

TRANSPORTATION IN MIDDLE BRONZE PERIODS

It was not until man had learned to trade peacefully with his neighbours that he undertook long journeys along well-defined routes.

Once animals had been domesticated, he began using them for loads and for riding. Although there is evidence that the domestication of animals at Jericho had taken place as early as 5000 B. C., yet it is impossible to tell how long it was before their potentiality as bearers of burdens was grasped.

Section I — Animals

The Ass

Asses had almost certainly been used as pack-animals in Egypt and Mesopotamia before 3000 B. C., and were doubtless ridden as well. An Egyptian relief from Beni-Hassan tombs¹ cir. 1900 B. C. depicts the arrival of the Canaanites with the pack-asses laden with children and many other burdens. Throughout the Bronze Age in the Orient, and down to the present day, donkeys were regularly used as pack-animals and to carry riders.

The Ox

Though oxen were primarily used for pulling the plough and cart, they may be seen bearing packs on their backs in early rock engravings from the Sahara. In Palestine, there is no direct evidence of the use of oxen for transport in the M. B. II Period. But it is very probable that they were so used, as in other contemporary cultures.

In the "Quarry Inscription"² the oxen were mentioned as having been used in dragging stones, and were captured by His Majesty King Ahmose I in his victories among the Fenkhu (F n h w).³

In Palestine animal bones of an ox⁴ were found in rock-cut tomb of Al Jisr. Among the catalogue of ivories found in Al Jisr is a representation of two cow figurines, with hind-quarters missing; others are heads of cow figurines.

¹ Percy E. Newberry, *Beni Hasan, Part I. Tomb 3, Pl. XXXI.*

² *Urk IV, K. Seth 3; cf. Breasted, Ancient Records of Egypt, Vol. 2.*

On the wall of the limestone quarry of "Masaha" just south-east of Cairo. This inscription records the work of Nefeperet, an official of Ahmose I, who in the latter's twenty-second year, took out stone from "Masaha" quarry for the temples of Ptah and Amon. The inscription records the first resumption of building after the Hyksos expulsion.

³ *Fenkhu identified by scholars as the lands of Palestine. See Breasted, Egyptian Ancient Records, Vol. II, P. 13: 31.*

⁴ *Ory, QDAP, Vol. 12, 1946, p. 33. Bones examined by Dr. M. Stekelis.*

⁵ *Ibid. Figs. 82-86.*

The Camel

“The name applied to the two species of the genus *Camelus* of the order *Artiodactyla*. Of the two species ‘*Dromedarius*’ the Arabian Camel, is larger and has only one hump, while the Bactrian Camel ‘*Bactrianus*’, has two. The Bactrian Camel is shorter legged and more ponderous, and grows a long thick winter-coat.”¹

A two-humped camel is depicted on an Egyptian tomb of the First Dynasty cir. 3000 B. C. The Patriarchs had most probably used the Dromedary (Gen. 12: 16, 24; 10, 14). Archaeological evidence for its use may be deduced from the discovery of camel bones found in the Second Semitic levels at Gezer and at Al Jisr.² In Megiddo Tomb 3075 a scarab³ was found; the animal depicted on it would be suggested as a camel.

The Onager

Is the wild ass of Palestine. Scholars, today, for instance Professor Zeuner and Professor Childe, consider it is probable that remains of equids should often be identified as those of onagers. It is possible that the onager was in use in Palestine in the Middle Bronze Age, and a scarab (Pl. XXIII) discovered in Ajjul II Tomb 1165, together with a scarab of Apepa I, in the opinion of Professor Zeuner, represents an onager. (See Pl. XXV).

The Horse

Despite much antiquarian research and ingenious speculations, there remain many unsolved riddles connected with the origin and early history of the horse. “The most complete fossils have been found in America. It appears, however, that the real birthplace of the tribe was in Asia.”⁴

I am not going to trace its history here. But it is to be noted, however, that the horse was preceded by many centuries by the ox and the ass. The horse was most probably domesticated in Central Asia; this may have been accomplished by a people of nomadic herdsmen, to whom the convenience of riding would be obvious. Sooner or later the mounted nomad came to realise the measure of his advantage over the man who travelled and fought afoot, and was encouraged to wander further afield, conquering as he went.

In any case the horse (either as a charger or yoked to a chariot) became in early times an important factor in war. The use of horses for the workaday purposes of transport and tillage is probably comparatively a modern development.

When was the horse used in Palestine? This is the question that concerns us now. No literary evidence at all in Palestine or elsewhere has been found directly or indirectly to show that the horse was in use in Palestine before the Eighteenth Dynasty of Egypt.

¹ *Encyclopedia Britannica*, 14th edition.

² Ory, *QDAP*, Vol. 12, 1946, p. 33. “In a rockcut tomb, remains of animal bones were preserved, they represent ox, camel, and cheep”.

³ Loud, *Megiddo LL*, Pl. 150: 16.

⁴ *Encyclopedia Britannica*, 14th edition.

The generally accepted idea that the horse was used by the Hyksos, and was introduced together with the chariot to Egypt, was based on no archaeological or literary evidence. Neither Palestine nor Egypt has seen the horse harnessed to a chariot before the XVIIth Dynasty.

A. Ajjul horse burials

As to the archaeological evidence, to show that the horse was in use in the Middle Bronze Age II in Palestine is not easy to prove. The only positive evidence for that are the horse and donkey burials discovered by Petrie in Ajjul (Ancient Gaza). The identification of the animals was made by Petrie, who was not a specialist in this subject, and it is not now possible to check its correctness. He dates them to the Hyksos Period, i. e. MB. II cir. 1750-1550 B. C. On p. I discuss the dating, and show that they must fall in Phase V, i. e. late in the Middle Bronze Age II.

Let us fully examine these horse-burial tombs in Ajjul.

Construction of tombs.

The best example of horse burial¹ is in Tomb 411. Evidently of the same class are the other tombs, 246, 407 and 263. Tombs 210 and 101 are on Plate IX, the views of 210 and 411 are on Plate VIII, and of 263 and 407 on Plate X. Petrie, speaking about the Hyksos period, states in *AG. I*, p. 4, that "The only really distinctive remains of that people are the burials with horses, and pit tombs with oculi." The construction of the tombs is really a new feature that has not been seen in Palestine before, although very many tombs of the period have been excavated. It is, therefore, improbable that the owners of these tombs, or those who had constructed them, were Palestinians of the Middle Bronze Age period. They could have been intruders on the Canaanite citizens at the very end of the Middle Bronze II period and the very beginning of the Late Bronze Age. The type of such tombs has not been traced in Syria or Egypt in that particular period.

Disposition of the bodies. (Plate XXIII)

The practice of burying animals with the dead is not a distinctive feature in these tombs. Ass burials have been noticed in the Ajjul Courtyard Cemetery in Tomb 1417. Gazelles, oxen and sheep have been found in Middle Bronze Age tombs in Palestine, but these of course are provided as food for the dead, while the ass and the horse were most probably eaten at the burial ceremonial activities which may be considered of special significance. It is true that some joints have been removed from the asses or horses (onagers) in these Ajjul burials, and presumably had been eaten at the funeral feast. The placing apart, usually in a central position, of the skeletons of the animals, suggests that their presence in the tombs has a ceremonial significance.

As to the burial custom practiced in these tombs, the bodies were laid at full length, and usually composed regularly, and sometimes the legs were bent as seen in Tomb 407, Plate

¹ *Petrie, AG. I, Plan LVII, Pls. VIII-X. On Plate LIV of AG. I is a pit grave with loculi or alcoves surrounding it, numbered 5, 6 and 7. This may be considered a very close parallel.*

X:3. None of the bodies were contracted as seen in earlier periods, This full length burial practiced in these horse burials was rarely noticed at the beginning of the Middle Bronze II period.

The toggle-pins. (Pl. XXIV)

The toggle-pins found in these tombs were two in number, represented in AG 1 on pl. XXI:93 and 94. They are plain, unheaded and rather short. The first found in Tomb 411, the second in Tomb 263. Although I have never seen any in secure association with the Middle Bronze II period, yet many are found in Late Bronze periods.

In Megiddo¹ strata IX-VIII we may observe the same parallels to those of Ajjul burials. They are clearly represented in **Megiddo II**, Plate 223, nos. 61 and 62 of stratum IX and 68-70 of stratum VIII.

In Ajjul the same type occurs in a Late Bronze I tomb, No. 1055, represented in AG II, Pl. XVIII, no. 212. A base-ring juglet, type 89j, has been found with the toggle-pin inside the tomb.

Tell Duwier² (Lachish II) has produced other exact parallels in the Fosse Tmeple, Structure I, which are shown on Pl. XXVII 50-53. In particular no. 52 is an exact parallel to that found in horse burial no. 411. The excavators of the Fosse Temple say on page 65 when discussing the toggle-pins, rings and other odd pieces of metal, that "connections from other sites confirm a general period of the XVIIIth Dynasty for the metal."

Miss Olga Tufnell was kind enough to refer me to examples in Lachish IV (forthcoming) of the same type of toggle pins in Late Bronze tombs numbered 121, 532 and 547. They are represented on Plate 24 numbered respectively 23, 31, and 28.

Garstang³ in his excavation at Jericho found in the upper level of Tomb 5, the same types of toggle pins. The tomb had provided a very full series of different objects from early in Middle Bronze II to well into Late Bronze I, and the base-ring bilbil or juglet has been found in Layer D in the same level in which our toggle-pins were found.

Thus we have seen that the toggle pins which had been used to fasten the garments of those buried in the horse burials of Ajjul, nos. 411 and 263, had exact parallels in the Late Bronze I period in tombs found in Ajjul, Megiddo, Duwier and Jericho.

The Scarabs (Pl. XXV)

On the scarabs used by the Middle Bronze II people a very large number of animal designs are depicted, and different dieties, different kinds of plants in addition to very common concentric, circular and scroll designs. But whatever the designs on these scarabs, they do not include a representation of the horse, although we see in the later period the horse depicted on the scarabs with great delicacy and artistry.

¹ *Loud, Megiddo II.*

² *Harding, Inge, and Tufnell.*

³ *Garstang, AAA XX, p. 35, Fig. 10, two numbered 5 & 6.*

It is obvious that the animal depicted in scarab no. 96 found in horse burial no. 263 is surely not a horse. The legs, head and back show that it is of a feline family, (e. g. leopard or chester).

Tomb 101 contained a variety of animals buried within it (gazelle, ox, donkey and probably, as Petrie says, a horse.) Why was the horse not depicted instead of the lion on scarab 84 if it had already been introduced?

To scarab 105 of Tomb 411 and 85 of Tomb 101 I could not find any parallel in any of the Palestinian Middle Bronze II sites, nor in any of the Egyptian Middle Kingdom sites. Scarab 103 of Tomb 407 has a very near parallel to that of Beth Pelet I Tomb 570, the pottery suggests that it is Late Middle Bronze II. Scarab no. 84 of Tomb 101 has a mythological representation of a lion with a head of a man; this had near parallels but none exact. Scarab no. 97 of Tomb 263 and 91 of Tomb 246 has pseudo-hieroglyphic characters.

In short, the scarbs found inside these tombs are not of the general Middle Bronze II types, and have no horse representation on them at all.

The pottery offerings. (Pls. XXIV & XXV)

A glance at the pottery found in these tombs may give the idea that it is not a Middle Bronze II productoin, and, if anything, they form a phase in themselves on our pottery-chart (see ADAJ IV) It does not belong to the homogeneous pottery types found about 1800-1600 B. C. But if one examines the pottery objects thoroughly, he may be inclined to date them (although no clear-cut distinctive change in pottery could be recognized) to the very end of Middle Bronze II and the very Early Late Bronze I period. No. 89 A Pl. IX has exact parallel in Megiddo tomb 18, Pl. 38:6; another close parallel is in Megiddo II stratum IX, T. 3017 pl. 51:5. Jug 35 P 6 on Pl. IX has close parallel to Megiddo tombs 877 C 1 Pl. 14:18 and 855 Pl. 44:1; both dated Late Bronze. Very few objects appear in Phase IV of our chart in (ADAJ IV)

Other Objects

Generally speaking, most of the Middle Bronze II tombs in Palestine had in them some of the following objects: ivories, bone inlays, alabaster, and faience. But this should not mean that if none has been found, the tomb is not a Middle Bronze II tomb. But the absence of all of these types of objects from all the horse burials and the previous facts added to the unique character of tomb construction should mean that the tombs are those of a group separate from those of the majority of Middle Bronze II burials in Palestine.

Lack of weapons.

It has been generally accepted that the Hyksos rulers introduced the horse to Palestine and Egypt, and that they were great warriors. If these horse burial owners were warriors in the real sense of the word, where are their weapons? We have not observed a single weapon in these tombs. Yet we noticed that many of the Middle Bronze II tombs which had no horse in them, have weapons of different types. Therefore the absence of weapons from the tombs increases our doubts, and favours my belief that these tombs were not those of Middle Bronze II warriors.

Conclusion

Even if we assume that these burials are "horse-burials" and the identification of the animal remains discloses the horse (though not all are horses as stated by Petrie), there is still no evidence to suggest that the tombs belong to the period before 1600 B. C.

B. Other animal burials. (Pl. XXIII)

The only donkey or horse (?) burial found was also dug by Petrie in Ajjul.¹ But the type of this burial differs from the above-mentioned one, in construction, in the disposition of the body, and in the contents found in the tomb. The burial place was a circular pit dug into the gebel, composing of two large semi-circular loculi, 1467 and 1702, and two burials, 1474 and 1476 appeared in the body of the pit.

Petrie on page 15 states that "burial 1476 though recorded as a separate tomb group, was possibly part of the burial 1702, as it included no bones, and was set in the mouth of the second loculus." The second burial 1474 appeared in the body of the pit and is said to contain imperfect remains of a horse skeleton. And assuming the burial was a horse burial, neither a possible donkey nor a probable onager; what other contents were found?

In the register of finds in AG. IV, Plate LXVI, the following objects were noted: 6 K 1, 18j14, 23j14, 23E6, 35P6N, 43A6, 51D, 51D2, 51G12, 51D3. It is surprising to note the absence of weapons, toggle-pins, cylindrical juglets, lamps, ivories, faeinces, and the common Middle Bronze II pottery types. I think a glance at the drawings will allow us to conclude unhesitatingly that the objects belong to the very end of the Middle Bronze II, and the very beginning of the Late Bronze I period; anyhow a period later than 1600 B. C. as the other horse burials have shown.

C. Ajjul horse remains.

Petrie in AG. II, page 14, states that "the founding of the later Hyksos Palace IV was signalized by digging a Pit in the walls of Palace III (XLVIII). In this pit a horse was thrown after removal of the shouldrs for eating, and the left thigh. On the new ground level, about 1060, there was the scattered bones of two other horses which had been eaten. Such a sacrifice would be impossible to Egyptians, and stamps this as the Hyksos level." Professor Albright dated Palace II according to scarabs, pottery and other finds to about 1550 B. C. at the earliest, and speaks of Palaces III-V as being clearly Egyptian fortresses, to which I agree.

D. Other evidence.

Archaeologists have found some other odd bits and pieces of evidence than the above-mentioned horse burials and horse remains, in different Palestinian sites. It is very necessary to examine these remains, and to consider what they really are, and to what period they belong.

¹ Petrie, AG. IV, pp. 15-16 *TCH Pit*.

(1) **Horses' Heads figurines:-**

a) Petrie in *AG. I*, page 2, states that "at the base of Plate XXIV is a rude head pottery, an elementary head of limestone, and a horse's head and neck of brown pottery, showing the kind of mane of the Hyksos horses." The photograph published is not sufficiently clear for details to be certainly identified, but the appearance might suggest an erect mane, which is a characteristic of the onager. Petrie ascribes the period to the Hyksos levels, but as the provenance is not stated, the period cannot be checked by the associated finds.

b) Ory found in El Jisr¹ in the Wadi-Rubin, 14 km. south of Jaffa in 1940 a Middle Bronze rock-cut tomb. Among the catalogue of ivory finds represented on Plate XIV are fragments 81 and 82. I quote his description of them: "81 Figurine of horse (?). Hind-quarters missing as well as forelegs. Mare marked by band decorated with alternate vertical and horizontal strokes in header-stretcher form. The curved line dividing the head from neck is also decorated with parallel strokes". And no. 82, "probably figurine of horse". The question-mark for 81 suggests that Ory was uncertain of the identification, and I would agree to these uncertainties.

(2) **Scarabs:-**

Jericho tomb 5² had produced an ivory or bone rectangular hemi-cylindrical seal depicting a horse and a rider. Though Garstang states that the date is uncertain, I would mention that the type is not a Middle Bronze type, for a comparison of this seal and the scarabs of Tomb 4 nos. 7 and 9, Tomb 5, nos. 1, 2, 5 and 9 with the other scarabs on the same plate shows this group to be of a different style. Miss Tufnell would date them to the XVIII — XIVth Dynasties, and they would therefore belong to the re-use of the tomb, which Dr. Kenyon suggests was in the fourteenth century.

Petrie³ found in Ajjul Tomb 1165 a scarab of Apepa among other scarabs (Pl. XXV) Dr. Kenyon and I inclined to identify the animal depicted in it as a donkey. It looked to me as the modern Cypriote donkey used nowadays in Palestine, and I doubted the design to be a horse, but I am greatly indebted to Professor Zeuner⁴ who helped in the following identification. "This picture could admittedly represent a horse, but it equally could be a donkey or an onager (wild ass of Palestine). There is no anatomical evidence to recognize which of the three species is meant. An argument against this being a horse is, however, that it is shown without the usual chariot or rider, which are so typical of the scarabs of the later period. If the beast is meant to be a wild one, which is possible in view of the vegetation indicated above it, it should be regarded as an onager, a native of Palestine, but not of Egypt. If one takes the size of the ears seriously, they are too large for a horse, and too small for a donkey. This again would confirm the determination as an onager. The eye is most certainly displaced, as a result of poor craftsmanship. The muscular hindquarters also suggest the onager. On early pictures of the horse it is usually shown in movement."

¹ Ory, *Q. D. A. P.* vol. 12, 1946, p. 39.

² Garstang, *AAA*, XX, 1932-33.

³ Petrie, *AG. II*, Pl. VII, no. 76.

⁴ F. E. Zeuner, Head of the Department of Environmental Archaeology in the Institute of Archaeology, London University.

The Late Bronze scarabs found in Palestine show this last characteristic feature. But it must be admitted, however, that evidence of how the horse was represented at earlier or later periods is no conclusive for its treatment in the Middle Bronze Age, a period in which I believe there to be no certain evidence for its presence.

In comparing this onager scarab of Apepa I with the other horse scarabs found in Palestine, and Egypt of the Late Bronze period (XVIIIth — XIXth Dynasties) there should remain no doubt that the difference between the Middle Bronze II Onager of Apepa I and the horses of the latter periods is very clearly noticed in the drawings on the scarabs concerned.

This onager may be a successor of the tribe known to the Sumerians not later than the middle of the Third Millennium B. C.¹ The onager does not exist any more in Palestine, but in the last century it was actually seen in Iraq by Layard and by Carl Roswan in the Jebal Sinjar.

(3) **Ajjul horse-bits** (Model chariot wheels?). (Pl. XXV)

In AG. III: 35 Petrie describes two small bronze objects as follows: "two wheels, found near together = 1070 of Late Hyksos Age, on the outer face there are four projections toward off attackers, and the inner side has a deep hub to allow of the chariot side projecting or possibly they were cheek pieces of a horse-bit." The presence of the bichrome painted pottery, which is characterized by friezes divided into panels like architectural metopes, ornamented with birds, fishes, and stereotyped geometric patterns, i. e. the so-called "Union Jack" in the level are enough evidence to date the level to the Late Bronze Period in addition to the other metal, ivory, bone inlays and scarabs) which are all of the Late Bronze types. Childe² dates the same horse-bits with cheek pieces to about 1500 B. C.

Petrie publishes also another horse-bit with circular cheek pieces, from level T. 830, AG. IV. Pl. XXXV, photograph Pl. XXII. This level,³ too, has the painted bichrome pottery described above, which dates the level back to the Late Bronze period. The same period could be given to the other objects found with the horse-bits.

Conclusion.

We have seen above that the archaeological evidence found in Palestine in the Middle Bronze II period relating to the use of horses completely inconclusive. The evidence for horse remains is all from place only, i. e. Ajjul (Ancient Gaza) found by Petrie.

The animal skeletal remains found in the tomb burials may be those of horses, onagers or donkeys, and cannot be proved to have belonged to the Middle Bronze II period, that is to say, to a period before 1600 B. C. The other skeletal remains found in the city levels, with the hind parts partly eaten, and one leg left (a feature noticed in the skeletal remains

¹ *Mallowan, Iraq, Vol. X, 1948; C. L. Woolley, Ur Excavations, II; L.C. Watelin, Excavations at kish IV.*

² *A History of Technology, Childe, P. 722, Fig. 521.*

³ *See Albright. The American Journal of Semitic Languages and Literature, vol. LV, 1938, no. 4, "The Chronology of a South Palestinian City, Tell el Ajjul,"*

of those found in the burial tombs), and the horse bits (or model wheel chariots) are to be dated by the pottery contents, and scarabs found in the same level to the Late Bronze period, i. e. a period later than 1550 B. C.

It is obvious that we do not have any literary evidence in Palestine or elsewhere to show that the horse was in use in Palestine and Egypt¹ before the XVIIIth Dynasty period.

What other archaeological evidence than that mentioned above, had archaeologists to establish an unsound theory, which has been generally accepted, to postulate the Middle Bronze II people, i. e. the so-called Hyksos, as the introducers of the horse to Egypt?

Indeed, so far as we know, there is no evidence for the presence of the horse in Egypt itself before the XVIIIth Dynasty.

Sederbergh states that "not a single buried horse nor even a bone of a horse has been found in any of the numerous tombs from the Hyksos period in Egypt, and there is not a single picture of a horse despite the fact that all sorts of different animals are depicted on the scarabs of this time. In the hunting-scenes the hunter is depicted on foot. Thus everything in the evidence seems to demonstrate that the Hyksos never used this war technique until possibly in the last struggle against the Egyptians before they were expelled from the country."²

Therefore, the only proved means of transportation used by the Middle Bronze II people in Palestine were the ass, ox, onager, and perhaps the camel. They knew the horse and used it with the chariot, and alone in the Late Bronze Age.

Section II

Chariots.

Transport was revolutionized by the application of the wheel, very soon after if not about the same time, as the transformation of ceramic industry by the potters' wheel, and owing to the prestige soon acquired by wheeled vehicles, they were often buried in royal tombs in Mesopotamian, where a few have survived intact or left very complete impressions in the soil. In Europe at a later period they were deposited as votive offerings in bogs, which have preserved the wood. These carts were often faithfully represented in art or in clay models manufactured as toys or votive offerings.

Several royal tombs³ at Kish and Ur of between 3000 and 2000 B. C. contain actual

¹ I have consulted Miss Drawer, Lecturer of Ancient History in London University, and I. E. S. Edwards of the Egyptian Section of the British Museum, and both confirmed the absence of the literary evidence in Egypt before the XVIIIth Dynasty.

² Soderbergh, E. J. A. vol. 37-38, p. 60.

³ **History of Technology**, Childe, p. 205; **Ur Excavations II**, C. L. Woolley, Plate 92 "Royal Cemetery" with little scenes on the inlaid standard with cab chariots depicted there. See also **Kish, A Cemetery mound yielded an important series of chariot models**. See E. Mackay, **op. cit.** pp. 209-212, and Pl. XLVI. of cf. **Nuzi II**, R. F. Starr, Pl. 54, clay models of chariot-cabs discovered on the site.

vehicles, while numerous works of art from these and other Mesopotamian cities, and clay models found not only in Mesopotamia, but in Assyria, North-Syria and other places provide relatively detailed information on the structure of carts and wagons as well as evidence for their use.

Professor Gordon Childe states that "as early as 3000 B. C. vehicles drawn by onagers had been used in Mesopotamia for passenger transport, and as engines of war. Both two- and four-wheeled vehicles are depicted, but the former are the better known and eventually replaced the less manoeuvrable four-wheelers."¹ "Not until the second millennium B. C." states Professor Mallowan did the chariot become a really effective armament which could be used to turn the tide of battle."²

Anyhow, the details of the origin of the new means of communication and offence have still many points of uncertainties even if it be admitted) that the substitution of the horse (instead of the onager) as a draught-animal and invention of the spoked (for solid) wheels are connected.

In Syria the chariot was known at the time of Iasmah-Addu c. 1800 B. C. who was contemporary with the Hammurabi of Babylon. The evidence for this has been found in the **Mair-Letters**.³ These letters show clearly that the citizens and the rulers of Qatna had used the "Narkabat" chariot. It seems therefore reasonable to suggest that it was from Syria that the chariot was introduced through Palestine to Egypt. The Letters show also that they were something very expensive and dear.

The word "Narkabat" mentioned in these Letters was most probably imported to Egypt, and was borrowed by the Egyptians during the Hyksos period. If it was not the North Syrians of Qatna (although I think it was) who exported the chariot and its name, it should have been the intermediaries who are the Palestinian Canaanites in that case who gave the name to the Egyptians. Speiser says "it is not surprising to discover in the Egyptian terms for horse, parts of the chariot, reins, etc. evident Canaanite loan-words. Of these two words for the chariot itself, one is the good semitic name "m r k b t"; the other one is "W r r j t", for which there is no satisfactory Egyptian etymology, and it is highly probable that the name is a borrowing like the rest."⁴

¹ Childe, **History of Technology**, p. 725. *Contra Op. to Sir Leonard Wolley and others who identified onagers as horses.*

² **Iraq**, vol. X, 1948, Mallowan. "A copper rein-ring from Southern Iraq" pp. 51-55, especially p. 53-54.

³ **Archives Royales de Mair**, vol. I: 50.12; II: 123. 10-22; IV: 38.11; V: 20. 7-18 and VI: 76-22. Cf. **Iraq**, VII, (1940) Gadd "Tablets from Chagar Bazar and Tell Brak", f. 23, where he states that Iasmah-Addu kept teams of horses at Chagar Bazar, which he perhaps used as a relay station. See also Mallowan, **Iraq IX**, f. 215 for Syrian models of horses and chariots c. 2000 B. C. and earlier.

⁴ **AASOR XIII**, pp. 49-50.

The earliest evidence in Egypt was found on "the Carnarvon Tablet"¹ describing the defeat of the Hyksos by Kamose, who was probably the immediate predecessor of Ahmose I. Another inscription² containing the biography of an officer called Ahmose son of Ebana; a nobleman of El Kab³, who served with distinction under three successive kings — Ahmose I, Anehotep I and Thutmose I. This officer, referring to his younger days states "I followed the king on foot, when he rode abroad his chariot." This chariot may have been the only chariot in Egypt which has been used by the king alone." When he describes the Asiatic campaigns of Thutmose I, when he would have been a grown man, he says "His Majesty arrived at Naharin (N-h-ry-n) His Majesty found the foe he was (planning) destruction; His Majesty made a great slaughter among them. Numberless were the living prisoners, which His Majesty brought off from his victories. Meanwhile I was at the head of our troops, and His Majesty behold my bravery. I brought off a chariot, its horses and who was upon it as a living prisoner, and took them to His Majesty. One presented me with gold in double measure."

This shows obviously that chariotry was in the time of Thutmose I used in war in Naharin of Syria, and Ahmose Pen-Nekhbet, who was also taking part in the campaigns of Nubia and Naharin together with Ahmose son of Ebana mentions also that "again I served for King Okheperkere (Thutmose I) triumphant; I captured for him in the country of Naharin (N-h-ry-n) 21 hands, one horse, and one chariot." Here also one may deduce that chariotry was known, then, as a vehicle of war. The above mentioned inscriptions found in Egypt dated to the very beginning of the XVIIIth Dynasty show clearly when the horse and the chariot were known to the Egyptians.

In conclusion, no literary evidence has been found to show that chariots were in use in Palestine in the Middle Bronze II period, i. e. earlier than the XVIIth Dynasty period. Therefore we may consider the North Syrians (as available evidence shown) to be responsible for the introduction of the horse and the chariot to Palestine, and through it to Egypt. This shows that there is no Aryan element among the citizens of the Middle Bronze II period in Palestine and Egypt. It has always been assumed that the Hyksos invaded Egypt so easily because they used drawn chariots, a war technique said to be Aryan. Though it is enough to point out here that "the horse was known in Mesopotamia long before we find any traces of Indo-Iranians."⁴

¹ *The Carnarvon Tablet no. 1 belongs to a pair of hieratic writing boards found among loose debris of pottery and fragmentary mummies on a ledge near the entrance to a plundered tomb in the Bahari, not far from the mouth of the Dier El Bahari Valley. For details see J. E. A., vol. 3, pp. 111-107 "The defeat of the Hyksos King Kamose." The Carnarvon Tablets, by Gardiner.*

² *Urk IV, K. Seth 3 ; cf. Breasted, Ancient Records of Egypt, Vol. 2.*

³ *El Kab family were monarchs at El Kab, were strong supporters of the rising XVIIIth Dynasty. The family is far older than the Empire, and already under the XIIIth Dynasty enjoyed the favour of the king, For details see Breasted, Ancient Records of Egypt, vol. 11.*

⁴ *Syria XIX, 125 Horses and chariots in Mari under Zimri-Lim; Mallowan. Iraq, IX, 216; J. E. A. 37-38, 1951-52, p. 59.*

Anyhow, one should admit the fact that Palestine is the only land route between Syria and Egypt through which the chariot can travel. It is true, as I have shown here that no archaeological evidence has been found for horses or chariots in Middle Bronze Age sites in Palestine. But a relatively small area of towns of the period has been excavated.

It is therefore conceivable that future digging may produce evidence in support of the prevalent unwarranted belief that horses and chariots were already used in Palestine and Egypt as early as the Hyksos period.

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