THE HORSE IN WEST AFRICAN HISTORY

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When the Europeans sailed around the coast of Western Africa and arrived at Benin, they found that the king and important personages of that state possessed horses.[1] The Yoruba speaking peoples with whom some traditions link the Benin state are also familiar with the horse, which features prominently in their sculpture. The Yoruba live partly within the forest which fringes the Guinea coast and partly in the grasslands to the north of it. With the exception of the Yoruba and Benin areas, the horse appears to have been absent from the forested region but to have been important in every African state in the Sudanic belt.

It is as true of Africa as elsewhere that, as G.G. Simpson (1961 : 35) observes: « The most obvious influence of horses on history has been in warfare. Horses have been involved in almost every war since war began, and they made possible most of the great conquests before the machine age ».

The horse was never a beast of burden in traditional African cultures. That role was relegated to the cousin of the horse, the ass, or to other animals (usually camels or cattle, depending on the region). The horse was reserved exclusively for a military role, or for the closely related task of serving as a riding mount for the ruling and/or warrior class. We cannot here take time to review the evidence for the place of the horse in each state history, but

will mention one as an example. Ndewuura Jakpa, the founder of the Gonja state, had the title, or praise-name, of *Gbanga* "stallion". The one-time capital of the state is under the authority of an official known as the Gbangawuura, or "the owner of the horse". These titles symbolize the dependence of the rulers on their horses. Jack Goody (1964 : 199) informs us that:

> The association of the Gonja with horses is still very strong. Although there are not many of these animals in Gonja at present, they are important to the ruling class in several ways. As in many parts of the savannah region, chiefs are expected to ride on horseback; in war they acted as cavalry, armed with swords and iron spears.

The advantage that accrued to the warrior on horseback over one on foot was crucial. David Tait (1961) asserts that the Konkomba were a match for the Dagomba in fights which occurred in a village when both were on foot, but the Dagomba had for generations dominated the Konkomba because the latter were without horses.

The horse, I think we can say, is one element in a complex of traits which is associated with state-building in the grasslands of Western Africa. It might even be an index of actual or recent authority or of past glories. For this reason, it seemed to me that a special study of the horse should yield a better understanding of the peoples who have associated with that animal. If we can establish the approximate date at which the association between horses and men was established in West Africa and the phases which this relationship went through, we would have at least an outline for a history of the domesticated horse in the region and its effect on society.

In what follows, which is an introduction to the history of the horse in West Africa, we will be concerned with four facts and their implications. First, the horse is not indigenous to West Africa. Second, its early history in North Africa and the Sahara is associated with the chariot. Third, in later times, as already noted, the horse is a military and/or prestigious riding animal. Finally, there are three zoological varieties of the species, *Equus caballus* or horse, in western Africa. We will consider these in the order given above.

The Horse: Its Domestication and Later Distribution

The fossil record of the evolution of the horse has been extensively studied by paleontologists. It has in fact been a favorite example used by biologists in the discussion of evolution. It once roamed the American plains but later became extinct there along with some other species. It survived and throve in the Central Asian Steppes. Other species of the same genus, *Equus asinus*, the ass, and *Equus zebra*, the zebra (as well as *E. quagga* and *E. grévyi*, also "zebras"), penetrated Africa, but the horse is generally considered not to have reached this continent in the wild state. There are, we might note, no wild horses anywhere in Africa, but tarpans, or wild horses of an ancient European strain, persisted in Europe until about the end of the nineteenth century in eastern Russia and were common in the "wilder parts of central Europe" in the Middle Ages (Simpson 1961 : 21). It is generally believed, although there is some question, that the wild horses of central Asia, known as Przeval'skij's horse, still survives. The survival of wild horses in Europe and in Asia during so many centuries after domestication of some members of the species permits one to argue that, had wild horses reached Africa, there would have been some of them still at large in historic times. It is not easy to eliminate such a species even if it is the object of determined hunters. Simpson, in discussing the extinction of horses from the Pleistocene plains of the Americas, writes:

> Did man kill off the horses? It is now clear that wild horses survived in both North and South America when the earliest Indians reached these lands, perhaps ten thousand years ago. These Indians probably killed horses for food — but in North America they certainly killed large numbers of bisons, and bison did not become extinct. If horses were already on the wane, the herds becoming few and weak, then persecution by man might have provided the finishing touch. It is, however, almost inconceivable that the Indians alone put an end to the whole vast horse population of the late Pleistocene over so enormous an area (Simpson 1961 : 199-200; cfr. also Simpson 1949 : 209).

Simpson (1961 : 198) thinks that this disappearance of a species is « one of the most mysterious episodes in natural history ». He considers that despite lack of evidence, « disease cannot be

ruled out as the possible cause, or as a contributing cause » (1961 : 199). The usual cause for the extinction of a species in a region is ecological or climatic change; anythings else calls for special explanation. Thus, we can postulate that there never were wild horses in West Africa. Since « fossil mammals are... poorly known in that continent » (1961 : 186), it is possible that some might be discovered in the future, but the chances are against it on the ground just mentioned. At any rate suggestions that wild horses once roamed any part of Africa have referred only to North Africa.

In North Africa, fossil horses have been reported by C. Arambourg (1949), who named them *Equus numidicus*. In addition to this, Raymond Furon (1959 : 374) mentions *Equus mauritanicus* Pomel, which may be a related type or perhaps even the same (if nomenclature is not standardized). Simpson also apparently considered that wild horses may have been in this area, for he wrote that the idea of domesticating horses, once formed, spread rapidly and soon « domestication was going on wherever men and wild horses were in contact. This was an enormous area, including most of Europe, a broad strip across central Asia to the edge of China, and probably also a part of Africa » (1961 : 33). This opinion is probably not based on the fossils just mentioned, because Simpson was writing his book (*vide* preface and 1949 : 135 fn. 2) while Arambourg was unearthing the fossil. It seems to be based on evidence (source unquoted) of some horses coming into Egypt from Libya (Simpson 1961 : 45).

Unless the date of fossil horses can be definitely fixed as too early to have been domesticated, it may be that the bones do not represent wild horses and that consequently all horses entered the continent in the domesticated state. This would then make it unnecessary to have to try to explain why a wild grazing animal, such as the horse, did not cross the fertile region that the Sahara then was. That wild horses ever existed in North Africa is, I think, as unlikely as that they existed in West Africa. Horses appear in the rock art not in the early period of wild animals like the *bubalus* and giraffe but subsequent to the domesticated cattle and in association with men.

If we dismiss then from our consideration here the slight possibility (which few Africanists seem to have been aware of) that some horses were domesticated in North Africa, we shall have to look outside for the source of the African breeds of tamed

horses. Ralph Linton, who was rather fascinated by the horse, wrote:

> Horses are generally believed to have been domesticated somewhere in Central Asia rather than in Mongolia, since the wild ancestor of all present domestic breeds seems to have been the Tarpan, a Central Asiatic rather than Mongolian species [*sic.* The difference between the tarpan and the Prževal'skij is subspecific, not specific.] (1957 : 271):

Geoffrey Bibby would localize the domestication as having taken place just north of the Caucasus mountains and the Black Sea (1962 : 62). In any event, the occurrence is taken to be the result of the stimulus upon hunters of the idea of animal husbandry already practiced by their southern neighbors on sheep, goats, cattle, and pigs. As Bibby (ibid.) puts it:

> When the idea was brought... to the hunters of the grasslands, it was seized upon avidly. Cattle were rounded up in large numbers, but not only cattle. The horse, too, a beast unknown in Mesopotamia, was domesticated, at first solely for the sake of its meat and milk.

Since the steppe peoples also kept the animals archaeologically known to have been domesticated by the neolithic peoples south of the Caucasus, this reasoning seems acceptable, but how soon or how long after the domestication of other animals is not certain. Simpson (1961 : 32) notes:

> The first men to tame horses and to raise them in domestication could not write and were probably nomads who left little record of their lives and customs. There is no record of this extremely important event, but from indirect evidence we do have a rough idea when and where it occurred.

When the new animal that was now available for the use of man was introduced to the more advanced and settled peoples to the south, the horse comes into the written records of history and to a region much better explored archaeologically. According to Professor Piggott (1965 : 141), « the Sumerians... by 2000 B.C.... were beginning to know of a novel animal — an "ass from foreign parts" as the original name goes — "a fast horse, with a waving tail" as a hymn of this date describes him ». Both asses and onagers, *Equus hemionus*, often called the Asiatic wild ass (because it has not been maintained in domestication) were known in southwestern

Asia, later than cattle but before the horse. Representations of the onager, if crude or stylized, would be difficult to distinguish. Sir Leonard Wooley found such pictures and sculptures at Ur. Linton (1957 : 93) apparently took them to be horses and concluded that horses were introduced into the area by 3000 B.C. Carleton Coon decided, that « neither representation is definitive », and so reasoned cautiously:

> If they were asses or onagers, this find reveals a premature and unsuccessful attempt on the part of the Sumerians to use an animal unsuited for warfare... If they were tarpans, it means that the horse had already been domesticated in Iran or central Asia.[2]

There seems to be now a general consensus that the horse became established in the ancient Near East about 2000 B.C. (Simpson 1961 : 34; Piggott 1965 : 110; Downs 1961 : 1196; Coon 1954 : 241).

The next step is well known: the Hyksos brought horses and chariots into Egypt and it is often assumed that the earlier African horses west and south of Egypt were derived thence. Caesar R. Boettger (1958 : 184) declares:

> Das Pferd ist als Haustier wahrscheinlich aus Asien über Ägypten nach Afrika gelangt. Das geschah erst ziemlich spät, denn im Alten und zu Beginn des Mittleren Reiches war das Pferd in Ägypten noch unbekannt, während der Esel bereits zum festen Haustierbestand gehörte.

Bibby (1962 : Ch. IX) places this event about 1700 B.C. This is about the same time that horses began to be used in Greece (Simpson 1961 : 35) and the chariot-driving, bronze-making Shang dynasty arrived in China.[3] Without specifying a date for the Hyksos, Kroeber (1948 : 693) alleges: « The Cretan Minoans took up the chariot in the next century ». By 1000 B.C. horses had become an adjunct of the societies stretching from the Atlantic to the China sea, and the southernmost regions of this territory were India in the east and North Africa in the west (cfr. Simpson 1961 : 35). Since the year 1000 B.C. in the Mediterranean lands is the turning point from the Bronze Age to the Iron Age, we can conclude that it was in the Bronze Age that the spread of horse-using had occurred throughout all of the area (except perhaps West Africa) where it was to be an effective force in human society in the Old World.

Let us now come back to Simpson's observation that the Egyptians received as well as gave horses in their trading exchanges with the Libyans to their west (Simpson 1961 : 45). The two breeds of horses known in North Africa are the Barb (or Barbary horse), presumably descended more or less directly from the famous cavalry mounts of the Numidians, and the Arab (or Arabian horse), introduced into North Africa in the seventh century when Islamic armies swept in on horseback. Subsequently there has been some deliberate mixture of Arab blood to the Barb breed, but the Arabs have been strictly protected from « defilement » of Barb genes. Simpson points out that « most of the horses shown in Egyptian... art do not look like either Barbs or Arabs » (ibidem : 46-47). This need only mean that the respective breeds had not yet been developed. Some authorities believe that both of these breeds were created by selective breeding from a common type, called the oriental horse. Others hold that the ancestries of the breeds are different. As far back as the breeds are known they are quite distinct and have certain features, e.g. the shape of the head, that make them easily distinguishable. Those who hold to the latter view claim that the ancestry of the Barb goes back « perhaps, to a European origin in coarser, less spirited horses, such as are called "cold-blooded" by breeders » (Ibidem : 46). That horses from Europe may have been introduced to Africa west of Egypt is certainly likely, though probably not so early as the arrival of the Hyksos in Egypt. Horse-drawn chariots were in use in most of the Mediterranean lands before the end of the Bronze Age, and there were maritime contacts between the various islands and the northern and southern shores. At any rate, when the Egyptians began to get horses from the west they were of a different type than those which they had. Simpson (1961 : 45) describes them this way:

> Before long the Egyptians were active horse-traders and were involved, both directly and as middlemen, in crossbreeding of the light but rather stocky, usually pale-colored horses from the north with more fleet and slender, usually dark-colored horses. Some, at least, of these seem to have come from the west, that is, from the Libyans or Numidians of North Africa.

The story of the alliance of some Libyans and the « Peoples of the Sea » (who were apparently mainly Europeans) has often been told; we quote here the Steindorff and Seele account (1963 : 252).

> The most important event of the reign of Merenptah was a war with the Libyans which fell in his fifth year (1227 B.C.); it is more significant in that it was the first hostile meeting of the Egyptians with the peoples of Europe. At that period a great migration of races had upset the eastern half of the Mediterranean world. We have already seen how, a century and a half before, the Achaeans had invaded Crete and brought the brilliant Minoan culture to disaster. Now, under Merenptah, perhaps under pressure from the Phrygians and other tribes, a confederation consisting of Akaiwash, Tursha-Tyrsenians, Shekelesh, Lycians, and various others began to move southward across the Mediterranean. The impact of these mighty waves eventually reached the African coast and caught in their vortex the native Berber tribes, the Hamitic Meshwesh (probably the Maxyes of Herodotus) and the light-skinned, blue-eyed Libyans of the Temeh tribes. Both of these races turned eastward toward Egypt and, having formed an alliance with the sea peoples, invaded the Delta under the leadership of a certain Mery. A battle was fought... in which the Egyptians were overwhelmingly victorious, Mery was put to flight, thousands of the invaders were slain, and many more taken prisoner. By this action... the frontiers of Egypt [were] secured for a time.

Thus, sometime between the introduction of the horse to the Mediterranean peoples, circa 1700 B.C., and the great battle described above, 1227 B.C., there were almost without doubt some horses introduced from Europe into North Africa west of Egypt. In other words, nearly two millennia before the highly esteemed Arabian breed was brought to North Africa, the strains which went into the Barb were already present, and these were the horses of the Hyksos, the horses presumably brought in by sea, and just possibly (on Arambourg's fossil find) some older indigenous wild horses.

Libya was on the fringe of the ancient *oikumene,* or the world known to the literate peoples. West Africa was beyond their ken. Their records tell us nothing that help us; our evidence must be indirect. I will anticipate the conclusion of the next section, and assert that horses were at that time, in the second millenium B.C., making the trans-Saharan journey (which then did not involve desert travel) and were becoming established in what was later to be called the Bilad es-Sudan.

The Chariots

The history of the chariot is well established.[4] It developed from a slow cart pulled by oxen, and then by onagers, but only adapted for speed with spoked wheels and a lighter construction when the horse replaced other animals. At this point it became the most effective military equipment of its time. Yet the charioteers never really solved the problem of horse traction. As Linton (1957 : 93) puts it:

> The first pictures of horses in use show a type of harness based on the ox yoke. This arrangement was by no means satisfactory, since the yoke or breast strap interferes with the horse's breathing, but it was not until the Middle Ages that the invention of the horse collar in Northern Europe made possible a really effective use of horse traction.

But by that time traction was only of interest to farmers, and it was in this period and this area that farmers first began to use horses for more menial purposes (Simpson 1961 : 35-36); the military use of horses had by then long been based on mounted cavalry. Charioteers could not stand up to the more manoeuverable cavalry. Knowledge of equestrian techniques became widespread about the seventh century B.C.[5]

Herodotus knew very little about the Garamanteans, and part of what he recorded was misinformation, e.g. that they had oxen which grazed backward, but he did understand from his informants that they were « a very powerful people » (IV, 183). The most quoted passage is: « The Garamanteans have four-horse chariots, in which they chase the cave-dwelling Ethiopians, who of all nations whereof any account has reached our ears are by far the swiftest of foot » (Ibid.). On this one statement we know that a people living apparently in the area we now call the Fezzan used chariots and presumably were slave hunters. The extent of this slave trade must have been minor since Negro slaves in the ancient Mediterranean were a small minority in the servile population.

In the time of Herodotus, *circa* 482-424 B.C., riding had replaced chariots, except for ceremonies and racing, in all of the countries he had visited, including even Scythia. However, there he did hear of chariot-using people beyond the Danube River, and he gives a reason for their backwardness.

> The only people of whom I can hear as dwelling beyond the Ister are the race named Sigynae, who wear, they say, a dress like the Medes, and have horses which are covered entirely with a coat of shaggy hair, five fingers in length. They are a small breed, flat-nosed, and not strong enough to bear men on their back; but when yoked to chariots, they are among the swiftest known, which is the reason why the people of that country use chariots (V, 9).

Why did the Garamanteans use chariots at such a late date? The Barb (or its ancestor, the Numidian horse) would have been available from North Africa, and it is hard to believe that in the Sahara they had only horses too small to ride. One possibility is that his informants repeated to him a tradition about conditions which no longer existed in his time. Since this is one of the times when Herodotus is passing on what he had heard and not what he had himself seen, it is conceivable that the practice of man-hunting by chariot has been abandoned long ago, even centuries before the historian's visit.

On the other hand one might argue that the chariots were actually used in Herodotus' day and could have continued for some time after. When the Romans come into the Fezzan we hear nothing of chariots, but then we hear of little about the country from them. But I incline toward the former view, because it is difficult to explain why the Garamanteans, who probably had to import the wood and metal for their chariots, continued to bother to make them when they could save the expense and at the same time gain efficiency. And this is to say nothing about the ruggedness of the terrain (which had worsened since the second millenium) in which they reputedly employed these out-dated vehicles. The *regs* and *hammada* of their country should have encouraged the Garamanteans to imitate the Numidians and adopt the practice of riding.

The account given by Herodotus puts chariot users in the region of the Sahara where in modern times rock pictures of chariots and their drivers and the horses that pulled them have been found in abundance. Does Herodotus date these pictures? Perhaps. It depends on the problem of interpretation outlined above.

There is a stylistic feature of the pictures which may be pertinent to their chronology. The horses are depicted in what has been called the « flying gallop ». Let us consider this at some length;

it has often been referred to in the discussions of these pictures and yet it has been left always at a suggestive level rather than a conclusive one. With this and one other stylistic distinction, I hope to come closer to a conclusion.

> The flying gallop is the name given to a way of representing in art a horse or other quadruped running at full speed. The front legs are stretched out together forward, the hind legs similarly extended back almost horizontally, with the soles of the hoofs vertical, or even up. No horse ever actually assumes this position or one like it, in a gallop or in any other gait: the motion camera has put this beyond dispute. In fact a horse that somehow got itself into a flying-gallop posture would either fall or have a bad spill when its legs reached the ground again. The posture is therefore a wholly conventional or symbolic one, used in art because of its suggestion of great speed. Its objective falsity was no bar to its acceptance by artists, because the human eye and brain are not quick enough to « freeze » most of the shifting positions of the legs of a running animal.

This is how A.L. Kroeber (1948 : 497) introduces the flying gallop in his discussion of its origin and spreads. He concerned with « culture growths and spreads » and finds this an interesting case.

> In fact, nearly all the gallop postures in nearly all arts — until the cinema came to the rescue — are visual lies. This makes their history interesting. Being inventions of unrealities, we can trace their genealogies. If they corresponded to reality, they might derive anew from that, every so often, instead of being, as unrealities, obvious imitations of another artist's unrealities.

He then specified another stylistic mannerism for posturing a horse in art and procedes to trace the history of the travels of each.

> The most common method of picturing a running animal, the world over, is with its hind legs on the ground, the front legs either pawing the air in a somewhat bent position, or stretched foreward. This is a rearing or prance.
>
> The prance was used by Egyptian artists, and by Assyrian, and Medieval and Renaissance European painters and engravers.
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> The flying gallop has an entirely separate history. It appears fullblown in the Minoan art of Crete and the derived Mycenaean art of the mainland, of say 1600-1000 B.C. and is therefore

> pre-Greek. This art was interested in vehemence and rapidity; the device of stretching out the body and limbs is evidently the result of this inclination: the posture suggests the speed of flight. The flying gallop did not get adopted into the main current of Greek art, which really began pretty much over again centuries later than the Minoan-Mycenaean art, with crude, stiff, and static forms.

This gap in time between the Greeks and their predecessors in the country led them to adopt the common prance, perhaps from Egyptian or Western Asian examples. Phydias sculpted horses in a true posture, but his pose soon died out in the Greek tradition.

« Next we find this same flying gallop, and other contorted animal postures, in Scythian and Siberian art. The Scythian lived in the steppes of the Ukraine ». In the sixth century they had trade contact with the Greeks who founded cities on the northern shore of the Black Sea. We know as yet little of Minoan commercial ventures in these waters and some have doubted that they reached there at all.

> From the Ukraine, this Scythian style with the flying gallop spread to Hungary; to the Goths who at various times ranged between the Baltic and Crimea; to the Caucasus and the Caspian Sea; and to south-western Siberia where a related art maintained itself long after the Scythians were extinct, in fact until around A.D. 500. From this general region our device was communicated to Sassanian Persia (226-641); all earlier Persian art lacks the device, as did Assyrian and Greek arts by which Persian art was influenced. A farther spread was to China, where depiction of the flying gallop had become installed by terminal Han times, in the second post-Christian century. The Han dynasty repeatedly sought Western connection, especially in order to obtain heavy cavalry horses from Ferghana in modern Soviet Uzbekistan, so that an avenue was open for import of the stylistic influence (1948 : 500).

The next move was in a reverse direction but by another route. « This diffusion to China and Japan was the last but one of the travels of the flying gallop. In 1794 it suddenly appeared in an English engraved print » (Ibidem : 501) and soon became popular in Great Britain, France and Germany. This popularity lasted until photography gave more realistic models (Kroeber 1948 : 502;

Simpson 1961 : Chap. VII « An interlude on gaits and the invention of motion pictures »; Muybridge 1899).

Kroeber sums up:

> There is some question whether the nineteenth century European depiction of the flying gallop represents an original invention of this deceptive but appealing falsity, or an imitation of it. Chinese ceramics and other works of luxury and art had been reaching the West freely for two hundred and fifty years before 1794, so that European eyes, especially the eyes of overseas-trading Englishmen, may have become gradually accustomed to the representation until it seemed « natural » enough to adopt. The two breaks in the record, for singleness of the invention and its spread, are the time gap between Mycenaeans and Scythians, and the space gap between China and England.

These objections are not sufficient to cause him to deny the continuity.

> The Scythians were horse-breeders, horse-milkers, and horsemen; the English, the horse-racers par excellence of modern times. These orientations probably had something to do with the part of both in the story... being alert to receive an innovation (1948 : 502).

It is clear from the careful and extensive treatment which Kroeber gave this topic that he was not aware of the presence of the flying gallop in the Saharan rock art. Although it had been reported by the time he wrote, it had somehow escaped his kaleidoscopic survey of publications. If he had known of it, there can be little doubt that he would have attached the northern African examples, so close to Minoan waters, to the same tradition. The flying gallop had a definite, but limited, diffusion, which carried widely separated cultures, but it was always an unusual and isolated device in contrast to the styles of the neighbors who used the common device, also artificial, of the prance. The flying gallop is an index of culture-contact. We could view the north African extension as an abortive branch of the culture growth which flowered more fully in the north.

If the Saharan style derives from the Minoan, was it directly or indirectly introduced? If directly, then the adoption must have occurred prior to 1100 B.C. and probably not later than the fourteenth century. If indirectly, it is possible that objects which

persisted through some generations, treasured heirlooms, might have introduced the style after the collapse of the Minoan culture and when no living artist knew of the style. This is the sort of solution for the « time-gap » between Minoan-Mycenaean and Scythian that Kroeber was striving for, but it probably was not necessary in that case since « Mycenaeans were in constant touch with the Anatolian coast » (Vermeule 1964 : 276). These words from the most recent survey of the period were written about the Troiad. If the Mycenaeans did not get through the Dardanelles to the Black Sea, certainly the Trojans did and could have carried some Minoan-Mycenaean goods to trade there.

Whatever many be true of the Scythian case, it is more difficult to imagine how the time gap could be bridged in the African case. When the Greeks had replaced the Mycenaeans, without learning their art, and the turmoil in the eastern Mediterranean at the end of the Bronze Age and the early Iron Age had overturned virtually all old cultures and connections, what would have remained to transmit this peculiar style to the people in North Africa?

There is also the fact that from early in the first millenium the Phoenicians (and then the Carthaginians) made contacts more difficult for the traders from the old Minoan-Mycenaean districts.

It seems to me a pretty strong case, that the style was learned by some artists in Africa *before* the collapse of the Mycenaean world. E.F. Gautier almost arrived at this conclusion but remained uncertain at the end. He set up the problem well, but he had not enough information. He determined that the eastern Saharan chariot pictures were not Egyptian in style, because the horses were galloping: « le sculpteur égyptien ne sait pas représenter le galop » (Gautier 1952 : 36). This he had observed for himself and he had the authority of Maspero. He called them « chars égéens, » and adds: « dont les chevaux ont ce galop envolé » (Ibidem : 37).

Having recognized the resemblance to the ancient « Aegaean » style and mindful of Herodotus' Garamanteans, Gautier sets the limits of the range for their chronology:

> Pour dater les chars de l'oued Djerat, trace incontestable d'un royaume militaire saharien, nous avons donc un terminus *ad quem*, le IV^e^ siècle; le terminus *a quo* devant être reporté aux invasions en Egypte des peuples de la mer, huit ou neuf siècles plus tôt.

The problem thus was set but was not resolved: « inutile de souligner ce qu'une marge de huit à neuf siècles laisse subsister d'incertitude ».

Gautier, with a flair for playing with words, calls the chariots « garamantiques ».[6] The adjective « Garamantean » for these chariots — despite the reservation — since it must commonly connote a time period more or less contemporary with Herodotus, is to be avoided, I feel, because the pictures are almost certainly older. McBurney, however, argues that they are not as old as other pictures (1960 : 267).

There is another factor to be considered, and it puts the emphasis upon the same early period, the Mediterranean Bronze Age. Again, I have anticipated; now for the argument. There is, in addition to the « chariot route » from the Sirte to the Niger bend marked by the pictures of chariots and horses in flying gallop, another « chariot route » from southern Morocco to the same Niger bend area. However, the style of the western route does not have horses extended in a flying gallop. And the styles are in other ways thoroughly different. The eastern style is crude but naturalistic; the western is abstract, symbolic, schematic. The peculiarity of the western style is that the viewer had the perspective of looking down from above the scene but with the heels laid out flat and the horses likewise lying on their sides, back along the pole of the chariot and legs extended away. The conceptualizations of the artists are totally different.

Now in the Bronze Age, as in the earlier Neolithic, there were in the Mediterranean two separate culture areas (although the archaeologists do not usually use this term), one west of Malta, the other to the east. Glyn Daniel (1963 : 131 and passim) sees the western culture area as composed primarily of five foci. He gives these as Iberia (Los Millares), southern France, Sardinia, the Balearics, and Malta, and he sees these as deriving their cultural base from the eastern Mediterranean but having « translated » it into new idioms. Childe and Crawford believe that western North Africa may have constituted another center (Crawford 1957 : 55). The eastern Mediterranean culture area did not include the Nile Delta of the Semitic coasts of Asia, but did include some of the Anatolian coast and had its center of gravity in the Agaean islands and shorelands. V.G. Childe called it the « Early Aegaean Cycle »

and saw it as « embracing five or six cultures which, despite many common traits, can easily be distinguished and most of which can be further subdivided ».[7] The cultures grew and changed through the Bronze Age period, but the two culture areas persisted.

O.G.S. Crawford showed that one of the differences between the eastern Mediterranean and the western was in art styles. Although there was some schematization in the east, the art on the whole was naturalistic, while the art of the west was so abstract that one could recognize only with difficulty the intended meaning until the principles of the system were learned. It was precisely because the western culture area had earlier drawn much of its inspiration from the eastern that the same religious and other themes could be compared in the two areas.

Crawford, an archaeologist of varied experience, including some African research, founder and long-time editor of the journal, *Antiquity*, in his last book before his death, *The Eye Goddess,* traced the movement of a religion from Anatolia through the eastern and western Mediterranean to Atlantic Europe in the third and second millennia B.C. on the evidence of the symbols of its religious art. As the cult progresses westward, its art begins to become progressively more abstract. Iberia is the limit of recognizability of integrated forms. Beyond that:

> The identification becomes increasingly difficult; and when we reach Ireland we shall find that she has gone all to pieces... The component elements — face, fringes, necklace, etc. — become detached from each other, and often we are confronted with an apparently meaningless pattern or jumble (1957 : 54).

Yet by his analysis and comparison he concludes: « We can therefore claim that these links form an unbroken chain connecting Ireland and Anatolia during the second millennium ». What he emphasized was the cultic relationships between regions; what concerns us here is the stylistic differences between the regions, and this is well illustrated by his reproductions of religious art.

The conclusion which Crawford and other archaeologists have established — that Mediterranean peoples colonized Atlantic Europe, and that the peoples were primarily from the western

Mediterranean — are in accordance with our dating of the Western Saharan rock pictures of chariots, because in Southern Sweden is a rock picture of a chariot in the same style as the Moroccan chariots (illustrations in Piggott, 1965).

From this excursion into the archaeological literature on the ancient Mediterranean we can posit these conclusions: 1) the art style of the eastern chariot route equates with the art style of the « Early Aegaen Cycle », and the art style of the western chariot route equates with the styles of the western Mediterranean culture area; 2) that this indicates a relationship of some group or groups in the eastern Sahara with the Minoan-Mycenean world and the relationship of some group or groups in the western Sahara with the western Mediterranean culture area, and that this relationship was probably trade; 3) these contacts could not have been later than the second millennium.

The evidence of the flying gallop and of the distinctive style of the western route reinforce each other and, to my mind, make it very difficult to uphold any date for the chariot pictures later than the Mediterranean Bronze Age.

We might perhaps note that Crawford, although he did not have the quantity of evidence he had for the other areas, felt that « there is evidence that some elements of an archaic Mediterranean religion penetrated into the Sahara, ad even crossed it to arrive on the banks of the Niger » (1957 : 111,63). If this can be substantiated, Crawford's research on an ancient cult would reinforce still further our conclusion concerning the chronology of the chariots because the succeeding Mediterranean Iron Age saw a religious change which submerged the old cult.

If the horse was actually introduced into West Africa at that time, we are faced with a number of problems. We have well over a millennium of obscurity to account for before we have any indication of cavalry-using states. How did they arise? Is there any connection with the charioteers? Did West Africans ever build and use chariots? But before we consider these puzzles, let us continue with our next two points.

West African Cavalry

We will treat this point very briefly here, for, were this section expanded, it would constitute the history of the horse in the historic West African states, and we wish only to introduce this at this time.

Idris Alooma of Bornu, a ruler successful in his wars, knew the value of good horses.[8] Ajayi and Smith (1964) recount the use of cavalry by the Yoruba even within a somewhat wooded area. Al-Bakri indicated that the cavalry was the principal strength of Ghana's army. He gives the number of men the king can call up, and then he mentions horses without specifying how many of the army are mounted.[9] As my purpose here is only to demonstrate that cavalry were an indispensable part of West African states, perhaps these examples will suffice.

Their significance is, it seems to me, that the historical connections between West African states and some other states elsewhere in Africa, which have been dubbed « Sudanic states », is made doubtful because of the lack of horses among the eastern African states. After a survery of some characteristics of African states, R. Oliver and J.D. Fage conclude:

> First, that the formation of states, alike in sub-Saharan [by which they mean *immediately* sub-Saharan, i.e. West Africa] and in Bantu Africa, was a process which involved the deployment of a considerable fund of common political ideas; secondly, that the earliest lines of deployment seem to have been interior lines, running out in long arms westward and southward from a common point of origin in the upper Nile valley; thirdly, that this fund of common ideas was pre-Muslim and pre-Christian, in the sense that the basic ideas of the system ran sharply counter to the tenets of both these religions, and therefore that if the Nile valley was the point of departure, they must have started to disperse from that region before either Christianity or Islam became firmly established there [i.e. *circa* sixth century.] (Oliver and Fage 1962 : 49-50).

I take no issue with the common fund of ideas, nor that the « dispersal » is at least old as they indicate, but I point out that the east African grasslands provide just as adequate an environment for horses as the west Africa grasslands, yet the states in the Nile valley and those of West Africa had horses while those of Bantu

Africa, as they term it, do not. It is rather a great deal to suppose that horsemen would lightly give up the mounts. This would be especially true of such devoted horsemen as the Kushites (who are the presumptive source of the dispersal), if their ruler, Piankhy, was at all typical of their attitudes. During the conquest of Egypt, he hung the governor of Hermopolis because that official had permitted the horses in his stables to be neglected during the siege. A.J. Arkell (1955 : 122) says of him: « Piankhy was a great horse-lover ».

The nature of the similarities between Africa states, the routes of the dispersal of the fund of common political (and other) ideas, and the source itself, all have to be reconsidered. I am in the process of doing this, and I do not believe at present that there is any strong evidence for supposing any important connection between the West African states and Kush and Meroë. There is much more evidence for connections across the Sahara in the Mediterranean Brònze age, as there has been ever since, than for any connection between West Africa and the upper Nile peoples. The similarities between the Nilotic kingdoms and the West African states, which go beyond the possession of horses, can be explained in other ways which we cannot go into here. Besides, the Dongola pony of the upper Nile valley is a different breed of horse from those of the Western and Central Sudan. This brings us to our final topic.

Breeds of West African Horses

The horses of the Western Sudan are today primarily Barbs. But this was not always so. Al-Bakri wrote: « The horses of Ghana are small ».[10] Since the eleventh century then there has been an alteration in the horse population of the region. This is not surprising since Leo Africanus claimed that if a trader could get a horse alive across the desert he could make a sevenfold profit. He is without doubt referring to the trade which brought the Barb into the area of old Ghana.

The horses of the Central Sudan (Hausa and Bornu area) are a mixture of Barbs, Arabs, and a small proportion of Dongola from the Nile valley.

The third type of horse is the type called by Doutresoulle simple « pony ». This is perhaps the most interesting for historical evidence

and has a distribution in three isolated pockets on the periphery of the breeds. One population of ponies is found near the Senegal, the Cayor pony; another is found on the edge of the forest in the Ivory Coast; and the third is found in the upper part of today-Benin, the Kotokoli pony.[11]

What is the meaning of this zoological distribution? The interpretation I suggest is that the ponies represent the earliest horse population of West Africa, and that in Islamic times, probably particularly after the eleventh century (see McCall in press), larger horses were brought in from North Africa (with possibly a few Dongolas coming west south of the Sahara) along two main trade routes, one from Morocco bringing in only (or at least mainly) Barbs, and the central route, probably via the Fezzan, bringing in a sizeable number of Arabs as well as Barbs. These routes reflect the needs of the various states north and south of the Sahara and there tended to be a division in the North with one focus in Morocco and one in Tunisia-Tripoli; these routes are also very similar to the earlier chariot routes.

The reason it can be argued that the ponies represent the earliest horse population of West Africa is that all authorities agree that the earliest horses domesticated were of a small variety (Simpson 1961 : 45; Coon 1954 : 262; *Encyclopaedia Britannica*, s.v. *Horse*; Downs 1961 : 1194). The chariot horses of the Bronze Age were too small to ride.

> In early antiquity the horse probably averaged little more than 12 hands (48 ins.) at the withers, and a height of 14 hands was exceptional; whereas in modern times many breeds reach 17 hands and occasional specimens approximate 20 hands (80 ins.) (*Encyclopaedia Britannica*, s.v. *Horse*).

The usual view is that the form of the horse is somewhat plastic and that selective breeding after domestication led to the appearance of the larger horse, suitable for riding. Another possibility is that the enlargement of the domesticated ponies was due to interbreeding with another breed of horse which had been domesticated later. The steppe horse was the earliest to be tamed and brought into the society of men, but there existed in Europe a forest type of wild horse, descended it seems from the horses hunted by the cave men of the Ice Ages. Animals adapted to cold climate (cold stenothermic

animals) are larger than other varieties of the same species. This is so because it is more efficient for the conservation of body heat, and is known to biologists as Bergman's Law. The « European wild forest zone type [had] a large and a small form » (Piggott, 1965 : 95). And the « forest zone types are also domesticated in Bronze II » (Ibidem : 110). From references I have seen to the urgency of getting heavy cavalry mounts from elsewhere, I would not be surprised if none of the chariot horse populations were ever raised sufficiently in size by selective breeding to satisfy the needs of cavalry without getting some stallions of a larger breed. However that may be, we know that the « small horses » that al-Bakri reported were not « bred up » to larger horses but have been replaced by known breeds from the north. The ponies on the periphery of the area of the larger horses are the remnants of the earlier « small horse » population, and I suggest that they are the horses which pulled the chariots.

The distribution of ponies is just what one would expect on the principle of « the survival of old forms of culture at the remote margins » (Kroeber 1948 : 561).

Discussion

We have surveyed the four points introduced at the beginning, which we can now restate: horses arrived in West Africa in a domesticated form, drawing chariots which were replaced by equestrianism, and new breeds were subsequently introduced.

In deciding that horses were introduced in the second millennium B.C., we have raised new problems. First, let us take the zoological one: Bronze Age chariot horses were small and the earliest West African horses were small, which (taken along with the rock art evidence) we think means that horses have been in the western Sudan for over a thousand years before we have any evidence of horse-using states. What happened to the horses in that time? One might have argued, if there were only the rock pictures, that the early horses did not survive; that they were so precious that the charioteers were usually inclined to leave behind only the dead or ailing beasts, and therefore that no horse population was established in the area, despite the chariot contact. The presence of

the three areas of ponies on the peripheries of the horse country denies us that interpretation.

One might assume that the horses were allowed to become feral. « A feral animal is one whose ancestors were domesticated but escaped and ran wild » (Simpson 1961 : 21). The argument against this is the same as presented earlier against the existence of truly wild horses. The mustangs of western North America are feral horses descended from Spanish horses which escaped from their owners in the sixteenth century. Despite continual efforts to capture them, and often successfully, there are some still extant in the wild state, and this despite the increase in the human population and building and fencing which have diminished truly wild species like coyotes. If there had been feral horses in West Africa at an earlier time, there would still have been some in historic times. That means that the horse has been maintained in domestication during the whole of the first millennium B.C. and later.

Did West Africans build and use chariots? The answer to this cannot be certain. If people bother to keep an animal, which always involves care, they have some motivation. What was it in this instance? The horses were not used as beasts of burden we can be pretty sure, for, if they had been so used in those early days, the idea of such use would likely have persisted as an alternative use of the animal later. But West Africans consider the horse in a different category from other animals such as cattle, donkeys, or camels. Unlike some Asiatic horse breeders, West Africans never seemed to have used the milk or meat of this animal. They probably did not ride the beasts, because no one at that epoch seems yet to have thought of that possibility. Downs (1961) argued that riding, as other uses of domestication, originated in the Near East. In addition the horses may have been too small before any interbreeding with larger stock had begun. They may have kept the animal for religious sacrifices, as has been known to happen elsewhere (but we have as yet no evidence of it in this region), and that would be a sufficient reason for them to maintain the stock. Except for this last, somewhat unlikely purpose, the only reason I can think of why people would keep horses is the one for which they were introduced: to pull chariots.

If this did in fact occur, I admit it probably was on a small scale although sufficient to keep in existence in domestication the pony

breed. There has been so little archaeological excavation in the region as yet that we have no basis for arguing one way or the other. Whether we shall ever find out depends on conditions of preservation. Wooden chariot bodies would disintegrate; metal parts would have had to have been bronze, before the iron age, and obtained from the north since West Africa lacks copper. This would make them expensive and keep down the numbers. Unless one assumes that West Africans precociously taught themselves to ride before any of the other horse using peoples, it seems likely that they made some use of chariots. There are some Saharan rock pictures which show riding of cattle as well as horses.

Whether as charioteers or as riders, the adoption of the horse must have had an effect of some kind on West African cultures. What can we know of that? First, we know that the West African societies in that area were before that time neolithic, which is to say that they were settled food-producers. They cultivated millets, sorghum, and other crops and kept some cattle, goats, and sheep. Institutions of government were probably simple and more or less limited to village level. The adoption of the horse, since it had in the area from which it came an exclusively military employment and later in West Africa had the same use, must have introduced or intensified a military character from the beginning. Furthermore, the charioteers from the north were culture-bearers of state-building societies, and the combination of the idea of kingship and the horse as the military means to put the idea into effect would lead to conquests that established states.

Could this have happened so early? Were there states in West Africa during the first millennium B.C.? It is the common opinion today that Ghana is the oldest of the West African states, and it does not come into existence until about the fourth century A.D. But Ghana is only the best known of those we have evidence on. Tekrur, Songhai, and Kanem were three which survived into historic times and were as old, if not as wealthy in gold, as Ghana. The traditions associated with each indicate this antiquity, but the written references in the Arabic records refer first to Ghana. If, then, we think of West Africa in the early centuries of the first millennium A.D. as having several states, four at least, stretched from the Senegal to beyond Lake Chad (perhaps with lots of uncontrolled territories intervening), this is a fairly developed

condition, probably an interacting state-system. Such a societal condition must have required some time to develop. It would not require as long as our evidence suggests the horse had been in the area, but beginning from small beginnings, toward the end of the second millennium B.C. and growing slowly, horses were no doubt scarce at first (and if chariots were used they add an additional expense — read scarcity), and so only gradually increasing in the size of the area under the control of the kingdom and gradually the number of kingdoms increasing.

Could we learn anything about the early horse-using cultures of West Africa from our knowledge of the impact of the horse on the cultures of the American Indians?[12] The answer, I think, is no, at least for the general outlines of the cultural development. The West Africa area was one of settled farmers; the American plains were too arid for primitive agriculture. « Agriculture in only feasible by means of modern irrigation or dry farming, neither of which was known to the Plains Indians. One form of wealth only existed: great herds of bison » (Birket-Smith 1960 : 56). Thus, Plains Indians horse-using societies were nomadic hunting societies, and their warfare did not give rise to states (of course it had in any case only a couple of centuries at most to develop). West African societies had that agricultural base which is prerequisite for the growth of kingdoms.

A wide area extending around the bend of the Niger is the area where the first kingdoms would have been formed, but directly south from the Fezzan, that is the area of the historic Kanem, probably soon afterwards or perhaps at the same time should have been developed politically. Even M. Gluckman (1963 : Introduction) now has come to see fission as the normal procedure in African states with about every four generations or so presenting succession problems and frequently the prince who does not get the kingship goes off and founds another state. Thus the proliferation of states, once one is founded, is more or less inevitable. I postulate that the expansion went out from the bend along the two arms of the river. Another line of expansion was probably along the fringe of what was now, in the first millenium B.C., rapidly becoming desert, in other words through the Sahel, so that, if there were two centers of dispersal of the idea of kingship, eventually they would meet somewhere between Lake Chad and the Niger. A shifting line somewhere

in this region has always in historic times seemed to constitute a cultural boundary. Expansion westward from the Niger bend through the Sahel would bring states into the Senegal valley, where eventually Tekrur was located. Eastward from Kanem expansion was not so feasible, since to the north was the Libyan desert, which is of a different nature from the western Sahara and much more severe in its conditions (Gautier 1935). This was important in that trade is the lifeblood of these states. The Sudan between Lake Chad and the Nile has been the least developed politically, and that development seems to have been tardy, starting long after the areas on either side did. The base of agricultural people is necessary and to some extent tribute from subjected populations supplies the ruling class with their needs, but it is not enough to thrive. Long distance trade is necessary. And this certainly existed during the Bronze Age and in the later part of the first millenium B.C. and probably was never interrupted for long.

The state (or states) in the Senegal would receive a fillip in their trade in the middle of the first millenium B.C. when the Carthaginians may have established a small trading settlement there (and even Masaliot merchants like Euthemenes may have reached there), and perhaps even the name « Tekrur » is a Semitic name. At any rate, in Abyssinia in earlier times there was a region known as Tekrur, and the coincidence is striking although not necessarily more than coincidence. But in Geez it could mean « black », an analogue of the Sudan and perhaps of Zanzibar, and since Punic is a closely related language, the same idiom may have come out similarly.

When a horse-using, state-building people extended down the eastern arm of the Niger to the forest edge, they would have encountered Yoruba speaking peoples. When this occurred and what political condition the Yoruba were in at that time is problematical, but I suggest that Ife was already established and that Oyo, where of all Yoruba states horses were most important — and which was by far the largest — may have originally been a conquest by outsiders who soon took to speaking Yoruba and eventually adjusted their traditions so that their founder was accepted as a member of Oduduwa's family.

This same military venture probably extended as far as Benin, which was also already in existence — on the evidence of the

traditions of the earlier dynasty — and this accounts for the connection in the traditions of Oyo and Benin. The rulers at Benin maintained horses as part of their class traditions, but the horses were of little value in the forest and so they forgot in later generations how to ride. Probably also they had continually to import horses because they would succumb in the forest. And this is the situation found by the Europeans, the nobles being supported on either side as they sat uneasily on their mounts.

Conclusion

There are many points which need substantiation or refutation. But one thing is clear — horses have been in West Africa for a long time, and they have been of utmost importance militarily and politically. When Lander found an official with the title, Ona-Olukun-esin, the mast of the horse (*Journal*, 177), he did not know that this was a very common title in other states, but he could see it was an honorable one.

Notes

1. Cfr. eg. *A description and historical declaration of the Golden Kingdom of Guinea... translated out of the Dutch...*, in Samuel Purchas, *Hakluytus Postumus, or Purchas his pilgrimes*, quoted by Hodgkin (1960: 121). We will return to this reference later in different context.

2. Coon (1954: 240); reproductions of the picture and sculpture in question are given on pages 240-241.

3. Linton (1957: 529); Bibby put Shang later and so does Kroeber (1948: 693).

4. For a popular account, see Bibby (1962: Chap. II).

5. Coon (1954: 273): « The seventh century B.C., when riding is known to have begun in Iran. Shortly after this, they [horses] were ridden in Central and Western Europe and introduced into Greece and Italy ». Downs (1961: 1200) has riding begin a little earlier: « Toward the end of the second millennium we begin to see evidence of riding in military contexts. It was known in Heroic Greece, if we are to believe Homer, and the reliefs of the Assyrian kings show both light and heavy cavalry in addition to chariots. By the time of Classic Greece and Rome the chariot was relegated to ceremonial and sporting uses. Cavalry was used in warfare everywhere except among the uncivilized tribes of Northern and Western Europe ».

6. Gautier (1952: 38): « Les chars de l'Oued Djaret, sans interpolation illicite, nous avons le droit, pour la commodité de l'exposition, de les appeler Garamantiques: étant donné que cette appelation ne préjuge en rien de l'âge précis de ces chars, en tant que peintures et gravures, oeuvres d'art ».

7. Childe (1958: Chap. 7). He gives these as Troadic, Thracic, Macedonic, Helladic, Cycladic, and Minoan, as well as Cypriot.

8. Cfr. Ibn Fartua, quoted by Palmer (1970: 29).

9. See the new translation by Rajkowski quoted by Fage in *Transactions of the Historical Society of Ghana,* vol. 3.

10. See fn. 9.

11. The information on breed comes from Doutresolle.

12. As an introduction to an extensive literature, see Wissler (1914: 1-25).

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Sommario

Alla fine del sec. XV, gli Europei scopritori dell'Africa occidentale trovarono che il cavallo era impiegato nel Benin e nei vicini paesi yoruba. Poiché non si conosce l'esistenza di antenati selvatici dell'*Equus caballus* in questa o in alcuna altra zona dell'Africa, si trattava di equini importati. Sulla base di argomenti zoologici, archeologici, storici ed etnologici, il presente articolo intende chiarire tempi e modi di tale introduzione.

Il cavallo è anche qui essenzialmente animale da guerra e simbolo di prestigio sociale: il suo arrivo, dall'Africa settentrionale per via del Sahara, è connesso con l'impiego del carro da guerra. L'A. discute brevemente le questioni della iniziale domesticazione equina, dell'uso e della diffusione dei carri ippotrainati, delle singolari raffigurazioni di questi nello stile del « galoppo volante » tipico dell'arte minoico-micenea e presente tra l'altro nelle figurazioni rupestri sahariane; e delle presumibili relazioni commerciali che dovettero in-

direttamente collegare quest'ultima area, e quella del Mediterraneo occidentale nell'età del bronzo, con le zone oltre il Sahara. Di qui, secondo l'A., giunse il cavallo nel bacino del Niger, mentre più deboli sono considerate le possibilità di connessione degli stati dell'Africa occidentale con Kush e Meroe. Se però l'evidenza archeologica suggerisce per tali contatti epoche non posteriori al II millennio a.C., queste appaiono di molto anteriori ai tempi in cui si presume siano sorti in Africa occidentale stati in grado di sfruttare corpi di cavalleria: il più antico stato locale di cui si abbia notizia, il Ghana, non risale a prima del IV sec. d.C. Fra le ipotesi relative al destino del cavallo in queste zone durante il lungo e oscuro intervallo, l'A. tende a scartare quella di un rinselvatichimento della specie come si sa essere avvenuto in America; egli pensa piuttosto a un uso del cavallo come animale da sacrificio, o a un suo persistente impiego per il traino di carri; meno probabile il suo uso come cavalcatura, prevalso poi in epoca moderna. La più antica varietà di *Equus* presente in Africa occidentale sarebbe infatti, secondo l'A., una razza di *ponies* di piccole dimensioni, poco atta a essere cavalcata; più tardo sarebbe l'arrivo della più robusta varietà berbera, di quella araba, di quella dongolana. Comunque impiegato agli inizi, il cavallo contribuì a trasformare in senso militare le ancor piccole comunità dell'area sudanese-guineana viventi di coltivazione e allevamento di tipo « neolitico »; e i contatti trans-sahariani che accompagnarono l'introduzione del nuovo nobile animale dovettero incoraggiare la fondazione dei primi stati della zona.