scenes of the royal family travelling to and from the temple and a new spatial relationship is developed between the king, queen, the princesses and their entourage. Additionally, there is a distinct narrative¹¹³⁵ element being featured. In the top left

¹¹³⁴ Johnson attributes this possibly to "the deification of Akhenaten's father Amenhotep III as a living, temporal manifestation of the creator god Re-Horakhty/ Aten." R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramsesside Battle-Narrative Tradition*, Chicago 84, note 4.

¹¹³⁵ Gaballa's definition of narrative is helpful here. He suggests that for a true narrative to exist it must contain elements of character, place, time and specific event and he emphasizes the incorporation of the last feature as vital to the transformation of what otherwise might in the Egyptian context be interpreted as "a typical action." G. Gaballa (1976) *Narrative in Egyptian Art*, Mainz, 5.

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corner the royal palace is shown as the place from which the procession originates¹¹³⁶ then the procession itself follows and on the right side of the scene is the temple to which they journey. Fundamental to this “story” is the fact that the main characters undertake the journey at speed in chariots drawn by spirited and powerful steeds.

This narrative technique becomes incorporated into royal iconography in the “battle narrative” and is utilised by kings to help reinforce their authority. According to Johnson his reconstruction of the destroyed “Temple of Nebkheperure in Thebes”¹¹³⁷ “is the earliest battle-theme composition to utilize the narrative format reintroduced during the Amarna Period.”¹¹³⁸ This then develops into the well-known Ramesside battle narratives that dominate the surviving monuments from that period. What is significant for this study is the part that the horses play as the teams become essential elements of the iconography of the king within this narrative form. The horses parallel the king in size and power, they lend speed and aggression, action and drama, nobility and beauty to the image and they demonstrate Egypt’s “modern” technological and military capacity. The massed chariot divisions of Abu Simbel and the Ramesseum speak of Egypt’s capacity for war and most importantly they underline the king’s statement of his fitness for the throne. On Thutmose IV’s chariot, the traditional images of smiting and the use of the chariot were juxtaposed to enable an extension of the ancient genre to better fit the “modern” explosion of Egyptian wealth and power in the 18th Dynasty. The horse is fundamental not only to the achievement of this wealth and power, but also to the way the kings chose to project their public image in this new environment.

¹¹³⁶ N. de Garis Davies (1903) *The Tomb of Meryre*, London, 23.

¹¹³⁷ R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramesside Battle-Narrative Tradition*, Chicago 43.

¹¹³⁸ R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramesside Battle-Narrative Tradition* 43. Although this interpretation needs to be reconsidered in view of the chariot scenes of Ahmose from Abydos, the fragmentary nature of the surviving scenes from Abydos make this difficult.

11.1.12 A KING - A MAN AND HIS HORSE

It seems horses had a personal impact, not only on some officials,¹¹³⁹ but also on at least several of the kings. Thutmose III and Seti I proudly declare that their horses are well cared for. Thutmose III provides “[hay] for the mouth(s) of my horse(s)”¹¹⁴⁰ and Seti I’s horses “are sated with corn.”¹¹⁴¹ The most striking example of interest and affection comes from the Great Sphinx Stela of Amenhotep II¹¹⁴² which not only stresses his skill as a horseman but makes it clear that he had a great emotional attachment to horses. “Now when he was (yet) a young prince he adored horses and delighted in them.”¹¹⁴³ Later Tutankhamun praises his team’s strength on the fan found in his tomb¹¹⁴⁴ and Ramesses II declares his gratitude for their support in the battle at Kadesh declaring that “They shall hence forth be fed in my presence, whenever I reside in my palace;”¹¹⁴⁵ and Ramesses III boasts that his horses “are like falcons when they see small birds... They roar like lion(s), agitated and enraged.”¹¹⁴⁶

The chariot teams of a variety of kings were given impressive names, Ramesses II’s faithful team were “Victory-in-Thebes and Mut-is-Content.”¹¹⁴⁷ Naming horses appears to have developed in the Amarna period,¹¹⁴⁸ though there may be evidence of it occurring during the reign of Amenhotep II with the king’s horses possibly identified as “Amun is Brave, Mut is Content.”¹¹⁴⁹ Hoffmeier points to the Amarna period as the

¹¹³⁹ As Paheri seems to have been very happy with his possession of a chariot team. J. Tylor (1895) *The Tomb of Paheri*, London, pl. 3.

¹¹⁴⁰ G. Botti (1955) “A Fragment of the Story of a Military Expedition of Tuthmosis III to Syria,” *Journal of Egyptian Archaeology* 41 (1955) 64-71. Turin Papyrus 1940-1941 (page 1, recto, line 6 and fig 1.)

¹¹⁴¹ R. Caminos (1968) *The Shrines and Rock-Inscriptions of Ibrim*, Archaeological Survey of Egypt 32, Egypt Exploration Society, London, 85 line 5 of the text and pl. 40.

¹¹⁴² *Urk* IV 1279.6-1283.2.

¹¹⁴³ *Urk* IV 1281-1283. B. Cumming (1982) *Egyptian Historical Records* Warminster, 21 He was also given charge of the royal stable and the raising and training of the royal horses which he seemed to do with great success.

¹¹⁴⁴ T. G. H. James (2000) *Tutankhamun*, London, 186. They are “like bulls” (in their strength.)

¹¹⁴⁵ “The Kadesh Battle Inscriptions of Ramesses II, The Poem,” in M. Lichtheim (1974) *Ancient Egyptian Literature II, The New Kingdom*, Berkeley, 70.

¹¹⁴⁶ K. Kitchen (1970) *Ramesside Inscriptions*, Oxford, 5, 22.9.

¹¹⁴⁷ M. Lichtheim (1974) *Ancient Egyptian Literature II, The New Kingdom*, Berkeley, 70.

¹¹⁴⁸ J. K. Hoffmeier (1988) “The Chariot Scenes” in D. Redford (ed) (1988) *The Akhenaten Temple Project 2: Rwd-mnw, Foreigners and Inscriptions*, Toronto, 37 “The naming is significant, because I know of no earlier example of the practice, nor can I point to another occurrence from the Karnak talatat, or the chariot scenes from Amarna.”

¹¹⁴⁹ *Urk* IV 1302.3, “Amun is valiant,” B. Cumming (1982) *Egyptian Historical Records of the Later Eighteenth Dynasty*, Fascicle 1, Warminster, 30-32, Translated from the original hieroglyphic

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time of the first occurrence of the naming of a team of royal chariot horses. A line of text on Plate 35 has the suggested translation of “its (the team’s) beautiful name (is) ‘Made by the Sun-disc).”¹¹⁵⁰ These together with the other later attestations, reveal some of the kings’ pride and affection for their horses and recognition of their contribution.

11.1.13 HORSES AND HERMENEUTICS

In examining the corpus of horse images some benefit can be gained from viewing it from a hermeneutic perspective.¹¹⁵¹ Put simplistically, hermeneutics has to do with the interpretation and analysis of underlying meaning. If an overview of the corpus of horse scenes is examined there is (together within the general interpretations of meaning in Egyptian art, see Chapter 6) one critical embedded meaning that the images of the horses help to convey- the most significant meaning/message - the maintenance of *mꜥt*. Three general categories of illustration become apparent¹¹⁵² as means by which this message is communicated.

The first category consists of horses that are harnessed and under the tight control of their driver be it king, official or soldier, at play (Userhat TT 56 hunting, Fig. 4.108) on official duty (Menna TT 69 inspecting crops, Fig. 4.137) or in battle (Seti I attacking the Libyans, Fig. 4.260). The image is of energy, power and strength tempered with obedience. The horses are fully harnessed to chariots, tightly reined, in a powerful team working together in harmony strongly controlled by an individual who may even be otherwise engaged as are Userhat and Seti who have the reins actually tied about their waists whilst they use their bows to hunt or to do battle. The horses are always in the correct proportion to the most prestigious person in direct control. They are presented in neat rows or registers vertically or horizontally, based on ground lines even in

¹¹⁵⁰ text as published in W. Helck *Urkunden der 18. Dynastie*. Cumming notes Grdseloff *ASAE* 45 120ff reads “Amun is brave, Mut is content” as the names of the two horses.” Footnote 1302.3. J. K. Hoffmeier (1988) in D. B. Redford (1988) *The Akhenaten Temple Project*, Vol.2. Rwd-Mnw and Inscriptions, Toronto, 37. Hoffmeier states, “The naming is significant because I know of no earlier example of the practice, nor can I point to another occurrence from the Karnak talatat, or the chariot scenes from Amarna.” 37.

¹¹⁵¹ V. Angenot (2015) “Semiotics and Hermeneutics,” in M. Hartwig (ed.) (2015) *A Companion to Ancient Egyptian Art*, Chichester. “Hermeneutics is the branch of discourse theory that deals with *interpretation* and the analysis of underlying layers of meaning that exceed the literal or obvious signification of textual and visual motifs.” 108.

¹¹⁵² There are of course anomalies however these are quite infrequent.

circumstances when a certain amount of “busyness” is implied such as that of the Egyptian camp at Kadesh (Fig. 9.6¹¹⁵³). No matter how dramatic the circumstance or with what skill they are rendered they conform to each other, they are always under control. The image is in perfect harmony with the underlying message that *mꜥt* is being maintained be it in smaller scenes in tombs or on temple walls on a vast scale.

The second category within the corpus is that of horses brought as tribute, (Amunedjeh TT 84 Fig.4.66), battle spoils or in feeding or pastoral scenes. These animals are not tightly harnessed and at times are presented by non-Egyptian individuals. They are illustrated in very similar fashion to the harnessed horses though with a generally quieter demeanour. They are depicted in identical ways to the chariot teams. They are in registers, on ground lines, layered vertically or horizontally, in proportion to the person in direct contact with them and often constrained physically with halters. As an example in the scene from the tomb of Amenemhet (TT 123 Fig. 4.22) only the forward group is actually constrained in this way!¹¹⁵⁴ The second group is following along completely unrestrained and obedient. In the Petrie image from Amarna (Fig. 9.4) and Meryra I’s horses (Fig. 4.196) are confined in stables. The images are of wonderful, valuable, spirited animals under control. No matter from whence they came or under what circumstances, they are in Egypt and thus under control. *mꜥt* is being maintained. The feeding scenes feature horses that are under no direct human contact and yet, they are obedient. Two scenes may seem to contradict the message- the scene from the tomb of Ipuia (Fig. 4.253) and the Amarna relief (Fig.9.25). Both contain horses that may be deemed not under control. Ipuia’s horses prance and dance about, they are very energetic and spirited but the grooms are controlling them, they are confined by halters. In the Amarna relief the horses seen running in a small herd are free to gallop but immediately below they are obediently submitting to their grooms. The level of control is more relaxed in these scenes but it is still there and the horses obey- order is maintained.

The third category is very specific and reserved for enemy horses in battle. They are shown in the same anatomical form to the Egyptian horses and most are harnessed but

¹¹⁵³ Where they are presented still in neat lines as they feed.

¹¹⁵⁴ The group in the tomb of Anonymous A (TT 91) seems to surround a groom who is patting one of the horses.

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that is where similarity ends. Tutankhamun's Painted Box (Figs. 4.225, 4.226, 4.227, 4.228) Seti I shown attacking the Hittites on the walls at Karnak (Fig. 4.261) and Ramesses II's Kadesh scenes at Abu Simbel, (Fig. 4.278) the Ramesseum (Fig. 4.274) and at Abydos (Fig. 4.272) all contain clear exemplars of this category and they fall within the battle narrative style of depiction.

In all circumstances enemy teams are shown in spectacular contrast to the Egyptian teams.

The Egyptian chariot teams are harnessed- enemy teams are too but many of their chariots are shown upturned, abandoned or in retreat. Egyptian horses are upright going strongly forward and uninjured. Enemy horses often in panicked with heads down, falling and injured. They trip and crumple and are even upside down (Fig. 4.272).

Egypt's teams act together in harmony whilst individual horses in enemy teams are wounded, falling and dragging their partners down with their heads facing in completely different directions.

The enemy horses are generally all shown in the same proportion as are the Egyptian horses but the horses of the enemy leaders whilst larger than their fellows are much smaller than those of Pharaoh (Fig. 4.262).

The battle scenes are often bordered by massed Egyptian chariots that are still in vertical or horizontal registers or lines in order whereas the enemy teams are in complete disarray. They are out of order in a jumble of broken chariots, dead bodies, injured horses and men and in a stampeding rout.

The lack of registers, ground lines and the massed jumbled figures enabled the demonstration of enemy chaos but also freed the images from the constraints of *mꜣt* *mꜣt* and introduced elements of chaos- *isfet*. They permit an insight into the understanding and skills of the artist in depicting unusual actions, positions and behaviours of horses not possible within a normal scene.

Most especially through the spectacularly dramatic contrast between the horses of Egypt and its enemies a clear message is being sent- that in terms of Egypt and its king *mꜣt* is being maintained.

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These scenes are certainly dominant in the 19th Dynasty but they can be traced as far back as the Ahmose I pyramid complex at Abydos and its decorations.¹¹⁵⁵ There is evidence for them continuing on through the 18th dynasty on the demolished temples of Thutmose 1 and Thutmose 11. They appear on the sides of Thutmose IV's chariot on Tutankhamun's Painted Box and his mortuary temple and they are at their grandest and most public on the walls of Karnak, the Ramesseum, Abydos and Abu Simbel. The underlying message that *mꜥt* is being maintained is magnified by the images of the horses that play such a vital part in the contents of the scenes and helped to boost the propaganda "campaigns" of the kings.

The arrival of the horse had an extraordinary impact on Egypt. It changed the sights sounds and smells of the entire country. The creation of whole new occupations and industries, services and structures heavily impacted the economy and the environment. Lines of resource acquisition, management and distribution would have been established, transport and communications enhanced, skills and knowledge accumulated and the sum of the wealth of the Egyptian state magnified. The social structure was reinforced through horse ownership and the execution of official activities made more extensive and speedy. The inclusion of horses helped to advertise the achievements of kings and reinforce the demonstration of their duties. Horses penetrated religious, social and cultural activities, became the subject of art and were appropriate elements in Egypt's funerary images. No aspect of Egypt remained untouched by its adoption.

The most obvious impact was on the military and Egypt's capacity to assert itself on the political environment of the Near East. Domestically an entire new wing of the military was created into which great amounts of resources were poured giving it the potential not only to become a force of itself in the country but enabling an extraordinary change in the international status of Egypt itself. Certainly by the time of Thutmose III Egypt was perfectly capable of fielding well trained well supplied and well led chariot divisions and these enabled that king and following monarchs to establish Egyptian domination of vast new territories and access incredible wealth.

¹¹⁵⁵ For a thorough examination of the tracing of the "Battle Narrative" see W. R. Johnson (1992) *An Asiatic Battle Scene of Tutankhamun from Thebes: A Late Amarna Antecedent of the Ramesside Battle- Narrative Tradition*, Dissertation: University of Chicago.

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11.2 INTERNATIONAL IMPACT

Based on textual and archaeological evidence, it appears that horses played some part in the expulsion of the Hyksos. Following the experience of their hegemony, the Egyptians “came to the conclusion that to protect Egypt effectively, a first line of defence had to be set well to the North, i.e. in Syria. This and a satisfying feeling of national pride were the real factors behind the new policy epitomised by the Egyptians as ‘extending the boundaries’, that is imperial expansion.”¹¹⁵⁶ While there are several more reasons for this, notwithstanding the personalities of the “warrior kings,” the requirements of national security were certainly factors that influenced Egypt’s subsequent warlike activities and lay at the heart of the changes both internally and externally that Egypt experienced as a result of them and at the heart of this process was the horse. During the time of the Hyksos hegemony, the Near East was populated by cultures that had, at their disposal the horse and chariot and all that this “cutting edge” military technology could provide. Fortunately, it was acquired and adopted by Egyptian kings determined to reunite Egypt and who also recognised that a forward defence policy was the only way to secure their land from attack in the future. In the hands of aggressive kings who knew very well how to produce and use the horse and chariot, Egypt was put on a level footing with other powers in the region. It protected them from invasion, increased their mobility and range and allowed them to conquer and then to maintain control over the Empire it helped create.

Kings demonstrated their warlike qualities and many, if not most, actually participated in battle and under the warrior kings like Thutmose III and Amenhotep II Egypt in the 18th Dynasty was able to counter attacks on its sovereignty and push its boundaries further than at any time in its history, competing equally with horse cultures such as the Mitanni and the Hittites.

Thutmose III was the first king attested as having launched significant Syrian campaigns. They comprised chariot divisions made possible, most likely by domestic breeding and construction programs (see above), acquisitions through trade and booty from an earlier campaign by Thutmose I and perhaps Thutmose II. Chariot divisions

¹¹⁵⁶ G. Gaballa (1976) *Narrative in Egyptian Art*, Mainz, 47.

became standard military components. On the remaining monuments kings are shown in their chariots on the way to battle, in battle (Fig. 11.50) and returning from battle (Fig. 11.51) on a scale not seen before. Egypt came to be great because it used the chariot, its armies and its collective will to dominate the region. The horse was a vital contributor to making Egypt into a true world power and providing the opportunity for the influx of greater wealth than it had ever enjoyed.

Having achieved this new international power the long term maintenance of hegemony became an Egyptian imperative. The most effective means to do this was by the judicious use of military power, the army and its chariot divisions. This international imperative spurred on the explosion of horse and chariot related activities within Egypt itself.

Given the power of “imperial” Egypt it behoved its subject states to pay tribute in a variety of forms. One of the commodities judged suitable for this was horses. Not surprisingly the first identifiable instance of this occurs in Menkheperresonb’s (TT 86) (Fig. 4.31) tomb during the reign of Thutmose III where two harnessed and two unharnessed horses are being presented by Syrians. This is only the first of a multitude of scenes stretching throughout the period that illustrate the presentation of horses to Egypt. Thutmose III’s Butler and Foreman of Works, Minmose wrote, “I taxed Upper Retjenu in ...chariots and horses without number,”¹¹⁵⁷ and this system became the norm. Horses and chariots became a large part of the required tribute due to Egypt on a regular basis. As it is clear that horses initially made their way from the Levant into Egypt it would be most appropriate that the kings would have appreciated the injection of new breeding stock. Indeed since there is a measureable increase in the size of Egyptian horses following the reign of Thutmose III it is quite possible that these horses did in fact have a significant effect on the morphology of the Egyptian domestic stock.

¹¹⁵⁷ *Urk. IV* 1442.

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Horses were also seen as appropriate “gifts” from other rulers to the Egyptian kings. Tušratta of Mitanni, the king of Alašiya¹¹⁵⁸ and the Great Prince of Hatti¹¹⁵⁹ all sent multiple horses as gifts.

It appears also that there was a two-way movement of horses not only into but out of Egypt. The Amarna letters¹¹⁶⁰ contain multiple requests from subject states for the supply of horses and chariots from Egypt supposedly in order to build up their defences against their shared enemies.

Foreign rulers needed to maintain positive relations with “imperial” Egypt and it is significant that horses were seen as a valuable means of securing this goal. Horses and chariots were valuable commodities and they represented an important instrument of international conquest, the maintenance of power and diplomacy.

The impact of the acquisition of the horse and its attendant chariot cannot be over emphasised in that there was no aspect of Egyptian domestic life that was not in some way influenced by it and to a large degree it was this animal that made a valuable contribution to establishing and maintaining the wealthiest and most powerful era in Egypt’s long history.

¹¹⁵⁸ W. L. Moran (1987) *Amarna Letters*, Baltimore, pp. 6,7,12,18,37,41,43,51,105,110. (See Chapter 5.)

¹¹⁵⁹ *KRI* II, 247.5-6; Kitchen (1996) 94; J. B. Pritchard (1955) *ANET* 257.

¹¹⁶⁰ EA 71, W. L. Moran (1987) *Amarna Letters*, Baltimore, EA 107, 40-41. See also Chapter 5.

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This research into horses in the New Kingdom has revealed a vast amount more material than was envisaged at its outset and far more than can be adequately examined within the bounds of this thesis. It has confirmed the horse and its contribution to the Egyptians as important and valid subjects for specific study, a study that merges into a developing academic context that increasingly concentrates on the animals of ancient Egypt. Because so much of the evidence is iconographic its examination also melds with expanding investigations into Egyptian art making the two complimentary. So much material emerged that it enforced a selection process that gives priority to the visual material rather than the textual evidence though a sample of the latter has been included. The thesis has benefitted greatly from developments in scientific techniques such as standardised measuring criteria but most especially from the evolution of archaeological approaches that now acknowledge the importance of every aspect of ancient Egypt and methodologies that enable their proper examination and appreciation. The dominance of the chariot can now be reviewed and the horse, its “engine” given its proper place in academic research. No longer is the “cart before the horse.” The study of the horse has provided a fresh and more extensive insight into the New Kingdom in Egypt adding a new dimension, a clearer understanding of its complexities and the adaptive capacities of the Egyptians themselves.

Several of the research questions formulated at the outset remain to be the subject of future work or to await the discovery of new material but the examination of the corpus of evidence has provided many answers as well as unanticipated information.

12.1 WHAT WAS THE ORIGIN OF THE EGYPTIAN HORSE AND HOW WAS IT INTRODUCED INTO EGYPT?

It was necessary to go further back in time than was expected to get a clear understanding of the ultimate origin of the Egyptian horse.

Studies of faunal remains reveal that there is no evidence to support the existence of an extant native Egyptian horse after the Pleistocene period, so it is clear that the horse of the New Kingdom did not originate in Africa. Based on genetic studies and

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archaeological investigations the Tarpan, *E. ferus caballus* appears to have been the progenitor of Near Eastern horses and it was domesticated at one or several cultural sites in the Ukraine in the late 4th to early 3rd millennium BCE. Over a long period of time its numbers expanded into the east and the west because of the advantages it conferred on various cultures and it continued to proliferate through the Transcaucasian areas into the drainage of the Tigris/Euphrates and thence in a westerly and south-westerly direction. This process was facilitated by semi-nomadic “horse cultures” whose range intersected with the established trade routes and the presence and use of horses is well attested in these areas over time.

One of the most significant conduits was the Hurrian “horse culture” whose collective expertise in the training, handling and husbanding of the animal was exploited by rising polities such as Mitanni. But it was the development of the light spoke-wheeled chariot that made the horse particularly significant and provided the stimulus for the further development of its function as an effective instrument of war.

The pervasiveness of the Hurrian culture and the success of powerful chariot-using polities like the Mitanni and the Hittites ensured that horse exploitation would reach Levantine groups. The Hyksos culture, according to archaeological, faunal and linguistic evidence, originated in or near the Levant. It was the channel through which the horse made its way into Egypt either by direct importation from ports such as Byblos or by overland routes. It accompanied the influx of Hyksos peoples who eventually established their hegemony in the Egyptian north. The evidence attests to the Hyksos being in possession of horses in Egypt by the “Liberation” phase of the 17th Dynasty.

The “War of Liberation” was the context in which evidence exists for the Egyptians themselves coming into the possession of horses. Epigraphic, faunal and iconographic sources suggest that they were initially in the personal possession of the king and as such quickly became associated with existing kingly iconography. All the evidence indicates that the numbers of horses were small originally and their possession devolved from the king. Once Egypt had horses in its possession it was almost inevitable that they would be used to re-establish Egyptian control of all of Upper and Lower Egypt and from this position the Egyptians would go on and not only compete with other chariot

using politics but under the command of a series of aggressive kings they came to dominate them. The horse and the chariot it powered was the tool that enabled the extension of an Egyptian hegemony that lasted for hundreds of years.

Having stated this however the most recent finds give an indication that there may in fact have been more horses in Egypt at an earlier time than has so far been understood. At the time of writing much investigation needs to be conducted before this can be either confirmed or discounted and that information is most eagerly anticipated.

12.2 WHAT WAS THE HORSE LIKE PHYSICALLY WHEN IT REACHED EGYPT AND WHAT CHANGES DID IT UNDERGO OVER TIME?

Faunal evidence is sparse and much of it insufficiently or inconsistently examined but overall trends can be identified. The remains indicate that the early Egyptian horses were quite small in relation to modern horses, they would today be considered to be ponies, and they were similar in appearance to the modern Arab breed. They were approximately fourteen hands in height and were finely built being described as “gracile.” They were unsuited to being ridden because of this and were more useful as chariot teams. The faunal remains not only give an idea of the appearance and structure of the horse but also an insight into several other factors. Faunal remains and iconographic evidence attest to the gradual increase in the body size and numbers of Egyptian horses resulting from conquest, tributary importations from the Near East and the establishment of domestic breeding programs. This coincides particularly with the campaigns of Thutmose III. At this time there is an identifiable change in the size and build of horse that confirms Rommelaere’s theory of two types of horse the “bréviligne” and the “longiligne” although not her contention that it is a different species. The faunal remains have also provided important information about the Egyptian capacity to successfully breed and manage horses from birth to old age. Because faunal remains are few and most have been uncovered in settlement contexts where chariot horses would have been present rather than breeding mares and many images have been destroyed or damaged, there is a “skewing” detectable in the evidence that suggests the predominance of the use of male horses which does not reflect the reality of a large

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scale successful breeding program. The Egyptian horse was small but it was eminently suited to the Egyptian adoption of the light spoke-wheeled chariot.

12.3 WHAT ROLE DID HORSES PLAY IN NEW KINGDOM EGYPT?

The reliefs and paintings in the tombs of New Kingdom officials in the Theban hills, at Amarna, Saqqara and in the provinces and the images on temple walls throughout Egypt provide excellent insights into the role of horses in the 18th and 19th Dynasties.

Initially horses appear only few in number and in the direct possession of the king. The evidence of the Ahmose I pyramid temple at Abydos and the skeletons of stallions found at Avaris dating from the same period suggest that Egypt began to adapt readily to chariot warfare at least in terms of the upper echelons of the military. As time went on horses changed the nature of Egyptian warfare, became and remained a vital component in Egypt's armies and took a crucial role in helping to establish an Egyptian empire.

Gradually chariot teams appeared in contexts beyond the military. They are shown in the execution of official's duties, in their leisure activities and as part of religious observances. Because they were initially in limited numbers and they were a direct benefice of the king they were "prestigious" animals and were not used for undertaking work such as that carried out by the donkey. The chariot and its team may have formed part of the "package" attached to an office but there is also evidence attesting that they were special gifts from kings. Because of their speed, nobility and their associations with the highest echelons of society horses became obvious inclusions in appropriate decorative schemes in official's tombs where their images attest to their active participation in administrative, agricultural, funerary, recreational, domestic and transportation activities. These images give clear indications of the proliferation of horses throughout the Egyptian administration and their importance to the execution of official duties. A more hidden role was the one they played in changing the lives of the people who served the kings, the military and the officials.

Horses and chariots were not only desirable booty but they became valued items of tribute especially from the time of Thutmose III. Their inclusion in tribute offerings not

only attested to their intrinsic worth but they became part of the public acknowledgement and reinforcement of Egypt's hegemony over its subject states.

The victories of kings were celebrated on the walls of temples on a grand scale with the reliefs of Seti I and Ramesses II providing clear evidence of the role of the horse in this kingly iconography and the propaganda it furthered. These scenes reinforced that essential aspect of life, the maintenance of *mꜥt*. The depictions of kings hunting, training with weapons and demonstrating their horsemanship were used to further their public images but together with written evidence they also give a small insight into the personal enjoyment some of these rulers gained from their interactions with their horses.

The significant role that the horse had is graphically illustrated by the extensive amount of data it has provided for investigation was that of a subject for all forms of artistic endeavours. There is no aspect of Egyptian art that the horse did not penetrate. It is demonstrated most obviously on temple walls and in tombs, in paintings and reliefs but it also became the subject of the decoration of artefacts, was incorporated into hieroglyphic communication and made its way into various works of literature, even extraordinarily into love poetry!¹¹⁶¹ The role of the horse was pervasive and essential to the development of Egypt in the period.

12.4 HOW DID THE ARRIVAL OF THE HORSE IMPACT EGYPT DOMESTICALLY AND INTERNATIONALLY?

The impact of the horse in Egypt was small to begin with but it gradually grew to such a scale that almost every facet of life was effected by it in some way and it extended to its being a significant element in the process that led to Egypt becoming an imperial power.

Whilst the initial numbers of horses in Egypt at the outset of the 18th Dynasty appear to have been small the Egyptians were quick to adjust their capabilities in order firstly to

¹¹⁶¹ A rather interesting comparison between a lover and a horse! From Papyrus Chester Beatty quoted in M. A. Lichtheim (1976) *Ancient Egyptian Literature: A Book of Readings*, Berkeley, 186-187.

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unseat and pursue the Hyksos and then under a series of skilled and aggressive kings to extend Egypt's sway to create an extensive empire far beyond its traditional territorial borders. This was only possible because it had established chariot divisions in its armies enabling it to compete with and defeat the chariot cultures of the Near East.

Domestically the presence of the horse effected agriculture, the economy, society and culture. By Thutmose III's reign, although there is limited archaeological evidence, there must have been sufficient changes in Egypt's domestic situation to enable the creation of such a successful war machine incorporating chariot divisions of significant size and ability.

Following Thutmose III's campaigns the proliferation of the horse throughout Egypt was boosted by the increasing numbers of available animals. The chariot had proven to be a major weapon in the Egyptian arsenal and one that could, if well used, provide the country and its people with greater wealth and prosperity than at any time in its history. The new type of warfare required the use of massed chariot divisions powered by huge numbers of horses and this gave rise to a domestic breeding program to supply them and that continued to expand in order to satisfy Egypt's growing needs. This was the real catalyst for the horse changing the face of Egypt. Patterns of agriculture were altered to provide the food resources necessary. The supply of horses became more accessible to the official classes and though there is no archaeological evidence to support it, there would have been horse breeding activities not only directly associated with the king and the military but also with officials, thus having an effect on agricultural practises both small and large scale, throughout the country. Large areas would have been set aside for breeding, exercising and grazing and new buildings were constructed, barns, storehouses, water supplies, stables etc. all of which required workers to build and to use them. The domestic economy and hierarchy were impacted by the creation of entirely new occupations to enable the supply, administration and training of horses, the manufacturing of harnesses and the chariots themselves. Resource acquisition and supply would have been vastly expanded and new skill sets and technical expertise developed. The impact on the official classes themselves was profound as well. A chariot became a prestigious possession associated directly with a position in the hierarchy, reinforcing that prestige and social differentiation. No doubt a chariot provided an impressive means to make the discharge of duties faster, more

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efficient and added a new dimension to established leisure activities like hunting. It even changed the scenery of everyday life. So important were horses and chariots that their images became accepted inclusions not only in the grand temple reliefs of the kings but in the exquisitely executed paintings and reliefs of the official's tombs and the artefacts they commissioned for daily use that provide us with much of our remaining evidence.

A welcomed outcome of the research has been a clearer understanding of the place the horse occupied in Egyptian culture. Whilst its depiction was embedded in artistic tradition it gave artists a new subject for their work, one that initially proved difficult to render. However, over time and with experience they began to depict the horse in greater detail and with more anatomical accuracy in a variety of scenes. Images of horses and chariots were integrated into the writing system, foreign words associated with them were added to the language and they were incorporated into works of literature.

The horse became a tool to enhance the public perception of the officials who commissioned the images. By examining the changes to the way in which the horse was depicted, new information has been revealed about developments in Egyptian art, and enabled further insights into the nature of the circumstances of times like the reign of Akhenaten. The study of the representation of the horse has revealed much about the perspicacity and skills of the artists but incidentally it has revealed what might cautiously be described as a type of “canon” for its depiction tied directly into the traditional one based on human beings. It reinforced our appreciation of the Egyptian artist's ability to accurately render the animal world and its behaviours. Horse images helped illuminate what constituted “acceptable” images in depictions and show how those conventions changed over time.

It has been made possible to better understand further the technical and adaptive capacities of the Egyptians and to glimpse more subtle aspects of their society such as their pride in and affection for their horses that was combined with distinctly authoritarian and sometimes even cruel control methods.

The horse and its chariot, joining a long tradition, became fundamental to the iconography of Egypt's kings. The spectacular images on the temple walls reinforced

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their maintenance of *mꜥt* and their extension of Egypt's lands and presented their successes on a vast scale, with drama and magnificence. These scenes underlined the fact that through the use of the horse and chariot Egypt and its people were able to experience new things and greater power and wealth than at any time in the nation's history.

The horse was very late in coming to Egypt. It arrived with an already established and important use, that as a weapon of war and Egyptian possession of it issued from war. It became, like everything else, an object at the disposition of the king and remained a very prestigious item for its entire history in that country. It took its place as an instrument of government and the military and it had a powerful national impact reaching into almost every facet of Egyptian life. It extended and reinforced Egypt's resource development, administrative and social systems and its use also had profound economic and technical ramifications. Its depiction not only reflected the art of the time but also Egypt's fundamental concepts and nature and ultimately the horse was the engine that powered the establishment and maintenance of Egypt's New Kingdom empire.

This thesis has uncovered far greater amounts of material relating to horses in the period covered than can be effectively examined within its scope. It has drawn together the various threads of theory in a more modern archaeological and academic context and benefitted from extensive developments in technology and methodology. It has drawn attention to the ancient Egyptian horse, the study of which has up to now been overshadowed by the instrument it powered, the chariot and established the horse in New Kingdom Egypt as a specific and distinct subject worthy of further study in its own right. There is so much more to learn.

"A horse! A horse! My kingdom for a horse!"

The Tragedy of Richard III. William Shakespeare. (Act V. Scene IV.)

APPENDIX 1: THE BUHEN HORSE

During excavations conducted in 1959 and 1960, Emery uncovered an almost entire horse skeleton at the Buhen fortress in Nubia. It was found lying on the Middle Kingdom rampart pavement under a 0.5m layer of cinders and charred wood as well as a stratified deposit 1.15m deep on top of which the New Kingdom reconstruction of the fortress was built.¹¹⁶² Emery dated it to 1675BCE.¹¹⁶³

The Buhen fortress was originally constructed in the Twelfth Dynasty to guard Egypt's southern borders and to control the Lower Nubian territory it had annexed.¹¹⁶⁴ In addition to this primary function, Buhen, which was sited north of the Second Cataract, provided a vital trading conduit for goods passing up and down the Nile. Emery suggests that it was the administrative centre for the whole area of the Second Cataract¹¹⁶⁵ and also a centre for mining and working of minerals such as amethyst and copper¹¹⁶⁶ and that it was responsible for the control of the desert routes.

Although no successful carbon dating of the skeleton has been achieved, the charcoal from the burned layer has been dated and Emery confidently assigned it to 1675BCE.¹¹⁶⁷ At or around this time the fortress was either overtaken by Nubians of the Kerma Culture or it was abandoned as Egypt's power in the area declined. Emery was convinced that the horse met its death in a violent Kushite attack on the fortress.¹¹⁶⁸

¹¹⁶² W.B. Emery (1960) *A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen 1958-59*, Kush 8-9, 1960-61, 8.

¹¹⁶³ J. Clutton-Brock (1979) "The Buhen Horse," in W.B. Emery, H.S. Smith, & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*. Egypt Exploration Society, London, 191. See also P. Raulwing & J. Clutton-Brock (2009) *The Buhen Horse: Fifty Years After Its Discovery (1958-2008)* Leiden,

¹¹⁶⁴ W.B. Emery, H.S. Smith & A. Millard. (1979) *The Fortress of Buhen*, 3.

¹¹⁶⁵ W.B. Emery. et al. (1979) 3.

¹¹⁶⁶ W.B. Emery. et al. (1979) 101.

¹¹⁶⁷ W.B. Emery (1960) *A Preliminary Report*, 9.

¹¹⁶⁸ W.B. Emery (1960) *A Preliminary Report*, 3.

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The skeleton of the Buhen horse was extensively studied by J. Clutton-Brock an experienced archaeozoologist at the British Museum in 1974¹¹⁶⁹ and a preliminary report was produced which itself was then incorporated into the full excavation report published in 1979.¹¹⁷⁰

It was established conclusively that the skeleton was that of a horse rather than that of another equid. The horse was a “male horse of about nineteen years of age at the time of its death...the horse may have been a gelding ... quite an old animal ... it was a perfectly healthy individual.” Its withers height is approximately 150cm.¹¹⁷¹ “The Buhen skeleton is from an animal that was larger and more fine-limbed than the prehistoric horses of Western Europe, and ... it belongs to the group of horses that is so well depicted in the art of Ancient Egypt after the Eighteenth Dynasty. These horses have all the looks of the present day Arab breed.”¹¹⁷² Clutton-Brock assigned it to Bokonyi’s “eastern group” of “small relatively slender-limbed horses or ponies,”¹¹⁷³ and she concluded that the “Egyptian Buhen ... Hittite and probably the later Mesopotamian horses all belong to the same group”... which “closely resemble the modern Arab.”¹¹⁷⁴ Clutton-Brock quoted Boessneck’s opinion concerning the similarity of the Buhen horse and the later Theban horse to the Hittite horses excavated from Osmankayasi, which is, that they are nearly identical.¹¹⁷⁵

¹¹⁶⁹ J. Clutton-Brock (1974) “*The Buhen Horse*,” *Journal Of Archaeological Science*, (1974) 1,1, 89-100.

¹¹⁷⁰ J. Clutton-Brock. (1974) “*The Buhen Horse*,” JAS (1974) 1/1, 89-100. Also in J. Clutton-Brock. (1979) “*The Buhen Horse*,” in W.B. Emery, H.S. Smith, & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*. Egypt Exploration Society, London.

¹¹⁷¹ J. Clutton-Brock (1979) “*The Buhen Horse*,” 192.

¹¹⁷² J. Clutton-Brock (1979) “*The Buhen Horse*,” 193.

¹¹⁷³ S. Bokonyi (1968) “Data on Iron Age Horses of Central and Eastern Europe,” in *Bulletin of the American School of Prehistoric Research*, Harvard, 25 (1968) 3ff. This text is referred to by Clutton-Brock within the discussion of the Buhen horse, (1979) “*The Buhen Horse*,” 193.

¹¹⁷⁴ J. Clutton-Brock (1979) “*The Buhen Horse*,” 194. Additionally, she makes mention of the effect of early castration on a young horse in that “when an animal is castrated the fusion of the epiphyses is delayed and the bone continues to grow for a greater length of time than it does in the normal male,” 193.

¹¹⁷⁵ J. Boessneck (1970) “Ein altägyptisches Pferdeskelett” *MDAIK* 26 (1970) 47.

The horse exhibited features of an animal “which was allowed to graze and feed in a natural manner.”¹¹⁷⁶ It appears also that the horse was actively ridden with a bit “made either of bone or bronze.”¹¹⁷⁷

The dating of the Buhen horse has been challenged by scholars such as Braunstein-Silvestre¹¹⁷⁸ who questioned Emery’s conclusion on the basis of the understanding of the series of events relating to the wall under which the horse was found.

Emery’s conclusions about the dating of this find are unequivocal.¹¹⁷⁹ Braunstein-Silvestre,¹¹⁸⁰ suggested there might be problems with the relationship of the horse to the wall as well as to the ashes under which it was buried. If Emery’s diagram below is examined carefully in light of his excavation report, it is clear that the horse was deposited directly on to the Middle Kingdom pavement.¹¹⁸¹ There is no indication that the horse was predated in any way either by human means or by animal, it was almost complete, parts of the skeleton having been crushed.¹¹⁸² D.M. Dixon mentions that it lay “directly”¹¹⁸³ under a layer of burnt wood and ashes of approximately 0.5m in depth and that both horse and ashes were buried under a stratified deposit which Emery identifies as being made of “fallen brick debris and drift sand” accumulated during the

¹¹⁷⁶ J. Clutton-Brock (1974) “The Buhen Horse,” *Journal Of Archaeological Science*, (1974) 1,1, 90. This article provides a complete report on the skeleton examined and makes comparisons between this horse and other horses found in Egypt.

¹¹⁷⁷ J. Clutton-Brock (1974) “The Buhen Horse,” 93.

¹¹⁷⁸ F. Braunstein-Silvestre (1981) “A quelle date apparaissent le cheval et le char en Égypte?” *La Recherche* 126 (1981) 1158-1161, and “Quand le cheval arrive-t-il en Égypte?”, in L. Krzyzaniak & M. Kobusiewicz (1984) *Origin and Early Development of Food Producing Cultures in Northeastern Africa*. Polish Academy of Sciences. Poznan. 271-275. Others such as S. Tyson Smith (1995) *Askut in Nubia The Economics and Ideology of Egyptian Imperialism in the Second Millenium B.C* London, have also criticised Emery’s dating. Raulwing and Clutton-Brock have examined these criticisms and satisfactorily supported Emery’s dating. P. Raulwing & J. Clutton-Brock (2009) *The Buhen Horse: Fifty Years After Its Discovery. (1958-2008)* Leiden. 1-106.

¹¹⁷⁹ W.B. Emery (1960) *A Preliminary Report*, 9. Also D. M. Dixon (1979) “Introduction” in W.B. Emery, H.S. Smith, & A. Millard (1979) *The Fortress of Buhen*, 191. He reiterates the dating criteria of the horse and makes reference to a work then going to press where more information could be found. However this researcher cannot find any subsequent publication of this text.

¹¹⁸⁰ F. Braunstein-Silvestre (1984) “Quand le cheval arrive-t-il en Égypte?” in L. Kryzaniak & M. Kobusiewicz (1984) *Origin and Early Development of Food-Producing Cultures in North-eastern Africa*, Poznan, 272.

¹¹⁸¹ W.B. Emery et.al (1979) *The Buhen Fortress*, 29.

¹¹⁸² J. Clutton-Brock (1979) “The Buhen Horse,” 191.

¹¹⁸³ D.M. Dixon (1979) “Introduction” in W.B. Emery, H.S. Smith & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report*. Egypt Exploration Society. London, 191.

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“partial or total abandonment” of the site¹¹⁸⁴ which he believes followed the destruction of the Middle Kingdom fortress. The New Kingdom fortress was constructed over these deposits sealing the horse in place.

It is difficult to see how the dating of these remains can be questioned. J. Clutton-Brock, who examined the remains, was equally convinced of Emery’s dating. Most recently Raulwing and Clutton-Brock¹¹⁸⁵ made an exhaustive review of all the material relating to this animal and they upheld Emery’s conclusions regarding the dating for the deposit and the horse. This paper will remain consistent with their conclusions in the absence of further data that might alter their determination, especially considering that the Buhen fortress no longer exists, making further investigation impossible.

The Buhen horse is an enigma. Its existence so far south and so early requires an explanation. Firstly, it was not native to Africa and would have had to come from the north. Its source may have been trade with the Levant mentioned earlier. Bietak suggests that even this early, horses may have been being imported from the Near East.¹¹⁸⁶ Its dating places it in the general period of the establishment of the kingdom of Nehesy, the foundation of the capital at Avaris (Tell el-Daba) and the very beginnings of the Hyksos ascendancy.¹¹⁸⁷ Its route to Buhen was most likely by way of the Nile Valley by boat or by land with the possibility of the desert routes and perhaps the wadis from the Red Sea coast. The fortress in which the horse was found was the major Egyptian military, administrative, commercial and communication centre in the region, the horse could logically have occupied a place in any of these activities. It was found in a securely dated context at a time when Egyptian control in the area was deteriorating rapidly and the possibility of an attack was realistic.

The horse itself exhibits several characteristics that would make its presence in this place more feasible. It was a mature gelded male, not valuable breeding stock. It was ridden and kept in good condition and it was not a curiosity. It provided a function at

¹¹⁸⁴ W.B. Emery et.al (1979) *The Buhen Fortress*, 29.

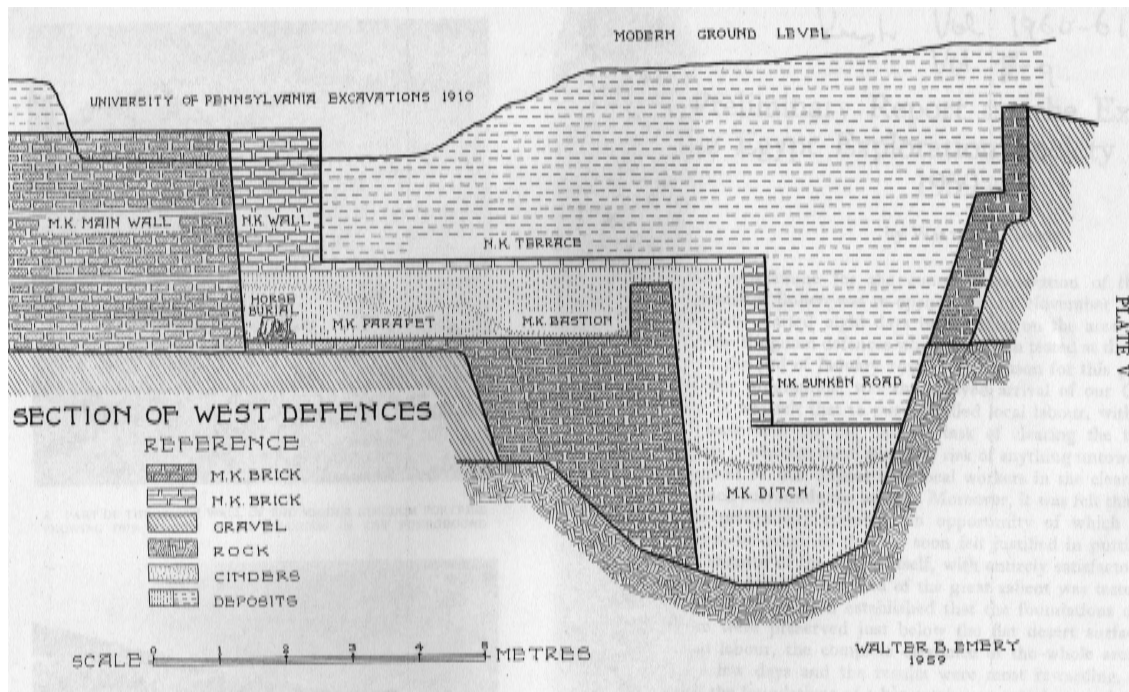
¹¹⁸⁵ P. Raulwing & J. Clutton-Brock (2009) *The Buhen Horse*, 1-106.

¹¹⁸⁶ M. Bietak (1996) 31.

¹¹⁸⁷ M. Bietak (1997) “Avaris, Capital of the Huksos Kingdom: New Results from Excavations,” 87-141, in E. Oren (ed.)(1997) *The Hyksos: New Historical and Archaeological Perspectives*, Philadelphia, 109.

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the fortress. Whilst it was the only horse found it is quite possible that it was not the only horse there at the time. Horses constitute grand booty, a large amount of food and a great amount of curiosity as faunal exotica and prestige in a time when they would have been rare indeed and it is quite likely that its fellows may have been rescued or captured. This suggests that horses may have been in Egypt in very limited numbers earlier than previously known.



Appendix 1. Fig.1. Position of the horse on the Middle Kingdom pavement.

(W.B. Emery (1960) "A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen. 1959- 1960" *Kush* 9 (1960-61) pl.V.)

This is probably the case however the numbers of horses in the direct possession of the Egyptians was at the most minimal. There is no evidence to indicate that horses were in the actual possession of the Thebans themselves. There are simply no earlier references to horses in the singular let alone the plural in Egyptian texts or depictions before the time of Kamose. Bietak's excavations at Avaris/Tell el-Daba point to horses existing at

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that site from the late 1700's BCE.¹¹⁸⁸ With the exception of the Buhen horse and the Sai horse¹¹⁸⁹ both in Nubia, there are no horse remains found south of Avaris until the time of Hatshepsut.¹¹⁹⁰ Again all that ensures is that if they were in the possession of the Theban princes they were few in number and/or cannot be identified now.

This doesn't explain the Buhen or the Sai horses. The Sai horse has been dated to a general period in the early New Kingdom¹¹⁹¹ so by that time the Thebans might have been in horse possession but what about the Buhen horse?

Emery in his excavation report considers it unlikely that the products of the destruction of the fortress under which the remains of the horse were found were the result of the later attacks conducted by Kamose and Ahmose I.¹¹⁹² Rather he considers that they were undertaken during the fall of the fortress to forces from Kush, "in the troubled days that followed the Hyksos domination of the homeland the armies of Kush took the stronghold by storm and parts of the fortifications and the town were destroyed by fire."¹¹⁹³ If this were the conflict in which the horse died it would suggest that the Buhen horse was in the nominal possession of the Egyptians at the time of the attack. If it did indeed perish during this conflict, how did it get there? It may have done so through the normal functioning of the Buhen fortress. Military considerations aside, Emery states that the fortress was built because it could control the river traffic, the desert routes and approaches, provide a customs and trading post and a processing point for commerce and "booty and tribute from southern rulers including large quantities of livestock."¹¹⁹⁴ Horses would have been a rare and special commodity and a valued trade item in a place that was to a large degree, centred on trade. What is special is how far

¹¹⁸⁸ J. Boessneck & A. von den Dreisch (1992) *Tell el-Daba. VII. Tiere und historische Umwelt in Nordost Delta in 2 Jahrtausend v. Chr. Anhand der Knochenfunde der Ausgrabungen. 1975-1986*. Untersuchungen der Zweigstelle Kairo des Österreichischen Archäologischen Institutes X. Vienna for a full discussion. This is the femoral bone (leg bone) of a horse.

¹¹⁸⁹ L. Chaix. & B. Gratien (2002) "Un Cheval du Nouvel Empire a Sai (Soudan)." *Archaeologie du Nil Moyen*, 9. 53-61.

¹¹⁹⁰ A. Lansing. & W. Hayes (1937) "The Museum's Excavations at Thebes," *Metropolitan Museum of Art Bulletin* 32,1, Part 2: "The Egyptian Expedition 1935-1936." 4-39.

¹¹⁹¹ L. Chaix. & B. Gratien (2002) "Un Cheval," 53, "L'occupation se poursuit au Kerma recent et au début du Nouvel Empire avec des sépultures appartenant à la culture pharaonique."

¹¹⁹² W.B. Emery et. al (1979) *The Buhen Fortress*, 3.

¹¹⁹³ W.B. Emery et. al (1979) *The Buhen Fortress*, 3.

¹¹⁹⁴ W.B. Emery et. al (1979) *The Buhen Fortress*, 99-102. Emery also discusses the fortress's relationships with the mining operations carried out in the vicinity.

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south it reached. It is also interesting that the horse was, at 19 years,¹¹⁹⁵ an old animal that may have spent some time making its way to Nubia through the trading networks emanating from the north.

There is no evidence of any other horses at this place and time but that doesn't mean there weren't any. Until more information becomes available the Buhen horse must remain, in several ways, atypical of the processes discernable from the available evidence-an enigma.



Fig. 1. The Buhen Horse.

(W.B. Emery, H.S. Smith & A. Millard (1979) *The Fortress of Buhen. The Archaeological Report. Egypt Exploration Society, London*, pl. 107)

¹¹⁹⁵ J. Clutton-Brock (1979) "The Buhen Horse," in W.B. Emery, H.S. Smith. A. Millard (1979) *The Fortress of Buhen. The Archaeological Report, London*, 192.

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APPENDIX 2: TELL EL KEBIR

In 1994, Dr Ali Hassan of the EAO announced the finding of eight brick tombs at Tell el-Kebir in the northeast Delta with the skeletons of two horses associated with them. The skeletons were dated to approximately 1750BCE.¹¹⁹⁶ Several announcements were made in the Egyptian press¹¹⁹⁷ as well as in *Archaeologia*.¹¹⁹⁸ Egyptian Archaeology published a short item; “Hyksos horse: New light on the Hyksos and their use of horses may be shed by the discovery of a new burial ground in the north-eastern Delta at Tell el-Kebir, 140km from Cairo. The Egyptian press quotes Dr Ali Hassan of the EAO as reporting eight pharaonic tombs and the skeleton of a horse which he dates to about 1750 BC.”¹¹⁹⁹

In 1995 in *Orientalia*, Leclant and Clerk reported that, “ En janvier 1994, une mission de l’EAO a découvert huit tombes en brique crue datant de l’époque Hyksos près de Tell el-Kebir, dans le gouvernorat d’ Ismaïlya à 80 km au Nord-Ést du Caire environ. L’une d’elles contenait quatre inhumations, des poteries, des jarres en albâtre et quatre scarabées. Un cheval avait été enterré à quelques mètres de cette sépulture et les ossements d’un cheval furent découverts près d’une tombe voisine. Ces restes de chevaux sont parmi les plus anciens témoignages de cet animal qui fut introduit en Égypte par les Hyksos. Des points de fleches en bronze figurent aussi parmi le materiel exhumé dans les sépultures.”¹²⁰⁰ The discovery has since been cited in several publications, Houlihan in 1996¹²⁰¹ and Hyland in 2003, the latter identifying Professor Joris Peters as the “head of the dig at the Delta site.”¹²⁰²

¹¹⁹⁶ This was cited in *Egyptian Archaeology* 4 (1994) “News,” 28.

¹¹⁹⁷ *The Egyptian Gazette* of January 30 and of March 3, *Le Progrès Egyptien* of January 31, *Journal d’Egypte*, February 1994 and *Al-Ahram Weekly* 10-16 February, 1994.

¹¹⁹⁸ *Archaeologia*, 299 (Mar 1994) 5.

¹¹⁹⁹ *Egyptian Archaeology* 4 (1994) 28.

¹²⁰⁰ J. Leclant & G. Clerk (1995) “Fouilles et travaux en Égypte et au Soudan. 1993-1994.” *Orientalia* 64 (1995) 225-335.

¹²⁰¹ P. F. Houlihan (1996) *Animal World of the Pharaohs*, London, 33.

¹²⁰² A. Hyland (2003) *The Horse in the Ancient World*, Gloucestershire, 14.

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If this discovery was correctly identified and dated, the horse remains would have been the earliest finds of horses in Egypt. This material moved into the corpus and appears to have become accepted. It has been quoted several times in both non-scholarly publications and scholarly publications¹²⁰³ for example Bibby states, “the earliest horses so far known are represented by remains from Tell el-Kebir dating to the eighteenth century BC.”¹²⁰⁴ The Tell el-Kebir horse(s) continued to be cited, in 2003 by Meeks¹²⁰⁵ (as unconfirmed).

Any attempt to uncover further information regarding the find has been met with silence. The finds do not seem to have ever been published in any format and it has not been possible to contact Dr. Hassan.

Neither Professor Dr. Joris Peters,¹²⁰⁶ nor Professor Dr. Louis Chaix,¹²⁰⁷ has any knowledge of the excavation or its findings¹²⁰⁸ nor has either of them examined them.¹²⁰⁹

Given the potential importance of such a find it would be expected that more information would have been available. This work concludes that either the find has still

¹²⁰³ A. Hyland (2003) *The Horse in the Ancient World*, 14. She quotes (Ch. 3 Note 7. 169), P. Houlihan *The Animal World of the Pharaohs*, London, 33. Both of these refer to the identification as unconfirmed.

¹²⁰⁴ M. Bibby (2003) “The Arrival of the Horse in Egypt: New Approaches and a Hypothesis,” in R. Ives, D. Lines, C. Naunton & Nina Wahlberg (eds.) (2003) *Current Research in Egyptology III*. BAR International Series 1192, 13-18.

¹²⁰⁵ D. Meeks (2003) “L’introduction du Cheval en Égypte et son insertion dans les croyances religieuses,” in A. Gardeisen (ed.) (2003) *Les Équidés dans Le Monde Méditerranéen Antique*, 57, reference 5. Meeks points out that at the time of writing the report is unconfirmed. “La découverte d’un autre squelette de cheval de l’époque Hyksôs à Tell el-Kebir, également au Nord-Est du delta a été mentionnée par Ali Hassan, *Egyptian Archaeology* 4 (1994) 28, mais n’est pas confirmée à ce jour.”

¹²⁰⁶ Professor Dr. Joris Peters. Professor and Head. Institut für Paläoanatomie und Geschichte der Tiermedizin.

¹²⁰⁷ Professor Dr. Louis Chaix, *Archaeology Muséum d’Histoire Naturelle of Geneva*.

¹²⁰⁸ J. Peters (personal communication 3 December 2008) said that he was not the director of the dig and had never seen the specimen. In an additional email (personal communication 6 Dec 2008) he confirmed that he had spoken to Dr L. Chaix who had not seen the horse(s) either.

¹²⁰⁹ Personal Communication (email 3/ December 2008. Professor Dr Peters replied to an enquiry saying that he had “never looked at this particular specimen.” He kindly emailed Professor Dr. Chaix enquiring about the Tell el-Kebir horses and was informed that Chaix had also never seen the horses. He then replied to the author conveying this information, (email 06/12/2008.)

not been adequately examined and verified or that the classification of the remains as those of horses was erroneous.

Unfortunately at the time of writing, there does not appear to be any further information available concerning this discovery so its original determination remains unconfirmed¹²¹⁰ and the location of the remains is unknown.

It is the general consensus of the scholars contacted in the research regarding this discovery that the remains have been misinterpreted and that they are in fact those of donkeys. This determination will be accepted in this work.

¹²¹⁰ Extensive inquiries have been conducted to discover the facts concerning this find, however, having approached Dr Hassan by several means the writer was unable to make contact with him to either confirm or deny the identification. All of the scholars who assisted in the attempt indicated that they were of the opinion that the remains had been misidentified and were not horse but donkey. The writer continues to pursue a definitive answer.

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
1750-1700 13 th Dyn approx 1750-1700	Tell el-Daba.	Boessneck.J. & von den Dreisch. A. (1992) <i>Tell el-Daba VII. Tiere und historische Umwelt in Nordest-Delta in 2. Jahrtausend v. Chr.anhand der Knochenfunde der Ausgrabungen. 1975-1986.</i> Vienna, 24-25.	Horse bone	F/1-i/22 from the foundation of the C house about the crown of the palace wall, H=5,12m. Street c=MB 11/A and Egyptian mixed culture, 13 th Dyn, approx. 1750-1700. 25.	“ a crumbled femoral leg of the horse in which only the depth of the Caput could be measured was found:49mms.” 25.		“Whether this bone is too big for a donkey managing to prove the occurrence of the horse already in the 13 th Dynasty is open to question.” 25
1675	Buhen	Emery.W.B. “A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen 1958-59”. <i>Kush</i> 8-9 (1960-61) 7-10. Emery.W.B. “A Preliminary Report on the Excavations of the Egypt Exploration Society at Buhen 1959-60,” <i>Kush</i> 9 (1960-61) 81-86. Clutton-Brock.J. “The Buhen Horse.” <i>Journal of Archaeological Science</i> 1 (1974) 89-100.	Whole horse (1)	Emery: (Vol 8-9) 8.” the burial of a horse, the skeleton lying directly on the brick pavement of the Middle Kingdom rampart. There can be no doubt of its date for it was covered with a stratified deposit 1.15m deep on which the brickwork of the New Kingdom reconstruction was laid.” Emery: Vol 9. Plate V is a	Clutton-Brock: (<i>JAS</i>) 90. “The skeleton is that of a male horse of about 19 years of age at the time of its death. The large well-developed canine teeth make it most unlikely to be a female. .. the pelvis is found to be intermediate between male and female..... it may have been a gelding..	150m.	Clutton-Brock 97 ..the Buhen skeleton is from an animal that was larger and more fine limbed that (sic) the prehistoric horses of Western Europe, and that it belongs to the group of horses so well depicted in the art of Ancient Egypt after the 18 th Dynasty (1580BC). These horses have all the looks

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		<p>Clutton-Brock. J. "The Buhen Horse" in Emery. W.B, Smith. H.S. & Millard. A. (1979) <i>The Fortress of Buhen. The Archaeological Report</i>. London.</p> <p>(Chapter 9 of the text was previously published in almost identical form in the Journal article previously cited.)</p>		<p>diagram of the stratification of the West Defences of the fortress with the position of the horse remains clearly depicted.</p>	<p>As the horse was quite an old animal, the healthy state of the teeth suggests that it had been allowed to graze and feed in a natural manner. ...a perfectly healthy individual..</p> <p>92. The excessive wear on the lower left second premolar establishes that the horse.... was ridden or driven with a bit..”</p>		<p>of the present day Arab breed.”</p> <p>98 The Buhen horse, although much earlier in date than Bokonyi's specimens, falls clearly into his eastern group, and curiously enough its dimensions correspond exactly with the measurements of bones from horses of Bokonyi's most Eastern region, those of the Scythian kurgans of the Altaian area.</p> <p>99 “ the Thebes horse, which was very similar in size and proportions to the Buhen skeleton, is nearly identical with the Hittite horses excavated from Osmankayasi.”</p>

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Boessneck- “early to middle Hyksos” Bietak, “ first half of the Hyksos hegemony” 1630-1600. (as quoted in this article 25.)	Tell el- Daba.	Boessneck . J. (1976) <i>Tell el-Daba III.</i> <i>Die Tierknochenfunde 1966-1969.</i> Vienna.		Boessneck: 25. “ two horse teeth,” (One tooth from Grave 9 and one from a rubbish pit.) “ Dates given for these teeth are early to middle Hyksos times...it does not seem to me to be impossible that both teeth belonged to the same animal”. “ M.Bietak...(quoted as estimating the date of the teeth as “ during the first half of the Hyksos hegemony.” 25.			“The length of the bone excludes affiliation to the donkey”. 25
1630-1600 “ before the	Tell el- Daba	Boessneck.J. and Von den Dreisch.A.1992 <i>Tell el-Daba VII. Tiere und historische Umwelt in Nordest-Delta in 2. Jahrtausend v. Chr.anhand der</i>	Distal end of a Metacarpus of a	Boessneck and von den Dreisch (1992) 24. “Together with three cattle teeth and the crown of	Boessneck and Von den Dreisch (1992) 25 “the finding fits the earlier dental findings of the horse,		

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New Kingdom' 24. Second Intermediate period		<i>Knochenfunde der Ausgrabungen. 1975-1986.</i> Vienna.	horse. (NOTE, this bone was found in the same context as the teeth listed above and was more specifically mentioned in the 1992 text. Horse teeth. (2) (0 total horse	the bovine animal the incomplete distal end of a Metacarpus of a horse was found." "A/II-O/21, grave 4: from the grave filling, Street E1-D3." 25.	namely in the Second Intermediate Period (approx 1630-1600BC.)" 25.		
1640- 1532 " late Hyksos time" 308.	Tell el-Daba	Von den Dreisch. A. & Peters. J. (2001) "Fruehe Pferde – und Maultierskelette aus Avaris (Tell el-Daba), ostliches Nildelta. <i>Egypt and the Levant</i> , XI. Bietak. M. (ed.) Verlag der osterreichischen Akademie der Wissenschaften 301-311.	Horse skeleton (1)	Von den Dreisch and Peters. 301. " H/111-q16, pit 9." 310 " the skeleton lay under ground water, it could not be drawn or photographed."	Von den Dreisch and Peters, 310. "It belonged to a medium sized, slim statured stallion of approximately 1.38 height. The animal had a small, nicely formed head.. 301, "More or less the entire skeleton o ha horse stallion.... At	1.38m	Von den Dreisch and Peters. "like a horse head from Amarna."

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
					his death (he as) between 6 and 7 years old. The skull looks stubby but not coarse. ... (the head is) nicely formed, hard, not too long.. with a slightly convex nasal part.”		
1786-1552- levels at Heboua. End of Second Intermediate Period to beginning of the New Kingdom- 1550 for horse levels. “the very beginning of the New Kingdom.” 177.	Tell Heboua	Chaix.L. (2000) “An Hyksos Horse from Tell Heboua,” in Mashkour. M. (ed.) (2000) <i>Archaeozoology of the Near East IV</i> . Centre for Archaeological research and Consultancy. 177-188.	Whole horse. (1)	Chaix: 177 “ The skeleton of a horse was found in the eastern part of this building. Its stratigraphic position indicates a date between the end of the Second Intermediate Period and the very beginning of the New Kingdom. No date is available on the horse itself....The horse was lying on its right side , the head facing west.”	Chaix: 179 “The complete absence of upper and lower canines seems to indicate a female. However, the badly damaged pelvis does not permit the sex to be confirmed.” 179 “.. between 5 and 8 years.” 179 ”with the mean being 1.47m at the withers.”	147m.	Chaix: 179, “ Using Vitt’s tables, the horse from Tell Heboua can be placed in the medium sized group, between 1.36 and 1.44m.” 181. “The horse..is characterized by a robust metacarpal, like those from Buhen and Kurru and close to those of the first domestic horses from the Neolithic of the Ukraine.” “ the individual from Tell Heboua falls in the upper part of the range of variation while the other horses from the Nile

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		Al-Ayedi. A. (2006) "The Dwelling of the Lion: A Fortress on the Ways of Horus." <i>Annales du Service des Antiquites</i> 80, 35-44.			Al-Ayedi confirms the Second Intermediate Period dating for the horse burial. 37.		valley exhibit slender metatarsals." "a medium size animal, smaller than the horses from Kurru. It was characterised by a heavy head with large teeth and robust distal limbs. It seems to belong to the "breviligne" type than to the slender animals from the "longiligne" type." 182 "The horse from Tell Heboua seems to be the most ancient, preceding the Egyptian horses, mostly dated to the reign of Thoutmosis I and later."
	Tell el	Bietak. M. & Dorner. J. (1999)	5 stallions	11. The burials of at least five horse stallions also belong to			" like the horse head from Amarna, .. nicely formed, more

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
1532-1512 Bietak's dates for the end of the Hyksos Period	Daba	<i>Ausgrabungen Tell el-Daba- Ezbet Helmi, 8 Sept-30 NOV. 1998.</i> Jahreshefte des Oesterreichischen Archaeologischen Institutes in Wein. 5-11. Von den Dreisch. A. & Peters. J. (2001) "Frue Pferde- und maultierskelette aus Avaris (Tell el-Daba), ostliches Nildelta," <i>Agypten und Levante</i> : XI. Zeitschrift fur agyptische Archaologie und deren Nachbargabeite. Verlag der Osterrichischen Akademie der Wissenschaften. Wein. 301-311.	Whole horses 3, (one cited above) plus 1 "possible" horse).	this strata (the end of the Hyksos period.) "The second finding concerns 5 equid skeletons from the time of the early 18 th Dynasty. Their finding situation, together with numerous hurriedly buried people without any additional (grave goods) allows the supposition that the people and the animals have died in fighting." p310.	304. Horse.2. H/111-q/ 18E, Pit 51. "Partial skeleton without the skull ...and pelvis .. the horse is more than 4 years old.... Nothing can be said about gender affiliation." 305 Horse 3. H/111 q/18E Pit 52. "Partial skeleton of a horse-stallion. ... the lower jaw clearly shows distinctive canines, the molars are extremely worn down... suggests an age of 13 to 15 years."	1.38m	hard, not too long, dry head with a slightly convex arched nasal part." 302.

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
					<p>305.</p> <p>Horse 4 (possible).</p> <p>H/111-p/19, Pit 11.</p> <p>Skeleton without skull. Adult. ... the remains of a horse are probable.</p>	<p>1.36m</p> <p>1.34m</p>	
1500	Sai	<p>Chaix. L & Gratien. B.</p> <p>“Un Cheval du Nouvel Empire a Saï (Soudan)”</p> <p><i>Archéologie du Nil Moyen</i> 9 (2002) 53-61.</p>	Whole horse (1)	Chaix: 54 “a tomb was discovered of a horse of small size, tomb 128. in the centre of the tombs of the beginning of the New Kingdom.”	<p>55</p> <p>3 to 3.5 years old.</p> <p>Male.</p> <p>Medium sized.</p>	1.40cm	<p>Chaix 57.. the Sai horse is characterised by a lengthened leg.. This lengthening seems more marked for the back legs.”</p> <p>58 ..It seems rather to correspond to the “longiline”</p>

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					<p>58 “the metatarsals... are relatively long but nevertheless gracile.</p> <p>..with slender limbs lengthened in the distal extremities.”</p>		type.
1494-1483	Deir el-Bahri	Lansing. A. & Hayes. W. “The Museum’s Excavations at Thebes,” <i>Metropolitan Museum of Art Bulletin</i> . 32, No 1, Part 2. The Egyptian Expedition 1935-1936. 4-39.	Whole horse (1)	<p>(Found in coffin)</p> <p>Quibell & Olver. 10 “There is no question that it was buried here at the time Sen-Mut’s tomb was being cut.”</p> <p>“ The horse had been wrapped up in linen.... But no signs of mummification were noted.”</p> <p>10 (It was buried in the coffin with a saddle cloth in place.)</p> <p>Chard quotes Lansing and</p>			

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
		<p>Chard. T. "An Early Horse Skeleton."</p> <p><i>The Journal of Heredity</i>, 28 (1937) 317-319.</p> <p>Boessneck. J. "Ein altägyptisches Pferdeskelett." <i>Mitteilungen, des deutschen archaologischen Institut</i>, Kairo. 26 (1970) 43-47</p>		<p>Hayes regarding the finding of the horse. 317</p> <p>D. E. Derry and B. Boulgakow examined the horse.</p> <p>(In Cairo Museum).</p> <p>Boessneck re-examined the remains of the horse in the Cairo Museum.</p>	<p>Derry: 317 "the height of the horse at 12.5 hands (50 inches) but it is</p>	1.27m	(Chubb cited by Chard) 319 " the measurements and description very strongly

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		Clutton-Brock. J. "The Buhen Horse," <i>Journal of Archaeological Science</i> 1. Issue 1. March (1974) 89-100.			only an estimate." " the animal is believed to be a mare about five or six years of age at the time of death"	(est).	suggest the Arab type." "The estimated height of this horse as given by Dr. Derry would be that of a very small horse." Boessneck. 45. " the animal was slender as horses from prehistoric and early Europe on average. It corresponds..to the type in numerous wall pictures of the New Kingdom." ... "the horse from Thebes can be assigned to the "oriental type". Clutton-Brock 94. " The Thebes horse has been dated to the first third of the 15 th century BC, that is about 250 years later than the Buhen specimen but it seems to be of very similar size and

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
						1.43m	proportions.”
1453-1419 Thutmose III- Thutmose IV	Thebes. Tjanuni TT 74	Brack. A & Brack. (1977) <i>A. Das Grab des Tjanuni. Theben Nr. 74. Mainz.</i>	Skull fragments, half lower jaw and some leg bones. (0 whole horse)	In tomb. Brack.: p65. “ J. Boessneck could not determine the nature of the remains and they have not yet been published.”			
1408-1372 Amenhotep III.	Soleb	P. Ducos (1971) “Le Cheval de Soleb” In Schiff-Giorgini. M. (1971) <i>Soleb II. Les Necropoles. Firenze.</i>	Whole horse (1)	Ducos: 258. “This horse had been attacked and probably killed by carnivores.” It was buried almost complete with some of the detached parts placed in the burial separately.	Ducos: 260 9/10 years old, male. It has 5 lumbar vertebrae.	1.36m	Ducos. 261. “The skull is small in size.” Ducos 265. “the equid is a male horse of average size. His skull is short with a cranium well developed in height and a short

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
		<p>Bokonyi. S. 1993. <i>The Horse Skeleton from Kurru</i>. Acta Archaeologica Academiae Scientiarum Hungaricae. 45</p> <p>Clutton-Brock. J. "The Buhen Horse," <i>Journal of Archaeological Science</i>. 1. Issue 1. March (1974) 89-100.</p>		<p>260 "... an almost entire skull, the entirety of the axial skeleton, with four tail vertebra and the sides,</p> <p>...the complete right foreleg and a fragment of the iliac bone."</p>			<p>muzzle and a strong jaw."</p> <p>NOTE:</p> <p>Bokonyi; 309. Indicates that Ducos used the wrong measurements to calculate the withers height of the Soleb horse. He suggests that it was 3-5cm smaller, eg 1.31-1.33cm.</p> <p>Clutton- Brock. <i>JAS</i>. 94. "... this horse was shorter and stockier and had a heavier head than either the Buhen or the Thebes specimens."</p>

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Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
						1.33m.	
Ramesside 1300-1180BC	Tell el-Borg	<p>Hoffmeier. J. & Bull. R. (2005) "New Inscriptions Mentioning Tjaru from Tell el-Borg, North Sinai," <i>Revue D'Egyptologie</i>. 56 (2005) Paris, 79-86.</p> <p>Hoffmeier. J. Tell el-Borg. Preliminary Report 2005. Viewed 24/08/2008, http://www.tellelborg.org/report2005preliminary.htm</p> <p>Hoffmeier. J. (2006) "Recent Excavations on the "Ways of Horus". The 2005 and 2006 Seasons at Tell el-Borg." <i>Annales du service des Antiques</i> 80, 257-275.</p> <p>Ikram. S. (2009) <i>The Equids of Tell el-Borg</i>. In</p>	<p>Skeleton</p> <p>(1)</p>	<p>260 "In addition to the inscribed blocks discovered in the moat, a collection of equid remains was discovered in the moat."</p> <p>261. "The animals were unceremoniously tossed into the moat."</p> <p>The dead animals had been thrown in, rather than carefully buried.</p> <p>Badly preserved.</p>	<p>2. Equid 1... "the overall bone and teeth measurements, and the internal folds of the mandibular teeth (Davis 1980) all point to its identification as a horse."</p> <p>3. "what could be determined from the teeth indicates that the animal was well over five years of age when it died."</p>		<p>8. "Egyptian horses, particularly from the early New Kingdom, are quite small and gracile."</p>

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		preparation.		Mature animal.			
1307-1196 Ramesside	Kom Firin	<p>Spencer. S. (2008)</p> <p><i>British Museum Expedition to Kom Firin. Report on the 2008 Season.</i></p> <p>At www.britishmuseum.org/pdf/0%20Prelims-10%20Bibliog.pdf</p> <p>Accessed 11/12/2010.</p> <p>Bertini. L</p> <p>(personal communication- email).</p>	<p>11 “ Equid remains</p> <p>(donkeys and horses) were also found with some frequency (262 fragments).</p>	<p>“The vast majority of horse (and general equid remains for that matter) are teeth, limb bone fragments, and the occasional complete phalanx</p> <p>(not well preserved.)”</p>			

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		May 18 2009. Bertini. Louise. In Press. <i>Kom Firin Fauna from the 2002-2008 Excavation Seasons.</i>					
1307-1196 Ramesside	Zawiyet Umm el-Rakham	Bertini.L. (personal communication-email). May 18. 2009.	"in total there maybe 2 fragments."				
1307-1196 Ramesside	Tell el Daba	Boessneck. J. & Dreisch. A. (1992) <i>Tell el-Daba VII. Tiere und historische Umwelt in Nordest-Delta in 2. Jahrtausend v. Chr.anhand der Knochenfunde der Ausgrabungen. 1975-1986.</i> Vienna.	10 horse bones	" from a pit with rubbish from the Ramesside period (A/11- O/ 19. Vgl. Tab 21.)" 25.	"The bones have crumbled and therefore are not measurable." 25.		
1300-1200	Saqqara	Quibell. J. & Olver. A. (1926) "An Ancient Egyptian Horse." <i>Annales de Service des Antiquites de l'Egypte.</i> (1926) 26. Cairo, 172-176.	3 horses (1 whole)	Quibell & Olver 172: "burial of three horses, one was in a coffin and was found complete; the second lay on a mat in	Male 18 years.	1.47m	Quibell & Olver, 174. " a normal horse of medium weight."

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				<p>contact with the coffin on the N. side; it had been disturbed and the head was missing. The third was represented by a single hoof.”</p> <p>172 “ ..the body of the animal appeared, lying on its left side with its head to the W. and the tail to the E. end. ..It was wrapped in cloth and tied with four bands at 0.3m intervals. The legs of the beast were doubled up and tied with papyrus ropes. Most of the flesh had disappeared from the bones, but there can be little doubt that the body was mummified. The bones were in good condition.”</p>			<p>“it appears that this was the mummy of a somewhat powerfully built, moderately deep-chested horse, with a strongly developed bony frame and large head.”</p> <p>“ The feet also appear to have been large but the bones of the limbs were of fine quality and very sound for an aged animal.”</p> <p>“It had apparently never been shod and the hoofs were in perfect condition but different in type from the typical hoof of the Arab horse of the desert.”</p> <p>175. “.. the height and length of this horse in life, would have been approximately correct for use in the full size model of a chariot, exhibited at the Museum.” “ this horse was of</p>

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							the North African type.”
1120-340	Hillat el-Arab	Chaix. L. (2006) “Animal Remains,” in Vincentelli I. (2006) <i>Hillat El-Arab. The Joint Sudanese-Italian Expedition in the Napatan Region. Sudan.</i> 1-6.	2 horses (One consists of two bones only.)	186. ARA 7 Chamber B. “ all the pieces belong to a single individual, a horse (<i>Equus caballus</i> L.)’ “it seems that the horse was lying on the right side, the head looking west.” 188 ARA 12 Chamber B. “Two bones were found in this tomb. They belong to a horse, probably adult. We have identified one cervical vertebra and a fragment of a tibia shaft.”	186.“it is possible to say that this animal was around 17 to 18 months old, so it was a relatively young individual”.	147cm . certainly between 144 and 152cm.	187. “ very comparable with horses from this area and particularly with those of the more recent cemetery of el-Kurru, “ “The mean for all these African horses is 145cm, which indicates large animals.” “If we consider the shape and dimensions of the metacarpal, we note that the horse from Hillat el-Arab is characterised by a long and slender bone.”
700-690 BCE	Kurru	Bokonyi.S. (1993) “Two Horse Skeletons from the Cemetery of Kurru.” (1993) <i>Acta Archaeologica</i>	Whole (horses (24)	302.	303. The extremity bones were long. Their shafts were rather	152.29c	305 “The two horses were large animals that cannot be

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		<p><i>Academiae Scientiarum Hungariae</i>. XLV, 301-316</p> <p>Mallory-Greenough. L. (2005) “The Horse Burials of Nubia.” <i>Journal of the Society for the Study of Egyptian Antiquities</i>. (2005) Toronto, 106.</p>	2 examined.	The two horse skeletons were found in two graves, 211 and 212.	<p>slender with strong muscle insertion places at their ends. The bones of the feet were large on both the fore and hind limbs.</p> <p>305. ... horse 212 was adult and horse 211 adult-mature.</p> <p>Both stallions.</p>	m 155.33cm	<p>considered even by modern standards, small.”</p> <p>307 Both horses have very slender limbs.</p> <p>“ the two horses from Kurru, were large animals, of a much greater size than the average oriental horses of their time.”</p> <p>p309 “ horses which could only be the result of conscious breeding”.</p>
700-600 BCE	Meroë	<p>Dunham. D. (1963) <i>The Royal Cemeteries of Kush</i>. 5. <i>The West and South Cemeteries at Meroe</i>. (Boston) 441, 443.S 193)</p> <p>Heidorn. L. “The Horses of Kush.” <i>Journal of Near Eastern Studies</i> 56 (1997) No. 2, 105-114.</p>	1 horse	<p>No objects were found in this tomb, so the dating remains uncertain. (in Heidorn “Horses of Kush.” 106 note; 7.</p> <p>116. Note 17.</p> <p>“The lone burial in the south cemetery at Meroë is not of the same type although it has been lumped with the Napatan</p>			

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		Mallory-Greenough. L. (2005) "The Horse Burials of Nubia." <i>Journal of the Society for the Study of Egyptian Antiquities</i> . (2005)Toronto, 105-119.	4 horses including the one above. (1 stallion 108.)	horses (eg Lenoble 1994). This grave contained the complete skeleton of a young animal which was placed on its side in a pit with rounded ends. No artefacts were found (Dunham 1963, 441,443).	107. "There seems to have been a mix of bones and teeth and there was not enough information for a proper analysis."		
350-600 AD	Ballana and Qustul, Firka and Gammai.	Emery.W.B. (1938) "The Royal Tombs of Ballana and Qustul. Mission Archéologique de Nubie. 1929-1934" <i>Service des Antiquités de l'Égypte</i> . 1. Text. Cairo.	49 horses at Ballana and Qustul. 1 horse at Firka.	19 " they were accustomed to riding the horse, camel and donkey." 26. The entrance to the tomb was then blocked with bricks and stone and the owner's horses, camels, donkeys and		None of the horses were examined	Many of the tombs at these sites were not completely excavated as they had been plundered and were declared "not worthy of excavation."

APPENDIX 3: THE FAUNAL REMAINS OF EQUUS CABALLUS IN EGYPT

Date	Site	Author &Text	Remains	Excavation Comments	Examination comments.	Withers Height	Comments
		Mallory-Greenough. L. (2005) "The Horse Burials of Nubia," <i>Journal of the Society for the Study of Egyptian Antiquities</i> . Toronto, 105-119.	1 horse at Gammai. Including Meriotic, Post-Meriotic and Pit Tombs at all three sites, Mallory-Greenough calculates 96 horses as a minimum. 108.	dogs, together with their grooms and possibly soldiers, were then sacrificed in the courtyard and ramp. The animals were buried wearing their harnesses and saddles..			
Kokabi Intrusive- into an Old Kingdom site.	Giza	Kokabi. M. (1979) "Tierknochenfunde aus Giseh/Ägypten," <i>Annalen des Naturhistorischen Museums</i> . Wein 83, 517-537.	521. Bones and teeth.	521. "Two biting edges and five molars (P2,P3,M1,M2,M3) of the right lower half of the jaw of an older animal as well as the cervical vertebra coming probably from a horse from a far later time"			

APPENDIX 4:

CATHERINE ROMMELAERE (1991) LES CHEVAUX DU NOUVEL EMPIRE ÉGYPTIEN. CONNAISSANCE DE L'ÉGYPTE ANCIENNE. BRUXELLES.

Rommelaere, in the only more extensive work on the Egyptian horse, begins her discussion with an overview of its evolution and domestication and its introduction into Egypt. She outlines conflicting early theories concerning either indigenous or imported Arabian origins for the Egyptian horses and counters both agreeing with an “Asiatic” source which she attributes to the Hyksos.¹²¹¹ She uses a wide variety of material including ostraca, stelea, statuettes, vases, wall paintings and reliefs as the basis for her study. Her catalogue of images is extensive, thorough and well documented.

As the work is an overview it devotes much of its bulk not only to a discussion of horses themselves but to harnesses and chariots which are not the concern of the present work.

She states that her preoccupation is essentially to discover if it is possible to establish dating criteria using the depictions of horses in Egypt over time and to confirm the dating already attributed to many of them. The main tool in this process for her is her identification of two different horse image types, which she names as the “Longeline” and the “Bréviligne.” She believes these were introduced at different periods in time. She does discuss the probable influence of changing artistic styles but remains convinced that the major cause for the difference in depictions is the arrival of a new “race” of horse the Bréviligne which is itself different from its predecessor, the Longeligne.

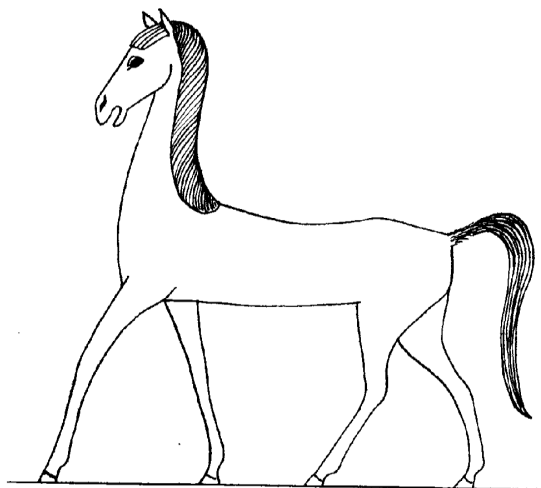
¹²¹¹ C. Rommelaere (1991) *Les chevaux du Nouvel Empire égyptien*, Brussels, 23.

APPENDIX 4:

Catherine Rommelaere (1991) *Les Chevaux du Nouvel Empire Égyptien. Connaissance de l'Égypte Ancienne*. Bruxelles.

Rommelaere's description of the Longeligne type is as follows:

“..un cheval à la tête volumineuse, étroite et allongée, au front bombe, avec la partie inférieure du chanfrein légèrement convexe, lui donnant un profil nettement busqué. Les oreilles sont longues, assez rapprochées, l'encolure droite, la crinière ondulée et plaquée contre l'encolure, le dos long, la croupe avalée, tranchante comme celle d'un mullet, avec des cuisses grêles, la poitrine étroite et des membres élances, sans trace de fanons.”¹²¹²



*Fig 1. Longeligne.*¹²¹³

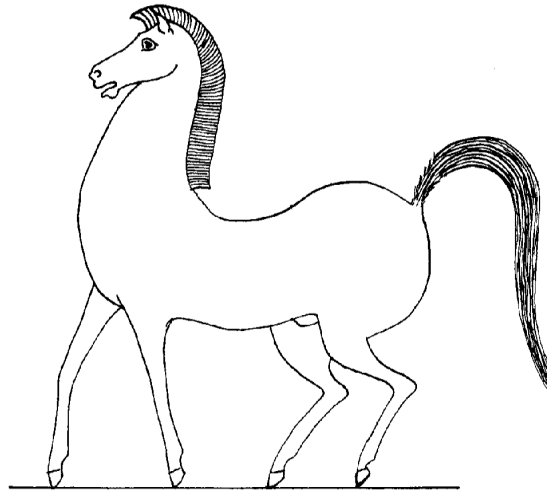
The Bréviligne type is described as:

“La tête du Bréviligne est brève avec un front large et plat, un chanfrein droit et un profil rectiligne ou concave. Des arcades sourcillières très saillantes, dépassant de beaucoup la ligne du front, ce qui donne une orbite grande et rend l'oeil expressif. Les oreilles courtes, fines et

¹²¹² C. Rommelaere (1991) *Les chevaux*, 34.

¹²¹³ C. Rommelaere (1991) *Les chevaux*, 34.

*droits, la crinière en brosse et la queue bien fournie. Le doc court, avec un garrot bien sorti et des côtes arrondies, la croupe large, ronde, assez haute, avec une queue portée loin du corps, << en panache >>, la poitrine ample et les membres secs.*¹²¹⁴



*Fig 2. Breviligne.*¹²¹⁵

A reservation one has with this work is that fundamentally Rommelaere makes a seemingly direct correlation between the Prezwalski, the Tarpan and the horses of New Kingdom Egypt. She states,

*“Il est assez vraisemblable que les deux sous-espèces se sont trouvées réunies à peu près vers la même période, dans la région comprise entre la Mer Noire et la Mer Caspienne, et qu’elles ont pu toutes deux participer aux migrations qui amenèrent les chevaux vers le Proche-Orient.”*¹²¹⁶

¹²¹⁴ C. Rommelaere (1991) *Les chevaux*, 35.

¹²¹⁵ C. Rommelaere (1991) *Les chevaux*, 35.

¹²¹⁶ See Chapter 2 for a discussion of this issue.

APPENDIX 4:

Catherine Rommelaere (1991) *Les Chevaux du Nouvel Empire Égyptien. Connaissance de l'Égypte Ancienne*. Bruxelles.

Given that almost four thousand years intervened between the estimated time of domestication of the horse in the Ukraine¹²¹⁷ and its arrival in Egypt and the great geographical distance between the Black Sea and the Nile Valley this correlation has to be open to question. New technology has revealed also that *Equus przewalski* is considered a separate species having a diploid chromosome number of 66 compared with 64 of the domestic horse *Equus caballus*.¹²¹⁸ They therefore cannot be seen as the direct ancestors of the horses depicted in tomb scenes.

Her conclusions are based almost solely on examination of the images rather than on the taxonomic or zooarchaeological analysis which would be needed to justify such identifications.

“The Tarpan (designated by Nobis in 1971 as *Equus ferus*)¹²¹⁹ appears to have contributed to domesticated horses but there must always be consideration for the points made above when attributing any degree of emphasis to this species’ level of influence on the Egyptian horses. As Olsen points out the domestic horse emerged from that single small progenitor, *Equus ferus* commonly known as the Tarpan. Current researchers generally accept this thesis and look toward a single species with a broad geographic distribution as the wild progenitor of the domestic horse, instead of multiple species. However, as noted above, it is likely that many subspecies or populations of *E. ferus* contributed to the gene pool of domestic stock.”¹²²⁰

¹²¹⁷ D. Anthony & D. Brown (1991) “The Origins of Horseback Riding” *Antiquity* 65 (1991) 32. See also D. Telegin (1986) *Derievka. A Settlement and Cemetery of Copper Age Horse Keepers on the Middle Dnieper*. BAR International Series, 287, England, 87.

¹²¹⁸ D. F. McMiken (1990) “Ancient Origins of Horsemanship,” *Equine Veterinary Journal* 22/2 (1990) 75.

¹²¹⁹ G. Nobis (1971) *Vom Wildpferd zum Hauspferd*, Fundamenta, Reihe B, Band 6, Cologne.

¹²²⁰ S. Olsen (2006) “Early Horse Domestication: Weighing the Evidence,” in S. Olsen, S Grant, A. M. Choyke & L Bartosiewicz (2006) *Horses and Humans: The Evolution of Human-Equine Relationships*. BAR International Series 1560. Oxford. 82.

Catherine Rommelaere (1991) *Les Chevaux du Nouvel Empire Égyptien. Connaissance de l'Égypte Ancienne*. Bruxelles.

Additionally there is a confusing interchangeability in her use of the terms “race” sub-species” and “type” which is not addressed by definition or distinction.

Given the complex nature and purposes of Egyptian art it is of some concern that she states, “il semblerait que les peintures des tombes thébaines aient donc été l’exact reflet de la réalité lorsqu’à partir du règne d’Amenhotep II, elles figurèrent un nouveau type de cheval (le Bréveligne), très différent de son prédécesseur.”¹²²¹

Her contention that the physical nature of the horses in Egypt changed is certainly attested by the evidence and her contribution to the analysis of the gaits, colours and bearing of the horse as it appears in ancient Egypt is very valuable. Her catalogue is detailed and is the first collected corpus of images of Egyptian horses. Her introduction of the specific study of horses in ancient Egypt is to be greatly appreciated.

¹²²¹ C. Rommelaere (1991) *Les Chevaux*, 40

APPENDIX 5: TEMPLES AND TOMBS TABLE

APPENDIX 5: TEMPLES AND TOMBS TABLE

DYN	KING	DATE	SITE	TOMB OWNER	HORSES	CHARIOTS	INSTANCE
17	KAMOSE	1555-1550	stele				
18	AHMOSE	1550-1525	Abydos	Temple	horses	chariots	battles
18	AMENHOTEP I	1525-1504					artefacts
18	THUTMOSE I	1504-1492					artefacts
18	THUTMOSE II	1492-1479	Thebes	temple			fragments
18	HATSHEPSUT	1473-1458	TT 73 Debeira TT 67	AMENHOTEP DJEHOUTIHOTEP HEPUSENEB	horses	chariots chariot chariots	Presentation of gifts Hunting Making chariots
18	THUTMOSE III	1479-1425	TT 121 TT 123 TT 155 TT 11 TT 86 TT 145 El Kab TT 39 TT 99 TT 342 TT 21	AHMOSE AMENEMHET ANTEF DJEHOUTY MENKHEPERAS ONB NEBAMUN PAHERI PUYEMRE SENNEFERI THUTMOSE USER	horses horses horses horses horses horses horses horses horses horses	chariot no chariot chariot chariots chariot chariot chariots chariot chariot	funeral procession Hunting Hunting Foreign tribute Recording of livestock Duty and boat Inspecting the workshops Expedition for wood No Image yet Wheel only, hunting
18	AMENHOTEP II	1427-1401	TT 276 TT 85 TT 42 TT 84 TT 143 TT 93 TT 95 TT 172 TT 72 TT 100	AMENEMOPE AMENEMHEB AMENMOSE AMUNEDJEH ANONYMOUS B KENAMUN MERY MENTIUI RE REKHMIRE	horses horses horses horses horses horses horses horses horses horses	chariot no chariots chariot chariot chariots chariots chariots chariot chariot	deceased in chariot hunting General inspecting chariotry Gifts Hunting and tribute Following king Making chariots Carrying chariots King hunting Tribute

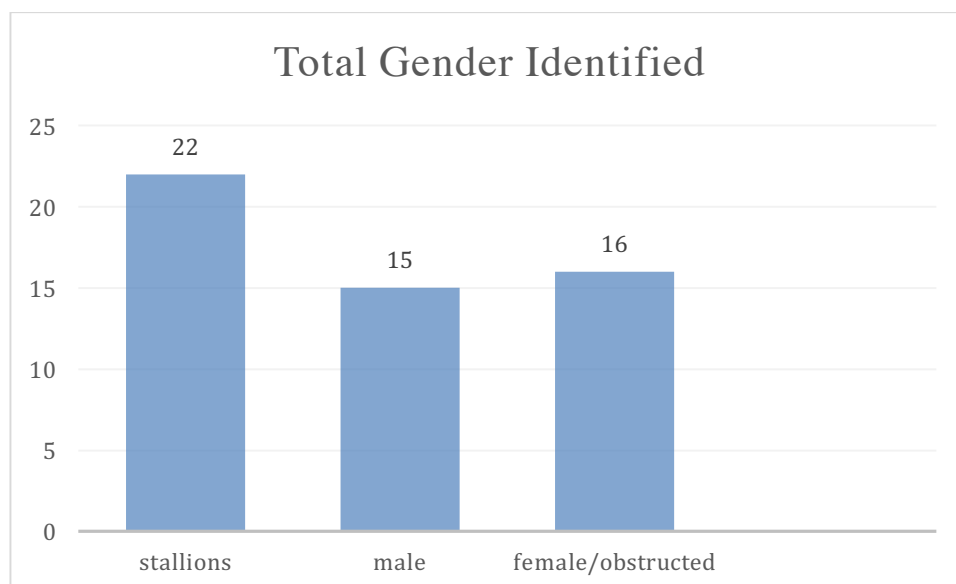
APPENDIX 5: TEMPLES AND TOMBS TABLE

DYN	KING	DATE	SITE	TOMB OWNER	HORSES	CHARIOTS	INSTANCE
			El Kab	RENNI	horses	chariot	Waiting for master
			TT 92	SUEMNUT	horse		Sketch only
			TT 239	PENHET	horse		Syrian tribute.
			TT 80	THUTNEFER	horse	chariot	Funeral procession head only.
			TT 88	PEHSUKHER	horse		
18	THUTMOSE IV	1401-1391	KV	Thutmose IV	horses	Chariots	Chariot itself with images
			TT 75	AMENHOTEP SISE SISE	horses	chariot	Driving his chariotTT
			TT 66	HEPU		chariots	Making chariots
			TT 74	TJANNUNI	horses		Recording
			TT 56	USERHAT	horses	chariots	Hunting, funeral procession
18	AMENHOTEP III	1391-1353	TT297	AMENEMOPET	horses	chariot	Measuring the grain
			TT 89	AMENMOSE	horses	chariots	Tribute of Punt and Syria
			TT 91	ANONYMOUS A	horses		Syrian tribute
			TT 151	HETI		chariot	Funeral procession
			TT 78	HAREMHEB	horses	chariots	Funeral procession
			TT 162	KENAMUN	horses		On boat feeding
			TT 57	KHAEMHAT	horses	chariots	In field and boat
			TT 69	MENNA	horses	chariot	Supervising the fields
			TT 90	NEBAMUN	horses		Tribute & on boat
			Unknown A3	NEBAMUN	horses	chariot	Inspecting the fields
			TT 201	RE'A	horses		Horses legs only
			TT 63	SOBEKHOTEP	horses	chariots	Tribute
18	AKHENATEN	1353-1335	Amarna King	AKHENATEN	horses	chariots	Trip to the temple
			Amarna 3	AHMOSE	horses	chariots	King & Queen driving
			Amarna 23	ANY	horses	chariot	Any and Thay stele
			Amarna 25	AY	horses	chariots	Honoured by the king.
			Amarna 1	HUYA	horses	chariots	Royal family, tribute, rewards
			Amarna 9	MAHU	horses	chariots	Royal chariots and doing duty
			Amarna 4	MERYRE 1	horses	chariots	Royal chariots, rewarding
			Amarna 2	MERYRE II	horses	chariots	Royal chariots, tribute, reward
			Amarna 6	PANEHESY	horses	chariots	rewarding and royal family
			Amarna 7	PARENNEFER	horses	chariots	Rewarding and

APPENDIX 5: TEMPLES AND TOMBS TABLE

DYN	KING	DATE	SITE	TOMB OWNER	HORSES	CHARIOTS	INSTANCE
			Amarna 5 TT 55 Amarna 8 Karnak Amarna	PENTHU RAMOSE TUTU temple temple	horses horses	chariots chariots	royal family Rewarding, royal family hieroglyph only Rewarding, royal family
18	TUTANKHAM UN	1333- 1323	TT 40 Akhmim Karnak	AMENHOTEP Huy SENNEDJEM temple	horses horses	 chariots	boats etc Chariot procession
18	AY	1323- 1319	Memphis	HOREMHEB	horses	chariots	also rider, melee,
18	HOREMHEB	1319- 1307	TT 49 TT162	NEFERHOTEP PARENNEFER	horses horses	chariot chariots	Rewarding Horses on boats/ to the temple
19	RAMESSES 1	1307- 1306					
19	SETI I	1306- 1290	TT 324 TT 51 Abydos Karnak	HATIAI USERHAT Temple Temple	 horses horses horses	chariot chariot chariots chariots	Chariot on boat. Receiving offerings battles etc battles etc
19	RAMESSES II	1290- 1224	TT A16 TT 31 TT 302 Memphis Karnak Abydos Ramesseu m Biet el- Wali	DJEHOUTIHOTE P KHONS (TO) PARAEMHEB TIA & TIA temple temple temple temple	horse horses horses horses horses horses	 chariots chariots chariots chariots	Horse with snake on back Horses on boat No Image On boat battles etc battles etc battles etc battles etc
19	MERENPTAH	1224- 1214	Karnak	temple	horses	chariots	Triumphal return
20	RAMESSES III	1194- 1163	Medinet Habu	temple	horses	chariots	Battles etc

APPENDIX 6: GENDER



OWNER	TOMB	STALLIONS	MALE	MARE/ UNKNOWN
Ahmose I				
Amenhotep I				
Thutmose I				
Thutmose II				
Hepuseneb	TT67			
Amenhotep	TT73			
Djehoutihotep	Debeira			
Paheri	TT 145			1
Antef	TT123			
Menkheperasonb				1
Nebamun	TT 145			1
Djehouty	TT 11			
Senniferi	TT 99			
Puyemre	TT 39			
Amenemhet	TT 123	1	1	

APPENDIX 6: GENDER

OWNER	TOMB	STALLIONS	MALE	MARE/ UNKNOWN
User	TT 21			
Rekhmire	TT 100			1
Amenhotep II		1		
Amenemheb	TT 85			
Amenmose	TT 42			
Thutnefer	TT 80			1
Aonymous B	TT 143		1	
Amunedjeh	TT 84			
Kenamun	TT 93			
Suemnut	TT 92			
Re	TT 72			
Mery	TT 95			
Mentuiui	TT 172			
Amenemope	TT 276			
Pehsuker				
Renni	El Kab			
Penhet				
Userhat	TT 56	1		
Tjannuni	TT 74			
Amenhotep Sisi	TT 75			
Hepu	TT 66			
Thutmose IV		1		
Nebamun			1	
Sobekhotep	TT 63			1
Haremheb	TT 78			
Menna	TT 69		1	
Amenhotep III			1	
Khaemhat	TT 57		1	
Amenmose				

APPENDIX 6: GENDER

OWNER	TOMB	STALLIONS	MALE	MARE/ UNKNOWN
Nebamun	TT 90			1
Amenmose	TT 89			1
Anonymous A	TT 91			1
Kenamun	TT 162			
Re	TT 201			
Akhenaten		1		
Amenemopet	TT 297			
Meryre I	AN 1	1	1	1
Panehesy	AN 4	1		2
Meryre II	AS9			
Huya	AS23		1	
Ahmes		1		
Penthu			1	1
Mahu	AS25		1	
Any				1
Parennefer	AN 2			
Tutu	AN 3		1	
Ay		1		
Cooney artefacts		1	1	1
Amenhotep Huy	TT 40			
Tutankhamun		1	1	
Sennedjem				
Ptahemwia				
Ay				
Horemheb	Saqqara	1	1	
Ipuia	Saqqara			
Neferhotep	TT 49	1		
Parennefer	TT 162		1	
Seti I	Mortuary temple	1		

APPENDIX 6: GENDER

OWNER	TOMB	STALLIONS	MALE	MARE/ UNKNOWN
	Karnak	1		
Amenemope	TT 41			
Userhat	TT 51			
Hatiai	TT 324			
Ramses II	Biet el Wali	1		
	Abu Simbel	1		1
	Ramesseum	1		
	Abydos	1		
	Luxor	1		
	Karnak	1		
Tia/Tia				
Khons	TT 31			
Djehoutihotep				
Paraemheb	TT 302			
Merenptah				
Ramses III	Medinet Habu	1		
		stallions	male	female/obstructed
Total Gender Identified		22	15	16

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>ỉ3t tpt</i>	A	19	Senniferi	99	Head of an office
<i>imy-ib nb.f r tpy r.f</i>	H	72	Horemheb	Saq	Favourite of his lord as regards his speech
<i>imy-ib n nswt m st nbt</i>	H	72	Horemheb	Saq	Favourite of the king of upper Egypt in every place
<i>imy-ib n hr m h.f</i>	T	72	Horemheb	Saq	Favourite of Horus in his palace
<i>imy-ib n ntrt-hw</i>	T	7	Amenhotep	73	Favourite of Netjer-khau
<i>imy-r k3.t hr n3 n thn.wy wr m pr imn</i>	T	7	Amenhotep	73	Overseer of the obelisks of Amun
<i>imy-r bw</i>	A	19	Senniferi	99	Overseer of the horned animals
<i>imy-r b imy-r whmt</i>	A	19	Senniferi	99	Overseer of horned and hoofed livestock
	A	28	Kenamun	93	
<i>imy-r b imy-r šwt n šmwt</i>	A	48	Haremhab	78	Overseer of the horned feathered and scaly livestock
<i>imy-r 3hwt n imn</i>	T	18	Puyemre	39	Overseer of the arable lands of Amun
	T	19	Senniferi	99	
	T	29	Mery	92	
	T	51	Menna	69	
<i>imy-r 3hwt n nb t3wy</i>	A	51	Menna	69	Overseer of the arable lands of the Lord of the Two Lands
<i>imy-r ỉ3wt h</i>	A	72	Horemheb	Saq	Overseer of the offices of the palace
<i>imy-r ỉ3wt n pr nswt</i>	A	72	Horemheb	Saq	Overseer of the offices of the palace

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r imyw-r mšꜥ nb t3wy</i>	M	72	Horemheb	Saq	Overseer of the generals of the Lord of the Two Lands
<i>imy-r n i3wt nbwt n nswt</i>	K	72	Horemheb	Saq	Overseer of all the offices of the king
<i>imy-r ꜥḥꜥw n nswt</i>	M	34	Suemnut	92	Overseer of the royal ships
<i>imy-r 3ḥwt</i>	A	28	Kenamun	93	Overseer of the arable lands
	A	44	Amenemopet	297	
<i>imy-r 3ḥwt n nb t3wy nw šmꜥw t3-mḥw</i>	K	51	Menna	69	Overseer of the arable lands belonging to the Lord of the Two Lands of Upper and Lower Egypt
<i>imy-r bḥs</i>	A	28	Kenamun	93	Overseer of calves
<i>imy-r bḥs ity</i>	A	28	Kenamun	93	Overseer of the calves of the sovereign
<i>imy-r ḥd</i>	A	28	Kenamun	93	Overseer of silver
<i>imy-r ḥd nbw n nb t3wy</i>	K	67	Tutu	AS 8	Overseer of all treasuries of gold of the Lord of the Two Lands
<i>imy-r ḥmw-ntr</i>	T	33	Renni	El-Kab	Overseer of priests
<i>imy-r ḥmw-ntr n itmw</i>	T	19	Senniferi	99	Overseer of priests of Atum
<i>imy-r ḥmw-ntr m šmꜥw mḥtt</i>	T	48	Haremheb	78	Overseer of the priests of Upper and Lower Egypt
	T	15	Menkheperas onb	86	
	T	28	Kenamun	93	
	T	29	Mery	95	
	T	66	Ramose	55	
<i>imy-r ḥmw-ntr n ḥr nb sby</i>	T	72	Horemheb	Saq	Overseer of the priests of Horus lord of Seby

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r ḥmw-ntr n ntrw nbw</i>	T	19	Senniferi	99	Overseer of priests of all gods
	T	34	Suemnut	92	
<i>imy-r ḥmw-ntr n sbk šdt</i>	T	55	Sobekhotep	63	Overseer of the priests of Sobek of Shedet
<i>imy-r ḥmw-ntr n dhwtj nb ḥmnw</i>	T	34	Suemnut	92	Overseer of the priests of Djehouty lord of Hermopolis
<i>imy-r ḥmw-ntr n ntr wnbw</i>	T	64	Parennefer	AS 7	Overseer of the priests
<i>imy-r ḥmw-ntr m hwt-shmt</i>	T	66	Ramose	55	Overseer of priests in the temple of Sekhmet
<i>imy-r ḥwwt-wrwt srsw</i>	A	32	Rekhmire	100	Overseer of the 6 great law courts
<i>imy-r ḥmwt n ḥwt-ntr</i>	T	15	Menkheperas onb	86	Master of the craftsmen of the temple
<i>imy-r ḥmwt nbt n imn</i>	T	32	Rekhmire	100	Master of all the craftsmen of Amun
<i>imy-r ḥmwt nbt n nswt</i>	B	66	Ramose	55	Master of all the craftsmen of the king
<i>imy-r ḥmwt nbt n nb t3wy</i>	B	67	Tutu	AS 8	Master of all the craftsmen of the Lord of the Two Lands
<i>imy-r iryw-ꜥ3 n šnwty n imn</i>	T	28	Kenamun	93	Overseer of the doorkeepers of the granaries of Amun
<i>imy-r iḥw</i>	A	29	Mery	95	Overseer of cattle
<i>imy-r iḥw</i>	A	74	Neferhotep	49	Overseer of cattle
<i>imy-r iḥw n imn</i>	T	28	Kenamun	93	Overseer of the cattle of Amun
	T	42	Userhat	56	
	T	7	Amenhotep	73	
	T	14	Djehouty	11	
	T	66	Ramose	55	

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r iḥw n imn m^c-mḥt</i>	T	66	Ramose	55	Overseer of the cattle of Amun in the region of the North
<i>imy-r i3wt ḥntt</i>	A	15	Menkheperas onb	86	Overseer of the foremost offices
	A	28	Kenamun	93	
<i>imy-r iw^cyt nb n ḥ3swt nbt</i>	M	67	Tutu	AS 8	Commander of all garrisons of every foreign land
<i>imy-r iw3w n p3 itn m 3ḥt-itn</i>	T	63	Panhesy	AN 6	Overseer of the oxen of Aten in Akhet-aten
<i>imy-r imyw-r</i>	A	28	Kenamun	93	Overseer of the overseers
<i>imy-r imyw-r nw idbwy</i>	A	72	Horemheb		Overseer of the overseers of the Two Banks
<i>imy-r imyw-r wrw</i>	A	28	Kenamun	93	Overseer of the great overseers
<i>imy-r imyw-r pr</i>	A	32	Rekhmire	100	Overseer of the stewards
<i>imy-r ipt nswt</i>	K	59	Huya	AN 1	Overseer of the royal harem
<i>imy-r ipt nswt n ḥmt-nswt 3t</i>	K	59	Huya	AN 1	Overseer of the royal harem of the great queen
<i>imy-r ip-t-nswt n.t ḥmt nswt 3.t nfr-nfr.w-itn nfr.t-tyt-ty nḥ d.t nḥḥ</i>	K	62	Meryre II	AN 2	Overseer of the royal harem of the great queen Nefertiti given life
<i>imy-r k3wt m dw n bi3t</i>	B	72	Horemheb	Saq	Overseer of works in the hill of gritstone
<i>imy-r k3wt m mnw wrw</i>	B	66	Ramose	55	Overseer of the works in the great monuments
<i>imy-r k3wt nbt n imn</i>	T	32	Rekhmire	100	Overseer of all the works of Amun
	T	48	Haremheb	78	
<i>imy-r k3wt nt nswt m šm^cw mḥw</i>	B	72	Horemheb	Saq	Overseer of all works of the king in Upper and Lower Egypt

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r k3wt nw ḥwt-ntr n imn</i>	T	18	Puyemre	39	Overseer of the works of the temple of Amun
<i>imy-r k3wt</i>	B	14	Djehouty	11	Overseer of works
<i>imy-r k3wt nbt</i>	B	72	Horemheb	Saq	Overseer of all works
<i>imy-r k3wt nbt n ḥm.f</i>	B	67	Tutu	AS 8	Overseer of all the works of his majesty
<i>imy-r k3wt nbt n nswt</i>	B	72	Horemheb	Saq	Overseer of all the works of the king
<i>imy-r k3wt nbt n šmꜥw t3-mḥw</i>	B	72	Horemheb	Saq	Overseer of all works in Upper and Lower Egypt
<i>imy-r k3wt nbt nswt m st nbt</i>	B	72	Horemheb	Saq	Overseer of all works of the king in every place
<i>imy-r mšꜥ</i>	M	41	Tjannuni	74	General commander of the army
	M	67	Tutu	74	
	M	72	Horemheb	Saq	
<i>imy-r mšꜥ n nb t3wy</i>	M	72	Horemheb	Saq	General of the Lord of the Two Lands
<i>imy-r mšꜥ wr</i>	M	72	Horemheb	Saq	Generalissimo
<i>imy-r mšꜥ wr n nswt</i>	M	72	Horemheb	Saq	Generalissimo of the king
<i>imy-r mšꜥ wr n nb t3wy</i>	M	72	Horemheb	Saq	Generalissimo of the Lord of the Two Lands
<i>imy-r n imy-r sšw nb n nswt</i>	A	72	Horemheb	Saq	Overseer of all overseers of scribes of the king
<i>imy-r nww</i>	A	15	Menkheperas onb	86	Overseer of hunters
<i>imy-r nww n imn</i>	T	66	Ramose	55	Overseer of the hunters of Amun
<i>imy-r nfrwt n imn</i>	T	42	Userhat	56	Overseer of the good things of Amun

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r nfrwt n imn m šm^c.w mh.w</i>	T	74	Neferhotep	49	Overseer of the good things of Amun in Upper and Lower Egypt
<i>imy-r nfrw</i>	M	66	Ramose	55	Overseer of recruits
<i>imy-r nfrw n nb t_{wy}</i>	M	72	Horemheb	Saq	Overseer of the recruits of the Lord of the Two Lands
<i>imy-r nfr.t n mn-hpr-r^c</i>	K	83	Khons	31	Overseer of the cattle of Menkheperre
<i>imy-r niwt t_{ty}</i>	A	32	Rekhmire	100	Overseer of the city and Vizier
	A	66	Ramose	55	
	A	80	Userhat	51	
<i>imy-r pr m niwt rsyt</i>	A	45	Amenmose	89	Steward in the Southern City
	A	82	Djehoutyhotep	A16	
<i>imy-r pr</i>	K	57	Any	AS 23	Steward
	K	72	Horemheb	Saq	
	K	45	Amenmose	89	
	K	62	Meryre II	AN 2	
<i>imy-r pr n 'imn-r^c</i>	T	72	Horemheb	Saq	Steward of Amun-Re
<i>imy-r pr mwt nswt hmt nswt wrt ty</i>	K	59	Huya	AN 1	Overseer of the royal harem of the great queen Ti
<i>imy-r pr n [imn]</i>	T	32	Rekhmire	100	Steward of Amun
<i>imy-r pr n pr 3h-n-itn</i>	K	56	Ahmosé	AN 3	Steward of the palace of Ahkenaten
<i>imy-r-pr n hmt nswt wrt</i>	K	59	Huya	AN 1	Steward of the great queen
	K	47	Heti	151	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r pr n nswt</i>	K	7	Amenhotep	73	Steward of the palace
<i>imy-r pr n 3- hpr.w-r</i>	K	21	User	21	Steward of Thutmose I
<i>imy-r pr n 3- hpr.w-r di nh</i>	K	57	Any	AS 23	Overseer of the great house of Akhpeperure given life
<i>imy-r pr wr</i>	K	82	Djehoutyhotep	A16	High Steward
	K	7	Amenhotep	73	
	K	72	Horemheb	Saq	
<i>imy-r pr.wy nbw</i>	A	28	Kenamun	93	Overseer of the double treasury of gold
<i>[imy-r pr.wy] nbw [n imn]</i>	T	39	Amenhotep Si Si	75	Overseer of the double treasury of the gold of Amun
<i>imy-r pr.wy nbw imy-r pr.wy h</i>	A	15	Menkheperas onb	86	Overseer of the double treasury of gold and overseer of the 2 houses of silver
	A	32	Rekhmire	100	
<i>imy-r pr.wy h imy-r pr.wy nbw n imn</i>	T	15	Menkheperas onb	86	Overseer of the double treasury of silver and the double treasury of the gold of Amun
	T	32	Rekhmire	100	
<i>imy-r pr wr m mn-nfr</i>	K	66	Ramose	55	High Steward in Memphis
<i>imy-r pr wr n imn</i>	T	78	Amenemope	41	High Steward of Amun
<i>imy-r pr wr n nswt</i>	K	66	Ramose	55	High steward of the king
	K	28	Kenamun	93	
	K	7	Amenhotep	73	
<i>imy-r pr wr n nswt m prw-nfr</i>	K	28	Kenamun	93	High steward of the king in of Peru-nefer

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r pr wr n prw-nfr</i>	K	28	Kenamun	93	High steward of Peru-nefer
<i>imy-r pr wr m nswt m inb-ḥd</i>	K	66	Ramose	55	High Steward of the king in White Wall
<i>imy-r pr-ḥd</i>	A	39	Amenhotep SiSi	75	Overseer of the treasury
	A	62	Meryre II	AN 2	
	A	56	Ahmoose	AN 3	
	A	59	Huya	AN 1	
	A	61	Meryre I	AN 4	
	A	14	Djehouty	11	
	A	36	Thotnefer	80	
<i>imy-r pr.wy-ḥd</i>	A	59	Huya	AN 1	Overseer of the double treasury
<i>imy-r pr ḥd imy-r pr nbw</i>	A	23	Amenemope	276	Overseer of the treasury of gold and silver
<i>imy-r pr-ḥd wr</i>	A	66	Ramose	55	Chief of the treasury
<i>imy-r pr.wy ḥd n ḥmt nswt</i>	K	59	Huya	AN 1	Overseer of the double treasury of silver of the queen
<i>imy-r pr-ḥd n /// p3 itn m pr itn m [3ḥ.t]-itn</i>	T	67	Tutu	AS 8	Overseer of the treasury of the Aten in the temple of the Aten in Akhet-Aten
<i>imy-r mn^ct</i>	K	70	Sennedjem		Overseer of Tutors
<i>imy-r rw.yt n nb t3wy</i>	A	56	Ahmoose	AN 3	Overseer of the law court of the Lord of the Two Lands
<i>imy-r rwyty</i>	A	40	Hepu	66	Overseer of the law court
	A	56	Ahmoose	AN 3	
<i>imy-r šnh n ḥmt-nswt</i>	B	59	Huya	AN 1	Overseer of sculptors

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r šn^c n imn</i>	T	28	Kenamun	93	Overseer of the provisioning quarter of Amun
<i>imy-r šnwt</i>	A	13	Antef	155	Overseer of the granary
	A	15	Menkheperas onb	86	
	A	19	Senniferi	99	
	A	12	Amenemhet	123	
<i>imy-r šnwwt n imn</i>	T	13	Antef	155	Overseer of the granaries of Amun
<i>imy-r šnwt n imn</i>	T	15	Menkheperas onb	86	Overseer of the granary of Amun
	T	28	Kenamun	93	
	T	66	Ramose	55	
	T	39	Amenhotep Sisi	75	
<i>imy-r šnwty n imn n sp3(w)t imyw t3-mḥw</i>	T	66	Ramose	55	Overseer of the granaries of Amun in the districts in Lower Egypt
<i>imy-r šnwt n nb t3wy</i>	A	78	Amenemope	41	Overseer of the grain of the Lord of the Two Lands
<i>imy-r šnwwt n šm^cw mḥw</i>	A	78	Amenemope	41	Overseer of the granaries of Upper and Lower Egypt
	A	50	Khaemhat	57	
<i>imy-r šnwt p3 itn m 3ḥ.t-itn</i>	T	63	Panhesy	AN 6	Overseer of the granary of the Aten in Akhet-aten
<i>imy-r šnwty m t3 r dr.f</i>	A	66	Ramose	55	Overseer of the granaries in the entire land
<i>imy-r šm^cw</i>	A	29	Mery	95	Overseer of singers
<i>imy-r sšw</i>	A	32	Rekhmire	100	Chief Scribe
	A	66	Ramose	55	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r sšw nswt</i>	K	41	Tjannuni	74	Overseer of royal scribes
<i>imy-r sšw n mšꜥ</i>	M	41	Tjannuni	74	Overseer of the scribes of the army
<i>imy-r sš mšꜥ ʕ3</i>	M	41	Tjannuni	74	Chief scribe of the army
<i>imy-r sš mšꜥ n nswt</i>	M	41	Tjannuni	74	Chief scribe of the royal army
<i>imy-r sšw nswt nbw n mšꜥ</i>	M	48	Haremheb	78	Overseer of all the royal scribes of the army
<i>imy-r ssmwt</i>	M	48	Haremheb	78	Overseer of horses
	M	67	Tutu	AS 8	
	M	69	Amenhotep Huy	40	
	M	46	Anonymous A	91	
<i>imy-r ssmwt n nb t3wy</i>	K	58	Ay	AS 25	Overseer of the horses of the Lord of the Two Lands
	K	66	Ramose	55	
<i>imy-r ssmwt nbt n hm.f</i>	K	58	Ay	AS 25	Overseer of all the horses of his majesty
<i>imy-r hḥw m pt t3w nbw</i>	F	72	Horemheb	El-Kab	Overseer of millions in heaven and all countries
<i>imy-r h3swt hr imntt w3s.t</i>	F	52	Nebamun	90	Overseer of the desert lands to the west of Thebes
<i>imy-r h3swt rswt</i>	F	69	Amenhotep Huy	40	Overseer of the southern foreign lands
<i>imy-r h3swt nbw n imn</i>	T	19	Senniferi	99	Overseer of the gold lands of Amun
<i>imy-r h3swt nbw n gbytw</i>	T	15	Menkheperro nb	86	Overseer of the gold lands of Koptos
<i>imy-r h3swt mḥtw</i>	F	25	Amenmose	42	Overseer of the northern countries
	F	35	Penhet	239	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imy-r ht ʕh</i>	K	28	Kenamun	93	Attendant of the palace
<i>imy-r htmt</i>	K	19	Senniferi	99	Overseer of the seal
	K	55	Sobekhotep	63	
<i>imy-r htmt m t3 hntyt</i>	K	17	Paheri	El-Kab	Overseer of the seal in the southward voyage
<i>imy-r hm.w-ntr n mnw n w3s.t</i>	T	78	Amenemope	41	Overseer of the shrine of Min in Thebes
<i>imy-r hnr nswt</i>	K	59	Huya	AN 1	Overseer of the harem of the king
<i>imy-hnt</i>	K	65	Penthu	AN 5	Chamberlain
	K	67	Tutu	AS 8	
<i>imy-hnt n nb t3wy</i>	K	67	Tutu	AS 8	Chamberlain of the Lord of the Two Lands
<i>imy-r hbsw n imn</i>	T	51	Menna	69	Overseer of the ploughed lands of Amun
<i>imy-r ipt nswt</i>	K	62	Meryre II	AN 2	Overseer of the royal harem
<i>imy-r ipt nswt m hmt-nswt ʕ3t</i>	K	62	Meryre II	AN 2	Overseer of the royal harem of the great queen
<i>imy-r ipt nswt n hmt-nswt ʕ3t nfr-nfr.w-itn nfr-t-iyi-ty ʕnh d.t nhh</i>	K	62	Meryre II	AN 2	Overseer of the royal harem of the great queen Nefertiti given life
<i>irty n nswt m-ht idbwy</i>	K	72	Horemheb	Saq	The two eyes of the king throughout the Two Banks
<i>irty n nswt m sšm t3wy m snm hpw idbwy</i>	K	72	Horemheb	Saq	The two eyes of the king when leading the Two Lands and establishing the laws of the Two Banks
<i>irty nswt ʕhwy n bity</i>	K	28	Kenamun	93	Eyes of the king of Upper Egypt ears of the king of Lower Egypt
	K	41	Tjannuni	74	
<i>irty n nswt m t3 dr.f</i>	K	66	Ramose	55	Eyes of the king in the whole land

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>irty nswt r w3wt psdt 9</i>	K	28	Kenamun	93	Eyes of the king on the roads belonging to the 9 Bows
<i>irty nswt hr h3swt rtnw</i>	K	25	Amenmose	42	Eyes of the king in the foreign land of Retjenu
<i>irty nswt nhwy n bity hr hst rtnw hst</i>	K	25	Amenmose	42	Eyes of the king of upper Egypt, ears of the king in the foreign land of the wretched Retjenu
<i>irty nswt m st nbt</i>	K	51	Menna	69	Eyes of the king in every place
<i>irty n nswt m niwwt smw nhwy.f m sp3wt t3 mhw</i>	K	50	Khaemhat	57	Eyes of the king in the cities of Upper Egypt his ears in the nomes of lower Egypt
<i>iry- 3 n h3ty</i>	A	17	Paheri	El-Kab	Door keeper of the office
<i>iry pdt n nb t3wy</i>	M	37	Pehsuker	88	Captain of the Lord of the Two Lands
	M	46	Anonymous A	91	
<i>iry-rdwy n nb hpš hr h3swt rsywt mhwty</i>	K	48	Haremheb	78	Attendant of the lord of power in the southern and northern foreign lands
<i>iry-rdwy n nb t3wy hr hst rsyt mhty</i>	K	37	Pehsuker	88	Attendant of the Lord of the Two Lands in the Southern and Northern deserts
	K	48	Haremheb	78	
<i>iry-rdwy n ntr nfr</i>	K	37	Pehsuker	88	Attendant of the good god
<i>iry-rdwy n nb t3wy</i>	K	37	Pehsuker	88	Attendant of the Lord of the Two Lands
	K	56	Ahmosé	AN 3	
	K	34	Suemnut	92	
	K	24	Amenemhab	85	
<i>iry-rdwy nb.f hr ptri hrw pn n</i>	M	72	Horemheb	Saq	One in attendance on his lord upon the battlefield on this

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>sm3 sttyw</i>					day of smiting the Asiatics
<i>iry-p^ct</i>	H	18	Puyemre	39	Hereditary prince
	H	72	Horemheb	Saq	
	H	9	Dejehoutyhote p	Deb	
	H	20	Thutmose	342	
<i>iry-p^ct m h_d n gb</i>	T	66	Ramose	55	Prince in the White Chapel of Geb
<i>iry-p^ct n šm^cw t3-mh_w</i>	H	72	Horemheb	Saq	Hereditary prince of Upper and Lower Egypt
<i>iry-p^ct h3ty-^c</i>	H	7	Amenhotep	73	Prince and Count
	H	13	Antef	155	
	H	66	Ramose	55	
	H	37	Pehsuker	88	
	H	24	Amenemheb	85	
	H	48	Haremhab	78	
	H	19	Senniferi	99	
	H	32	Rekhmire	100	
	H	15	Menkheperras onb	86	
	H	80	Userhat	51	
	H	55	Sobekhotep	63	
	H	34	Suemnut	92	
	H	18	Puyemre	39	
	H	52	Nebamun	90	
	H	69	Amenhotep Huy	40	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
	H	9	Djehouteyhote p	Deb	
	H	70	Sennedjem	Akh	
	H	71	Ptahemwia	Saq	
	H	40	Hepu	66	
<i>iry ht</i>	A	32	Rekhmire	100	Overseer, administrator
<i>iry hm̄w</i>	M	50	Khaemhat	57	Helmsman
<i>iry nh̄n</i>	A	32	Rekhmire	100	Guardian of Nekhen
	A	66	Ramose	55	
<i>iry sšm</i>	A	32	Rekhmire	100	Functionary
<i>it-n̄tr</i>	K	28	Kenamun	93	Father of the god
	K	58	Ay	AS 25	
	K	34	Suemnut	92	
	K	66	Ramose	55	
	K	40	Hepu	66	
	K	70	Sennedjem	Akh	
	K	55	Sobekhotep	63	
	T	29	Mery	95	Divine father belonging to the great place
<i>idnw</i>	A	24	Amenemhab	85	Deputy
<i>idnw m hm̄.f m t3 r-dr̄.f</i>	K	72	Horemheb	Saq	Deputy of his majesty in the entire land
<i>idnw n p3 mšꜥ</i>	M	80	Userhat	51	Lieutenant commander of the army
<i>idnw n md3w</i>	M	52	Nebamun	90	Deputy of police
<i>idnw n hm̄.f</i>	K	37	Pehsuker	88	Deputy of his majesty

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
	K	72	Horemheb	Saq	
<i>idnw n ḥwt nswt n imnt wꜥst</i>	K	83	Khons	31	Deputy in the royal mansion in western Thebes
<i>idnw n mšꜥ</i>	M	37	Pehsuker	88	Lieutenant commander of the army
	M	24	Amenemhab	85	
<i>idnw n nb t3wy</i>	M	37	Pesuker	88	Lieutenant of the king
<i>idnw n mšꜥ ʕ3 ʕš3</i>	M	37	Pehsuker	88	Lieutenant commander of the numerous army
<i>idnw n mšꜥ n nb t3wy</i>	M	24	Amenemhab	85	Lieutenant commander of the army of the Lord of the Two Lands
<i>idnw n nswt</i>	K	37	Pehsuker	88	Royal deputy
	K	72	Horemheb	Saq	
<i>idnw n nswt hm.f</i>	K	37	Pehsuker	88	Deputy of his majesty
<i>idnw n kš s3 nswt ḥwy</i>	F	69	Amenhotep Huy	40	Deputy of Kush and king's son of Kush
<i>idnw n nswt m st nbt</i>	K	72	Horemheb	Saq	Deputy of the king in every place
<i>idnw n nswt m t3 r-dr.f</i>	K	72	Horemheb	Saq	Deputy of the king in the entire land
<i>idnw whmw</i>	K	42	Userhat	56	Deputy of the Herald
<i>ʕ3 m pr-nswt</i>	H	24	Amenemhab	85	Great in the palace
	H	49	Kenamun	93	
	H	37	Pehsuker	88	
	H	55	Sobekhotep	63	
<i>ʕ3 m sꜥḥ</i>	H	72	Horemheb	Saq	High in rank
	H	7	Amenhotep	73	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>ꜥ3 m sꜥh.f</i>	H	24	Amenemhab	85	Great in his dignity
	H	37	Pehsuker	88	
	H	41	Tjannuni	74	
	H	66	Ramose	55	
<i>ꜥ3 n ꜥ3w</i>	H	72	Horemheb	Saq	Mightiest of the mighty ones
<i>ꜥnhwy n nswt</i>	K	19	Senniferi	99	Ears of the king
	K	24	Amenemhab	85	
<i>ꜥnhw n mšꜥ</i>	M	24	Amenemhab	85	Soldier
	M	37	Pehsuker	88	
<i>ꜥš3 spw m nbw n ḥswt</i>	H	72	Horemheb	Saq	Rich in occasions involving the gold of honour
<i>wꜥ</i>	H	72	Horemheb	Saq	Unique one
<i>wꜥ rtw</i>	A	32	Rekhmire	100	Civil administrator
<i>wꜥ rtw n ḥk3</i>	K	32	Rekhmire	100	Controller of the Household
<i>wꜥb</i>	T	28	Kenamun	93	Wab-priest
	T	34	Suemnut	92	
<i>wꜥb n imn</i>	T	42	Userhat	56	Wab-priest of Amun
<i>wꜥb n pth</i>	T	42	Userhat	56	Wab-priest of Ptah
<i>wꜥw</i>	M	61	Meryre I	AN 4	Soldier
<i>wꜥ ḥr ḥw.f</i>	H	72	Horemheb	Saq	Unique one
<i>wb3 nswt</i>	K	30	Mentuiui	172	Royal butler
	K	34	Suemnut	92	
	K	64	Parannefer	AS 7	
<i>wb3 nswt wꜥb ꜥwy</i>	K	34	Suemnut	92	Royal Butler clean of hands

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>wdꜣ mdw</i>	K	71	Ptahemwia	Saq	
	K	64	Parannefer	AS 7	
	A	32	Rekhmire	100	Judge
	A	23	Amenemope	276	
<i>whm nswt tpy</i>	K	66	Ramose	55	First Royal Herald
<i>whmw nswt</i>	K	26	Amunedjeh	84	
	K	19	Senniferi	99	Royal Herald
<i>whmw ꜣ n nswt</i>	K	20	Thutmose	342	
	K	13	Antef	155	Great royal herald
<i>whmw nswt tpy n nb t3wy</i>	K	42	Userhat	56	First royal herald of the Lord of the Two Lands
<i>whmw nswt snnw n nb t3wy</i>	K	54	Re'a	201	
	K	66	Ramose	55	Second herald of the Lord of the Two Lands
	A	32	Rekhmire	100	Herald of Hermonthis
<i>whmw n iwni</i>	A	32	Rekhmire	100	Herald of Anteopolis
<i>whmw tbw</i>	A	32	Rekhmire	100	Herald of Edfu
<i>whmw db3</i>	A	32	Rekhmire	100	Herald of Edfu
<i>whm.f r bity n sꜥhw.f</i>	K	72	Horemheb	Saq	Who repeats the speech of the king (of Lower Egypt) to/ for the officials
<i>whm r bity n smrw</i>	K	72	Horemheb	Saq	Who repeats the words of the king (of Lower Egypt) to/ for his entourage
<i>wpwty</i>	F	66	Ramose	55	Envoy
<i>wpwty nswt</i>	F	72	Horemheb	Saq	King' s envoy
<i>wpwty n nswt hr h3swt nbwt</i>	F	66	Ramose	55	Royal envoy in all the foreign lands
<i>wpwty nswt r-h3t mšꜥ.f r h3swt</i>	F	72	Horemheb	Saq	King's envoy at the head of of his expedition to the northern and southern

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>rsywt mḥwt</i>					(foreign) land
<i>wr wrw</i>	H	7	Amenhotep	73	Great one of the great ones
	H	28	Kenamun	93	
	H	66	Ramose	55	
	H	72	Horemheb	Saq	
<i>wr wrw n smrw</i>	K	72	Horemheb		Chief of the most important courtiers
<i>wr mḏ-šmꜥw</i>	K	32	Rekhmire	100	Magnate of the 10 of Upper Egypt
<i>wr m i3wt.f</i>	H	7	Amenhotep	73	Important one in his office
	H	37	Pehsuker	88	
	H	41	Tjannuni	74	
	H	66	Ramose	55	
<i>wr m i3wt.f m pr-nswt</i>	H	50	Khaemhat	57	Important one in his office in the royal palace
<i>wr m i3wt.f m b3ḥ nswt</i>	K	41	Tjannuni	74	Important one in his office in the king's presence
<i>wr m3w p3 itn m pr itn m 3ḥ-t- itn</i>	T	61	Meryre I	AN 4	Greatest of seers of the Aten in Akhet-Aten
<i>wr m ꜥwt.f</i>	H	72	Horemheb	Saq	Great in his offices
<i>wr mꜥh</i>	H	55	Sobekhotep	63	An important man in the palace
<i>wr mrwt ḥr nb.f</i>	H	72	Horemheb	Saq	Greatly beloved of his lord
<i>wr swnw</i>	K	59	Huya	AN 1	Chief physician
	K	65	Penthu	AN 5	
<i>wr-m33.w n p3 itn m pr itn m 3ḥ.t-itn</i>	T	61	Meryre I	AN 4	Great seer of the Aten in the temple of the Aten in Akhetaten
<i>wr sšm nswt</i>	K	32	Rekhmire	100	Chief royal guide

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>wr hnr n šbk šdt</i>	K	55	Sobekhotep	63	Great one in the harem of Sobek of Shedet
<i>b3k n nb t3wy nfr-hprw-r^c-w^c-n-r^c</i>	K	63	Panhesy	AN 5	Servant of the lord of the two lands Neferkheperure
<i>b3k tpy n p3 'itn</i>	T	56	Ahmose	AN 3	Head servant of the Aten
	T	63	Panhesy	AN 6	
	T	65	Penthu	AN 5	
<i>b3k tpy n itn m t3 hwt p3 itn m 3ht-itn</i>	T	59	Huya	AN 1	Head servant of the Aten in the Aten's temple in Akhet Aten
	T	65	Penthu	AN 5	
<i>b3k tpy n p3 'itn m pr 'itn m 3ht-itn</i>	T	63	Panhesy	AN 6	Head servant of the Aten in the Aten's temple in Akhet Aten
	T	67	Tutu	AS 8	
<i>b3k tp(y) n nfr-hprw-r^c w^c-n-r^c m pr itn</i>	T	67	Tutu	AS 8	Head servant of Neferure We-en re in the temple of the Aten
<i>mn^ct wrt</i>	K	37	Pehsuker	88	Great tutor
<i>mn^ct wrt n nb t3wy</i>	K	24	Amenemhab	85	Great tutor of the Lord of the Two Lands
	K	29	Mery	95	
	K	56	Ahmose	AN 3	
	K	37	Pehsuker	88	
<i>mn^c nswt</i>	K	37	Pehsuker	88	Royal tutor
<i>mn^c nswt šdt h^cw ntr</i>	K	28	Kenamun	93	Royal tutor who educated the divine body
<i>mn^c n s3 nswt</i>	K	17	Paheri	El-Kab	Tutor of the royal son
<i>mn^c n s3t nswt n</i>	K	55	Sobekhotep	63	Tutor of the royal daughter of his body

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>ḥt.f</i>					
<i>mn^c n s3t</i>	K	48	Haremheb	78	Tutor of the daughter
<i>mr m3w m pr.wr</i>	T	32	Rekhmire	100	Greatest of the seers in the national shrine of Upper Egypt at El-Kab
<i>mr m3w n p3 'itn m pr itn m 3ḥ-t-itn</i>	T	61	Meryre I	AN 4	Greatest of the seers of the Aten in the temple of the Aten in Akhetaten
<i>mḥ-ib nb.f</i>	H	7	Amenhotep	73	One who is trusted by his lord
<i>mḥ-ib 3 n nb t3wy</i>	H	7	Amenhotep	73	Confident of the lord of the two Lands
<i>mḥ ib n nswt m mnw</i>	B	72	Horemheb	Saq	One who fills the heart of the king with all monuments
<i>mḥ ib n nswt m mnw nbw</i>	B	72	Horemheb	Saq	One who fills the the heart of the king with all monuments
<i>mḥ ib n nswt m smnh mnw.f</i>	B	72	Horemheb	Saq	Filling the heart of the king in establishing his monuments
<i>nby n ḥw.t-ntr n imn</i>	M	32	Rekhmire	100	Goldsmith of the temple of Amun
<i>ns shrr m t3 r dr.f</i>	A	72	Horemheb	Saq	Tongue that appeases in the entire land
<i>nfw</i>	M	32	Rekhmire	100	Sailor
<i>rwd</i>	A	50	Khaemhat	57	Inspector
<i>r ḥry n t3 mi kd.f</i>	A	28	Kenamun	93	Chief of the whole land
<i>rḥ nswt kd.f m ḥwn</i>	H	72	Horemheb		Whose virtues the king knows since he was a youth
<i>r shrr m rw-prw</i>	T	28	Kenamun	93	Spokesman who makes peace in the temple
<i>r shrr m t3 r dr.f</i>	A	40	Hepu	66	Mouth who appeases in the entire land
	A	72	Horemheb	Saq	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>rs-tp</i>	A	24	Amenemhab	85	Vigilant
<i>rh nswt</i>	H	65	Penthu	AN 5	King's acquaintance
<i>rdwy n nb t3wy</i>	K	28	Kenamun	93	Attendant of the Lord of the Two Lands
	K	34	Suemnut	92	
	K	37	Pehsuker	88	
<i>h3ty-^c</i>	H	52	Nebamun	90	Count
	H	72	Horemheb	Saq	
<i>h3ty-^c m niwt rsyt</i>	A	28	Kenamun	162	Mayor of the Southern city
<i>h3ty-^c n tny</i>	A	13	Antef	155	Mayor of Thinis
<i>h3ty-^c n iwnyt</i>	A	17	Paheri	El-Kab	Mayor of Lotopolis (Esna)
<i>h3ty-^c n mr n sbk</i>	A	55	Sobekhotep	63	Mayor of the canal of Sobek
<i>h3ty-^c n mr rsy n š n šdt</i>	A	55	Sobekhotep	63	Mayor of the southern canal and lake
<i>h3ty-^c n mr rsy n š3 n sbk</i>	A	55	Sobekhotep	63	Mayor of the southern canal and of the lake of Sobek
<i>h3ty-^c n nhb</i>	A	17	Paheri	El-Kab	Mayor of El-Kab
<i>h3ty-^c pr hr</i>	T	32	Rekhmire	100	Mayor of the temple of Horus
<i>h3ty-^c n nhn</i>	A	32	Rekhmire	100	Mayor of Nekhen
<i>h3ty-^c n serr^c</i>	A	9	Djehoutyhoptep	Deb	Mayor of Serra
<i>h3ty-^c n š-rsy</i>	A	55	Sobekhotep	63	Mayor of the Fayum
<i>h3ty-^c n db3</i>	A	32	Rekhmire	100	Mayor of Edfu
<i>h3ty-^c n nfrw-sy</i>	A	34	Suemnut	92	Mayor of Nefru-sy
<i>h3ty iry rdwy n nb t3wy</i>	K	24	Amenemhab	85	Chief attendant of the Lord of the Two Lands

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>ḥ3ty n smrw nswt</i>	K	72	Horemheb	Saq	Foremost of the king's courtiers
<i>ḥm-ntr m^ct</i>	T	66	Ramose	55	Priest of <i>m^ct</i>
<i>ḥm-ntr n sbk šdt</i>	T	55	Sobekhotep	63	Priest of Sobek of Shedet
<i>ḥm-ntr snnw n imn</i>	T	37	Pehsuker	88	Second priest of Amun
	T	39	Amenhotep Sisi	75	
	T	18	Puyemre	39	
<i>ḥm-ntr snnw n nb t3wy nfr-ḥprw-r^c-w^c-n-r^c</i>	T	63	Panhesy	AN 6	Second priest of the Lord of the Two Lands <i>Nfr-ḥpr.w-r^c-w^c-n(.y)-R^c</i>
<i>ḥm-ntr tpy m ḥwt hnm.t-^cnh</i>	T	80	Userhat	51	High Priest of the temple of Khnum
<i>ḥm-ntr tpy n ḥwt-ḥr hryt ib ḥnkt ^cnh</i>	T	31	Re	72	High priest of Hathor in the midst of Henket-ankh
<i>ḥm-ntr tpy i^ch</i>	T	55	Sobekhotep	63	High priest of the Moon
<i>ḥm-ntr tpy m ḥwt nswt</i>	T	80	Userhat	51	High Priest of the chapel of the king
<i>ḥm-ntr n ^c3-ḥpr-k3-r^c</i>	T	80	Userhat	51	Priest of Thutmose I
<i>ḥm-ntr tpy n ^c3-ḥpr-k3-r^c</i>	T	80	Userhat	51	High Priest of Akheperkare (Thutmose I)
<i>ḥm-ntr tpy n imn</i>	T	28	Kenamun	93	High priest of Amun
	T	15	Menkheperas onb	86	
	T	29	Mery	95	
	T	31	Re	72	
	T	75	Parennefer	162	
	T	8	Hepuseneb	67	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>hm-ntr tpy n k3 nswt 3-hpr-k3-r</i>	T	80	Userhat	51	High Priest of the KA of King Akheperkare
<i>hm-ntr tpy n sbk</i>	T	83	Khons	31	High Priest of Sobek
	T	79	Hatiaï	324	
<i>hm-ntr tpy n mnw gbtw</i>	T	49	Kenamun	93	High priest of Min of Koptos
	T	29	Mery	93	
<i>hm-ntr tpy n nb t3wy mn-hpr-r</i>	T	83	Khons	31	High Priest of the Lord of the two Lands Menkheperre (Thutmose III)
<i>hm-ntr tpy</i>	T	31	Re	72	High Priest
	T	80	Userhat	51	
<i>hm-ntr tpy n imn m mn-sw</i>	T	31	Re	72	High Priest of Amun in Men-Sut
<i>hm-ntr tpy n imn m hnk-t-nh</i>	T	31	Re	72	High Priest of Amun in Henket-ankh
<i>hm ntr tpy n imn m dsr-3ht</i>	T	31	Re	72	High Priest of Amun in Djeser-akhet
<i>hm-ntr inpw hrw hb-sd tpy n hm.f nb t3wy nb-m-t-r</i>	T	50	Khaemhat	57	High Priest of Anubis on the first day of the Heb-Sed of his majesty Nebmaatre
<i>hm k3</i>	T	37	Pehsuker	88	Funerary priest
<i>hry ihw</i>	M	34	Suemnut	92	Stable master
	M	69	Amenhotep Huy	40	
<i>hry ihw n nb t3wy</i>	M	25	Amenmose	42	Stable master of the Lord of the Two Lands
	M	34	Suemnut	92	
<i>hry mg3 n hm.f</i>	M	48	Haremhab	78	Troop commander of the skirmishers of his majesty
<i>hry-mrwt nbwt n</i>	T	28	Kenamun	93	Master of all the servants of Amun

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>imn</i>					
<i>ḥry-mḏ3w</i>	M	60	Mahu	AS 9	Chief of police
<i>ḥry-mḏ3w n itn</i>	M	60	Mahu	AS 9	Chief of police of the Aten
<i>ḥry-mḏ3w n 3ḥt-itn</i>	M	60	Mahu	AS 9	Chief of police in Akhet-aten
<i>ḥry-mḏ3w n gbtyw</i>	M	15	Menkheperas onb	86	Chief of police of Koptos
<i>ḥry-mḏ3w n imnt niwt</i>	M	52	Nebamun	90	Chief of police in Thebes
<i>ḥry-mḏ3w ḥr wꜥst</i>	M	52	Nebamun	90	Chief of police in Thebes
<i>ḥry mḏ3w ḥr imntt niwt m st tmbw st ʕ3-b3.w</i>	M	52	Nebamun	90	Chief of police in Thebes...
<i>ḥry pḏt</i>	M	24	Amenemhab	85	Troop commander
	M	24	Ay	AS 25	
	M	25	Amenmose	42	
<i>ḥry-pḏt n ḥm.f</i>	M	48	Haremhab	78	Troop commander of his majesty
<i>ḥry pḏt ḥr imntt wꜥst</i>	M	52	Nebamun	90	Troop commander in western Thebes
<i>ḥry šm3w</i>	F	24	Amenemhab	85	Chief of foreigners
<i>ḥry-sšt3</i>	K	32	Rekhmire	100	Privy Councillor
	K	50	Khaemhat	57	
<i>ḥry-sšt3 m pr-dw3t</i>	K	66	Ramose	55	Privy councillor of the robing room
<i>ḥry-sšt3 n pr-nswt</i>	K	32	Rekhmire	100	Privy Councillor of the palace
	K	50	Khaemhat	57	
	K	66	Ramose	55	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
	K	72	Horemheb	Saq	
<i>ḥry-sšt3 m ipt-swt</i>	K	28	Kenamun	93	Privy Councillor in Karnak
<i>ḥry-sšt3 n w3dty</i>	T	15	Menkheperas onb	86	Master of the secrets of the Two Crown Goddesses
	T	28	Kenamun	93	
	T	66	Ramose	55	
	T	72	Horemheb	Saq	
<i>ḥry ḥn.yt n s3 nswt</i>	M	69	Amenhotep Huy	40	Chief of sailors of the royal son
<i>ḥry-tp</i>	A	29	Mery	95	Chief
<i>ḥry-tp imy-r šmꜥw</i>	A	29	Mery	95	Master and Governor of Upper Egypt
	A	28	Kenamun	93	
<i>ḥry-tp imy-r ḥmwt</i>	B	15	Menkheperas onb	86	Chief of the overseers of the craftsmen
<i>ḥry-tp imyw-ḥt.f</i>	K	24	Amenemhab	85	Chief of attendants
<i>ḥry-tp ʿ3 m pr-nswt</i>	K	15	Menkheperas onb	86	Great chief in the palace
<i>ḥry-tp ʿ3 n rhyt</i>	H	72	Horemheb	Saq	Great chief of the subjects
<i>ḥry-tp m pr-md3t</i>	A	72	Horemheb	Saq	Who has authority over the library
<i>ḥry-tp m pr-nfr</i>	T	50	Khaemhat	57	Chief in the funerary workshop
<i>ḥry-tp m pr-dw3t</i>	K	72	Horemheb	Saq	Who has authority over the robing room
<i>ḥry-tp md3w n gbtyw</i>	M	15	Menkheperas onb	86	Chief of police of Koptos
<i>ḥry-tp nswt</i>	K	78	Amenemope	41	Chamberlain
	K	65	Penthu	AN 5	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>ḥry-tp mnḥ3.t nbt iryw ḥnt r rwt ḥ</i>	M	72	Horemheb	Saq	Chief of all the troops and of (?) those who transact business (?) at the gates of the palace
<i>ḥry-tp n ḥrsw</i>	T	50	Khaemhat	57	Master of the coffin
<i>ḥry-tp n ʿ3t nbt</i>	H	19	Senniferi	99	Chief of all great things
<i>ḥry-tp n t3 r dr.f</i>	A	7	Amenhotep	73	Chief of the entire land
	A	28	Kenamun	93	
	A	66	Ramose	55	
	A	72	Horemheb	Saq	
	A	32	Rekhmire	100	
	B	72	Horemheb	Saq	Who has authority over the booth of the craftsmen
<i>ḥry-tp smrw ʿḥ</i>	K	19	Senniferi	99	Chief of the courtiers of the palace
<i>ḥry-tp k3mw</i>	A	18	Puyemre	39	Chief of the vineyard keepers
<i>ḥry-k3mw n ntr ḥtpw n imn</i>	T	18	Puyemre	39	Chief vintner of the divine offerings of Amun
<i>ḥrp k3t nbt n nswt</i>	B	26	Amunedjeh	84	Director of all royal works
<i>ḥsy ʿ3 n nb t3wy</i>	H	72	Horemheb	Saq	The one greatly praised of the Lord of the Two Lands
<i>ḥsy n wsrt-k3w</i>		7	Amenhotep	73	One praised for strong works
<i>ḥsy n ntr nfr</i>	H	7	Amenhotep	73	One praised of the good god
	H	72	Horemheb	Saq	
<i>ḥsb it n šmʿw t3 mḥw</i>	A	42	Userhat	56	Bread reckoner in Upper and Lower Egypt
<i>ḥsb it n nb t3wy m šmʿw t3 mḥw</i>	A	50	Khaemhat	57	Grain reckoner of the Lord of the Two Lands in Upper and Lower Egypt

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>ḥsb it šꜥꜥ n iwnt nfryt r nḥb</i>	A	17	Paheri	El-Kab	Grain reckoner from Iwnet down to Nekheb
<i>ḥsb.f mnfyṯ</i>	M	72	Horemheb	Saq	Who counts the troops
<i>ḥk3-ḥwt n iwnt</i>	A	32	Rekhmire	100	District governor of Esna
<i>ḥry-tp nswt</i>	K	65	Penthū	AN 5	Chamberlain
<i>ḥnty t3wy</i>	A	72	Horemheb	Saq	Chief of the Two Lands
<i>ḥrp n nsty</i>	A	28	Kenamun	93	Controller of the double throne
<i>ḥrp ḥrpw</i>	A	28	Kenamun	93	Governor of governors
<i>ḥrp šmꜥ.w t3- mh.w</i>	A	66	Ramose	55	Director of Upper and Lower Egypt
<i>ḥrp k3t nbt m ipt-swt</i>	B	32	Rekhmire	100	Director of all the works in Karnak
<i>ḥrp k3t nbt n pr- nswt</i>	K	13	Antef	155	Director of all the works of the palace
<i>ḥrp rs-tp</i>	A	17	Paheri	El-Kab	Vigilant director
	A	24	Amenemhab	85	
	A	32	Rekhmire	100	
<i>ḥrp rs-tp n nb t3wy</i>	K	24	Amenemhab	85	Vigilant director of the Lord of the Two Lands
<i>ḥrp rs-tp n wn mꜥꜥt</i>	A	28	Kenamun	93	Truly vigilant director
<i>ḥrp šndwt nbt</i>	A	32	Rekhmire	100	Controller of all kilts
<i>ḥrp šndwt</i>	A	66	Ramose	55	Controller of kilts
<i>ḥtm bity</i>	K	15	Menkheperas onb	86	Royal Seal bearer
	K	29	Mery	95	
	K	30	Mentuiui	172	
	K	25	Amenmose	42	

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
	K	19	Senniferi	99	
	K	37	Pehsuker	88	
	K	55	Sobekhotep	63	
	K	56	Ahmoose	AN 3	
	K	61	Meryre I	AN 4	
	K	66	Ramose	55	
<i>hry-ḥbt n pth</i>	T	83	Khons	31	Lector priest of Ptah
<i>hry-ḥbt fdw</i>	T	26	Amunedjeh	84	Fourth lector priest
<i>hry-ḥbt tpy n imn</i>	T	31	Re	72	First Lector Priest of Amun
	T	11	Ahmoose	121	
<i>hry-ḥbt hmt n imn</i>	T	8	Hepuseneb	67	Third lector priest of Amun
<i>hry-ḥbt hmt n imn m ipt-swt</i>	T	8	Hepuseneb	67	Third lector priest of Amun in Karnak
<i>s3 nswt n kš</i>	F	66	Ramose	55	Viceroy of Kush
	F	69	Amenhotep Huy	40	
<i>s3b</i>	A	26	Amunedjeh	84	Judge
	A	32	Rekhmire	100	
	A	70	Sennedjem	Akh	
	A	66	Ramose	55	
<i>s3b ḏ-mr sp3t</i>	A	72	Horemheb	Saq	Provincial governor of the nome
<i>s3y [m nswt]</i>	H	72	Horemheb	Saq	Who was promoted [by the king because of his virtues]
<i>sḥ smrw</i>	H	28	Kenamun	93	Noblest of the courtiers
	H	72	Horemheb	Saq	

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>sḥ smrw n wn m3</i>	H	28	Kenamun	93	Noble dignitary among the courtiers in very truth
<i>sḥ snrw n nswt</i>	H	32	Rekhmire	100	Second royal dignitary
<i>sḥ ikr n sḥ</i>	H	40	Hepu	66	Excellent dignitary of a dignitary
<i>shdw n stp-s3</i>	K	28	Kenamun	93	Inspector of the palace
<i>shm smrw wd-mdw n šnwt</i>	K	28	Kenamun	93	Governor of the courtiers who issue orders to the entourage
<i>sdm-š n imy-r šnwt</i>	A	50	Khaemhat	57	Servant of the overseer of the granaries
<i>sdm ḥwwt-wryt 6</i>	A	32	Rekhmire	100	Judge of the 6 great mansions
<i>sdm sdmwt wḥw</i>	H	72	Horemheb	Saq	Who listens to the confidences of the unique ones
<i>sdy nswt</i>	K	32	Rekhmire	100	Foster child of the king
<i>sḏwty bity</i>	K	7	Amenhotep	73	Sealbearer of the king of Lower Egypt
	K	70	Sennedjem	Akh	
	K	70	Ptahemwia	Saq	
	K	72	Horemheb	Saq	
<i>sr</i>	A	28	Kenamun	93	Official
<i>sr n wb3</i>	K	32	Rekhmire	100	Chief Butler
<i>sr 3 m pr nswt</i>	K	26	Amunedjeh	84	Great official in the palace
<i>sr m-ḥ3t rhyt</i>	A	26	Amunedjeh	84	Official at the head of the common people
	A	37	Pehsuker	84	
	A	41	Tjannuni	74	
<i>sr m-ḥt špss</i>	K	24	Amenemhab	85	An official in front of the

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>nswt</i>					august king
<i>sr tpy n srwt</i>	A	19	Senniferi	99	First noble of the magistrates
<i>srw. n st w^cwt</i>	K	28	Kenamun	93	Official of the Privy Council chamber
<i>sm</i>	T	28	Kenamun	93	Sem-priest
	T	66	Ramose	55	
<i>sm m pr nsr</i>	T	32	Rekhmire	100	Sem-priest in the national shrine of lower Egypt at Pe
<i>smr</i>	K	28	Kenamun	93	Companion
	K	7	Amenhotep	73	
	K	69	Amenhotep Huy	40	
<i>smr [c3?] n mrwty</i>	H	72	Horemheb	Saq	[The great?] beloved official
<i>smr c3 nb twy</i>	K	66	Ramose	55	Great companion of the Lord of the Two Lands
<i>smr w^cty</i>	K	7	Amenhotep	73	Sole Companion
	K	18	Puyemre	39	
	K	24	Amenemheb	85	
	K	30	Mentuiui	172	
	K	66	Ramose	55	
	K	72	Horemheb	Saq	
	K	56	Ahmosé	AN 3	
	K	61	Meryre I	AN 4	
	K	70	Sennedjem	Akh	
	K	71	Ptahemwia	Saq	
	K	55	Sobekhotep	63	

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>smr w^cty tkn m nb.f</i>	K	40	Hepu	66	Sole companion who approaches the king
<i>smr n nbw šnwtj</i>	A	55	Sobekhotep	63	Companion of the lords of the granary
<i>smr tpy smrw n ḥ3t nswt špsw</i>	K	66	Ramose	55	First courtier of the courtiers at the head of the king's gentlemen
<i>smr tpy n smrw</i>	K	7	Amenhotep	73	First courtier of the courtiers
	K	56	Ahmose	AN 3	
<i>smr tpy n šnwt</i>	K	28	Kenamun	93	First courtier among the entourage
<i>šms nswt</i>	K	24	Amenemheb	85	King's retainer
<i>šms nswt r nmtt.f ḥr ḥ3swt rsywt mḥwty</i>	K	72	Horemheb	Saq	Who follows the king in his journeys in the southern and northern (foreign) lands
<i>šms n nswt m ḥ^ct mš^c.f ḥr ḥ3swt rsywt mḥhty</i>	K	7	Amenhotep	73	King's retainer at the front of his army in the southern and northern foreign lands
<i>šms nswt r iwt.f</i>	K	24	Amenemhab	85	King's retainer on his expeditions
<i>šms nswt r iwtw ḥr mw ḥr t3 ḥr ḥ3swt nbt</i>	K	24	Amenemhab	85	King's retainer on his expeditions on water, land and in all foreign countries
<i>šms nswt r iwt.f ḥr ḥ3swt rsyt mḥhty</i>	K	34	Suemnut	92	King's retainer in all his expeditions in the Southern and Northern foreign lands
	K	37	Pehsuker	88	
<i>šms nswt hr ḥnt t3</i>	F	24	Amenemhab	85	King's retainer in the southern land
<i>šms nswt ḥr ḥ3st Rtnw</i>	F	25	Amenemose	42	King's retainer in the foreign land of Retjenu
<i>šms nswt ḥr mw hr t3</i>	K	34	Suemnut	92	King's retainer on water and land

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>sš</i>	A	51	Menna	69	Scribe
	A	21	User	21	
	A	44	Amenemopet	297	
	A	47	Heti	151	
	A	9	Djehouteyhote p	Deb	
	A	53	Nebamun	Frag	
	A	12	Amenemhet	123	
<i>sš 3ḥwt n nb t3wy n šmꜥw mḥw</i>	A	51	Menna	69	Scribe of the arable lands of the Lord of the Two Lands of Upper and Lower Egypt
<i>sš ikr n tp-ḥsp</i>	A	17	Paheri	El-Kab	Skillful reckoning scribe
<i>sš ḥwt-ntr n mntw</i>	T	79	Hatiaï	324	Scribe of the temple of Montu
<i>sš ḥwt-ntr n mntw nb iwnw</i>	T	78	Amenemope	41	Scribe of the temple of Mont lord of Thebes
<i>sš ḥsb it n imn</i>	T	51	Menna	69	Reckoner of the grain of Amun
	T	44	Amenemopet	297	
<i>sš ḥsb it n šnwt ḥtpw-ntr imn</i>	T	17	Paheri	El-Kab	Scribe and reckoner of grain in the granary of the divine offerings of Amun
	T	53	Nebamun	Frag	
<i>sš ḥsb it n nb t3wy m šmꜥw t3 mḥw</i>	A	50	Khaemhat	57	Scribe and reckoner of grain of the Lord of the two Lands
<i>sš ḥsb it n šnwt pr-3</i>	A	50	Khaemhat	57	Scribe and reckoner of the grain of the granary of the king
<i>sš ḥsb m smꜥw mḥw</i>	A	42	Userhat	56	Scribe and reckoner of grain in Upper and Lower Egypt

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>sš ḥsb k3w 3bdw</i>	A	26	Amunedjeh	84	Scribe and reckoner of bulls and birds
<i>sš ḥsb nbw n s3 nswt</i>	K	69	Amenhotep Huy	40	Scribe and reckoner of the royal son
<i>sš ḥtpw-ntr tp n imn</i>	T	32	Rekhmire	100	Chief scribe of the divine offerings of Amun
<i>sš ḥtp.w n iwnyt</i>	T	32	Rekhmire	100	Scribe of the offerings of Esna
<i>sš mš</i>	M	41	Tjannuni	74	Scribe of the army
<i>sšmw ḥb n itm.w</i>	T	19	Senniferi	99	Festival conductor of Atum
	T	34	Suemnut	92	
<i>sšm m ḥb n ntrw nbw m inbw-ḥd</i>	T	66	Ramose	55	Festival conductor of all the gods in Memphis
<i>sšm ḥb n ntrw nbw iwnw</i>	T	19	Senniferi	99	Festival conductor of all gods of Heliopolis
<i>sšm ḥb n imn-r</i>	T	82	Djehoutyhotep	A16	Festival conductor of Amun Re
<i>sš m.w ḥ</i>	K	14	Djehouty	11	Leader of the palace
<i>sšm ḥn.wt nbt</i>	B	14	Djehouty	11	Controller of every craft
<i>sš n whmw n iwni</i>	A	32	Rekhmire	100	Scribe of the herald of Hermonthis
<i>sš n šnwty pr-3</i>	A	50	Khaemhat	57	Scribe of the granary of the king
<i>sš n s3 nswt</i>	K	69	Amenhotep Huy	40	Scribe of the royal son
<i>sš nswt</i>	K	41	Tjannuni	74	Royal Scribe
	K	62	Meryre II	AN 5	
	K	42	Userhat	56	
	K	28	Kenamun	93	
	K	67	Tutu	AS 8	

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<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>sš nswt m3š</i>	K	50	Khaemhat	57	
	K	78	Amenemope	41	
	K	72	Horemheb	Saq	
	K	59	Huya	AN 1	
	K	36	Thotnefer	80	
<i>sš nswt imy-wrt</i>	K	56	Ahmose	AN 3	True royal scribe
	K	66	Ramose	55	
<i>sš nswt m3^c mry .f</i>	K	41	Tjannuni	74	Royal scribe of the starboard
	K	58	Ay	AS 23	True royal scribe his beloved
	K	72	Horemheb	Saq	
	K	82	Djehoutyhotep	A16	
<i>sš nswt nfrw</i>	M	48	Haremhab	78	Royal scribe of recruits
	M	72	Horemheb	Saq	
<i>sš nswt wdḥw n nb t3wy</i>	K	57	Any	AS 23	Royal scribe of the offering table of the Lord of the Two Lands
	K	78	Amenemope	41	
<i>sš ḥ3yt n nb t3wy</i>	T	57	Any	AS 23	Scribe of the altar of the Lord of the Two Lands
<i>sš n iwni</i>	A	32	Rekhmire	100	District scribe of the district of Armant
<i>sš wdḥw</i>	T	28	Kenamun	93	Scribe of the offering table
<i>sš wdḥw itn n p3 itn m pr itn m 3ḥt-itn</i>	T	57	Any	AS 23	Scribe of the offering table of the Aten for the Aten in the temple of the Aten in Akhet-aten
<i>sš wr n imn</i>	T	74	Neferhotep	49	Great scribe of Amun
<i>sšm-ḥb n imn-r^c</i>	T	82	Djehoutyhotep	A16	Festival director of Amun-Re

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>stp n nswt hnty t3wy r ir shr(w) idbwy</i>	A	72	Horemheb	Saq	Chosen by the king above the Two Lands to carry out the government of the Two Banks
<i>kn n nswt</i>	M	7	Amenhotep	73	Brave warrior of the king
	M	55	Sobekhotep	63	
<i>kn n nb t3wy</i>	M	34	Suemnut	92	Brave warrior of the Lord of the Two Lands
<i>kfw kn</i>	M	24	Amenemhab	85	Brave warrior
<i>kfw kn n nb t3wy</i>	M	24	Amenemhab	85	Brave warrior of the Lord of the Two Lands
<i>kfw kn m s3 nb t3wy</i>	M	24	Amenemhab	85	Brave warrior behind the Lord of the Two Lands
<i>kdn</i>	M	83	Khons	31	Charioteer
<i>kdn n ihw n wsr-m3t-r s3p-n-r</i>	M	83	Khons	31	Charioteer of the stable of User-Maat-re Setep-en-re
<i>t3y-sryt n p3 s3 n m3g3yw h3 n.f itn</i>	M	59	Huya	AN 1	Standard bearer
<i>t3y-sryt n mry-imn</i>	M	52	Nebamun	90	Standard bearer of the ship" beloved of Amun"
<i>t3y-sryt n t3 hnyt</i>	M	41	Tjannuni	74	Standard bearer of the sailors
<i>t3y-sryt n dpt nswt mry-imn</i>	M	52	Nebamun	90	Standard bearer of the ship "Beloved of Amun"
<i>t3y-sryt</i>	M	34	Suemnut	92	Standard bearer
	M	37	Pehsuker	88	
	M	52	Nebamun	90	
<i>t3y-sryt n nb t3wy</i>	M	37	Pesuker	88	Standard bearer of the lord of the Two Lands
<i>t3y-hw</i>	K	37	Pehsuker	88	Fan bearer
<i>t3y-hw hr wnmy</i>	K	28	Kenamun	93	Fan bearer to the right of the

APPENDIX 7: TABLE OF TITLES

<i>Title</i>	<i>Category</i>	<i>Owner number</i>	<i>Owner</i>	<i>Tomb</i>	<i>Title Translation</i>
<i>n nswt</i>					king
	K	56	Ahmose	AN 3	
	K	61	Meryre I	AN 4	
	K	70	Sennedjem	Akh	
	K	72	Horemheb	Saq	
	K	58	Ay	AS 25	
<i>ḳtj</i>	A	32	Rekhmire	100	Vizier
	A	40	Hepu	66	
<i>tp-ḥr n ḳ r dr.f</i>	A	28	Kenamun	93	Master of the entire land
<i>tp n mšꜥ s3w</i>	M	52	Nebamun	90	Chief of numerous troops
<i>tsw ḥꜥw nw šmꜥw mḥw</i>	M	52	Nebamun	90	Commander of the fleet of Upper and Lower Egypt
<i>tsw n mnnw w 3bw</i>	F	32	Rekhmire	100	Commander of the fortress of Elephantine
<i>tkn m ḥꜥw ntr</i>	F	7	Amenhotep	73	One who approached the divine limbs
<i>dsrw mꜥh</i>		41	Tjannuni	74	

APPENDIX 8: CASPIAN HORSES

In 1965 Louise Firouz found small horses in the Elburz mountains around Kermanshah south of the Caspian Sea which she named “Caspians.” They were small and exhibited characteristics similar to those of Arabian horses with large protruding eyes, a prominent jaw, large nostrils, a small fine muzzle, a dished head, high set tail and slender legs.¹²²² Many of these features can also be seen in the faunal remains and the iconography of the ancient Egyptian horse and indeed in the modern Arab breed.

Many claims have been made concerning the Caspian horse suggesting that it is the ancestor of the Arabian¹²²³ and the “oldest breed of horse in the world still in existence.”¹²²⁴

In 1949 remains of a small horse were found in a cave at Behistun in Iran that C. Coon dated to 3400 BCE¹²²⁵ and based on iconographic material it is believed to be the same animal depicted in Persian reliefs, statuettes and writings. Small horses are featured on the seal of King Darius the Great and many other artefacts¹²²⁶ and they can be continuously identified in these sources to 637 CE when the Sasanids were overrun by Islamic forces. This may have been the time when they came into Arab possession. This animal has been suggested as an example of the Caspian horse.

¹²²² “History of the Caspian Horse”: The Caspian Society of the Americas. 7. <https://www.caspian.org/about-caspians/caspian-history.asp> accessed 14/7/2015

¹²²³ “History of the Caspian Horse”: The Caspian Society of the Americas. 5. <https://www.caspian.org/about-caspians/caspian-history.asp> accessed 14/7/2015

¹²²⁴ “Oldest remains of Caspian Horse discovered in North of Iran,” (2011) *The Circle of Ancient Iranian Studies* 29/4/2011 <http://www.cais-soas.com/news/2011/april2011/29-04.htm> accessed 18/7/2015.

¹²²⁵ C. Coon (1951) *Cave Excavations in Iran 1949*, Museum Monographs, Philadelphia, 42.

¹²²⁶ “History of the Caspian Horse”: The Caspian Society of the Americas. 6. <https://www.caspian.org/about-caspians/caspian-history.asp> accessed 14/7/2015

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Genetic and blood analysis suggests that they could be the ancestors of all other oriental type breeds of horse¹²²⁷ as well as “having a distinct link with the Arab horse.”¹²²⁸

A cytogenetic study carried out in 1979¹²²⁹ stated that, “The Caspian pony could be the outcome of natural hybridization between *E. caballus* and *E. przewalski*.”¹²³⁰ More recent studies however have concluded that, “The Przewalski’s horse (*E. przewalski*) is not ancestral to domestic horses.”¹²³¹ In their study Jansen et al. found that the Arab horse has little phenotypical similarity with North African and Iberian horses¹²³² and “that horses were domesticated from several wild populations.” This has been confirmed even more recently by L. Orlando et al.¹²³³ who after sequencing the genomes of Arabian, Icelandic, Norwegian fjord, Standardbred and Thoroughbred horses and a modern Przewalski horse found “no evidence for admixture between the Przewalski’s horse and the individual horse breeds investigated.”¹²³⁴ The Caspian therefore would not have *E. przewalski* as its progenitor and it has a common ancestry with all other domestic horses. The domestication of the horse can be traced through the Transcaucasus into northern Iran and thence into Egypt (see Chapter 2). Thus it may be suggested that the Caspian or its ancestor could have contributed to the ancient Egyptian horse and possibly also to the Arab breed. The DNA of the Caspian and that of the modern Arab are the same and so must the ancient Egyptian horse have been—they are the same species. The Caspians appear to be an outlying population¹²³⁵ based on natural selection, their form probably determined by environmental factors. They are possibly an isolated breeding population that has undergone either natural selection or selection by humans. The similarity in the Caspian, the Arab and the ancient Egyptian

¹²²⁷ E. G. Cothran (1990) *Animal Genetics*. Dissertation. Texas A & M University.

¹²²⁸ “History of the Caspian Horse”: The Caspian Society of the Americas, 7. <https://www.caspian.org/about-caspian/caspian-history.asp> accessed 14/7/2015

¹²²⁹ H. Hatami-Monazah & R. Pandit (1979) “A cytogenetic study of the Caspian pony,” *Journal of Reproduction and Fertility* 57 (1979) 331-333.

¹²³⁰ H. Hatami-Monazah & R. Pandit (1979) “A cytogenetic study of the Caspian pony,” *Journal of Reproduction and Fertility* 57 (1979) 331-333.

¹²³¹ T. Jansen, P. Forster, M. Levine (et al.) (2002) *Mitochondrial DNA and the Origins of the Domestic Horse*. Proceedings of the National Academy of Sciences 99/16 (2002) 10905-10910.

¹²³² T. Jansen, P. Forster, M. Levine (et al.) (2002) “Mitochondrial DNA and the Origins of the Domestic Horse.” *Proceedings of the National Academy of Sciences* 99/16 (2002) 10909.

¹²³³ L. Orlando et. al. (2013) “Recalibrating Equus evolution using the genome sequence of an early Middle Pleistocene horse,” *Nature* 499 (2013) 74-81.

¹²³⁴ L. Orlando et. al. (2013) “Recalibrating Equus evolution using the genome sequence of an early Middle Pleistocene horse,” *Nature* 499 (2013) 76.

¹²³⁵ In genetic and probably geographical terms as well.

APPENDIX 8: CASPIAN HORSES

horse is most likely a mixture of DNA, anatomical and morphological features combined with some variations in the last two to make them viable in their respective environments- that is-divergent populations of the same species.¹²³⁶

¹²³⁶ Dr. Peter Cooke- geneticist. Personal Communication July 18 2015.

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