NOTES ON THE ORIENTAL HORSE IN PERSIA

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The Arab horse is so well known that one thinks of it as the only breed in the Middle East. In fact it is the 'tip of the iceberg' and what many people consider the area's sole purebred strain is only the most recent manifestation of a phenomenon called the Oriental horse.

The unusual richness of the many breeds of horses peculiar to Persia has been largely neglected by scholars whose wanderings in equine history tended to come to an abrupt halt at the Euphrates - rather like checking at the first item on a lavish menu. The unique, for Europeans, beauty of the Arab horse seems to have obscured the question of equine origins in the Middle East, while the Arabs, from whom information was obtained, were neither in an educated enough position to enlighten travellers nor, had they been in possession of such information, likely to advance a theory of early equine development whose origins were not firmly rooted in their desert sands. Thus, although mention is made of Turkish, Barb and Persian horses included in the broad spectrum of Oriental blood, emphasis by most scholars is placed on the Arab as the only 'pure-bred' Oriental and the stock from which other local breeds derived.

That only limited numbers bothered to look further than the rich feast offered their eyes in Arab countries is a distinct pity, as the 20th century has seen the decline in horse populations in this area, affecting the general standard of the breeds and causing the total disappearance of some. Random examples occasionally surface, tantalizingly clear in their resemblance to old forms whose integrity was not affected by the demands of a western market or the advent of the internal combustion engine - forms frozen, as they are, in the friezes of stone carved by artisans in such ancient empires as those of the Achaemenians, Parthians and Sassanians. Although any hypothesis based on resemblance between the ancient models and modern examples of breeds is liable to stretch the imagination and lacks scientific objectivity (1), fleeting similarities of size and conformation give credence to the theory of evolution as an ever-changing theme played on basic form. But the dichotomy is familiar. The Arab horse, like Iran, has been modernized and adapted to the demands of western culture, while the Oriental horse is still Persia, basically unchanged and tuned to an environment that listens for the far-off call of the camel bell and to which seasons are more than a change of wardrobe

Surrounded by vast herds of horses roaming wild, the Central Asian steppe peoples were in the best position to appreciate the possibilities of the horse as a beast of burden. By the time they began to expand from Central Asia in the 2nd millenium B.C., they had been breeders of horses for some time. A good part of their way of life

and expansion was based on this versatile animal. As they entered and settled in Persia they introduced this knowledge to the indigenous inhabitants, although their own superiority with
the talent confirmed their position as rulers of ever-growing
empires until the Arab conquest in the 7th century A.D. (2)

Evidence recently discovered (3) appears to corroborate earlier
surmises that a post-Pleistocene horse existed in South Central
Iran prior to the advent of the steppe peoples, possibly
extending as far as the Kopet Dagh at the north-eastern boundary
of Iran and the beginning of Central Asia (4). The Sumerians
referred to this animal as "ansekur-ra" (5). Terra cotta relief
plaques of the Babylonian period (early 2nd millenium B.C.)
clearly show a very small horse as well as a hemione controlled
by a nose ring and a stick (6). There are further graphic
examples of this miniature horse but by the 3rd century A.D. we
no longer see the miniature horse. Persia's monuments take on a
different style. Verisimilitude is replaced by stylized fantasy and is no longer useful as a guide or potential source of
accurate information.

The science of archaeology has advanced dramatically in this century. Its major contributions are no longer limited to spectacular artifacts. Excavations in prehistoric sites have broadened the scope of understanding, branching into such prosaic fields as flint knapping or the early manufacture of pottery and the beginnings of basic tools. Faunal remains scattered amongst the debris in caves and primitive mud brick buildings document the wildlife and domesticated animals particular to an area. Study of these remains has given birth to a new branch of science; archaeozoology. Changes in morphology date the periods when animals began to fall under the sway of human domination. The horse is almost the latest to appear in this skeletal feast although, as time passes, he becomes a more frequent sight.In the case of the equids (E. *asinus*, E. h*emionus* and E.*caballus*) identification of species has been complicated by lack
of contemporary material. After all, the Prezewalsky horse was
only identified in 1878 although, surely, the local inhabitants
of Mongolia had been familiar with the animal for centuries. The
same could perhaps be said of the Caspian, whose 'discovery' dates from 1965 in an area where extensive use was being made of its talents. The form of the early steppe horse, however, has been fairly accurately established both by meticulous examination of his skeletal remains in sites from central and eastern Europe (7) and by study of late antique graphic artifacts, some of which,
like the Chertomlyk silver gilt vase (8), not only establish the
conformation of the animal but give a remarkably accurate picture of the methods of handling the animals.

Had the modern Caspian not been observed and studied, the
likelihood of the ancient, sub-fossil, native horse being
documented would have been slim. Only the proven existence of
this unusual animal prompted scholars to review the evidence,

matching contemporary graphic representations with osteological material from archaeological sites. Mrs. M.A. Littauer's examination of 'The Figured Evidence for a Small Pony in the Ancient Near East ' (9) documented the possibility of small equids in antiquity and Dr. Sandor Bokonyi's painstaking hours spent over mounds of dusty faunal remains from the British Institute of Persian Studies ' archaeological sites (10) began to put this small horse in a historical perspective.

Although we know from Coon (11) that in the Pleistocene there had been true horses in the Zagros mountains of western Iran and in Azerbaijan, it was assumed that it had not survived here into the Holocene. Duerst's 1908 claim (12) to have found a small oriental type of horse in the Neolithic of Anau in southern Turkmenistan, not far from the Kopet Dagh mountains, was challenged by Hilzheimer in 1941 (13) and again, by Lundholm in 1951 (14). The crux of the matter lay in the diagnostic criteria for distinguishing the different species of equids. These must rely on inconveniently few (and often completely missing) parts of the animal; certain parts of the skull, certain teeth, or metapodials (cannon bones). The slenderness index of the metapodials (i.e , the medial width multiplied by 100 and divided by the maximum length) of the Anau equids had appeared to fall well within the hemione limit.(The true horse is usually considered to have the highest index, with the true ass next and the hemione occupying the niche of greatest slenderness. The dividing line was generally considered to be 13.5, with anything above belonging to horses and anything below to ass or hemione.) When the Caspian's measurements were scientifically taken he first seemed only to confuse the issue since his slenderness index fell within that of the hemiones. It was clear that when neither skull nor teeth were also present to assist in identification still another criterion was necessary. Searching for this, Bokonyi found it in the dimensions of the distal epiphysis of the metapodials (i.e., the end of the cannon bone nearest the hoof). These were usually smaller proportionately to the rest of the bone in the hemione than even in the smallest horses. Thus the Caspian has served to revive the strong possibility that the Anau equids may indeed have been very small true horses. This fits in nicely with remains of another small horse in the Neolithic of Tal-i-Iblis in south-central Iran near Kerman (15).Such a small, gracile animal surviving in Iran, which was to be traversed many times by horses under warrors, migrants and traders from the north, would help to account for such a later horse as the Arab, giving it its density of bone, vaulted, small head, fine coat , high tail carriage and kind but spirited temperament.

At some date between the period when the steppe horse was first introduced to southwest Asia, and when the great empires of the Hittites, Assyrians and Achaemenians emerged with their trained chariotry and cavalries, something of great importance happened; something that was to alter the structure of animal husbandry for all time. It was discovered that selective

, as opposed to random, breeding produced horses of varying conformation and thus suitable for different tasks in different geographical locations. The wide range of breeds represented by faunal remains of over 1000 years in archaeological sites of Achaemenian, Parthian and Sassanian periods show a diversity from a miniature horse up to seventeen hands (16). In the middle range the horses exhibited skull forms with definite oriental characteristics, while the large animals had the straight head typical of the early steppe horse.
Different again, the famous Nisaean horse of the Achaemenians, although of no great height, had distinctly larger bone and its skull exhibited vaulting from the occiput through the nasal bone (not 'roman-nosed' which is a case of vaulting from the frontal through the nasal bones.)The obvious question is - how did these early empires achieve such a rich diversity in their breeds of horses? Based on studies of the modern Caspian skeleton compared with ancient graphic evidence (bones from miniature horses in archaeological sites are generally fragmented), it becomes apparent that the Zagros wild horse had several peculiar features lacking in the northern horse (17). Most notable amongst these in the modern Caspian is the 'vaulting' of the forehead with a wide parietal bone which does not crest but remains open to the occipital crest (18). This peculiarity of the vaulting in the forehead, known as the 'jibbah' in the Arab (19), is one of the most distinctive features in various breeds or strains of medium height (13 to 15 hands) developed by breeders 2500 years ago in Persia. Other distinctive features of the Caspian as well as the Arab include high tail carriage, dense bone, short back and compact hoof.

Topography and climate also played a vital part in the development of different types. From Azerbaijan and Kurdistan, where the winters are bitter cold and the snow drifts up to the roofs of houses, to the suffocating heat of Khuzistan, the barren Dasht-e-Kavir, the moderate climate of Fars and the lower Zagros, and the Caspian whose fauna and flora more closely resemble the biospheres of the U.K., the country presents a micrcosm of whole continents. A tall, heavy horse could not survive under conditions where water was scarce and feed consisted of scant mouthfuls of dry thorn and grass(20). Where these conditions prevailed a horse with dense bone and a 'meatless' quality to its conformation would be the natural choice. For these areas what is now the modern Fars, Darashuri and, later, Arab types were developed. In areas where the winters were severe but spring rich with mountain grass and plentiful natural springs (with, in Kurdistan, natural available limestone) a heavier ,'meatier' horse was possible to produce and, in fact, preferable and so the Nisaean. Interestingly enough, the equine inheritors of these pastures in Kurdistan and Azerabijan have fallen prey to over-grazing and extensive agriculture. As natural fodder declined, so did the size of the horses and the modern Kurdish horse is a reduced form of his famous ancient ancestor. The Parthian horse became victim to similar circumstances with the addition of historical change. Originally bred on the rich pastures bordering

the Turkoman steppe, he must have been a burden to his owners as the Parthian Empire spread west seeking ever wider boundaries abutting on arid desert areas.

This is the basic Oriental horse, derived in all probability, from a crossing of the native Zagros mountain horse with the steppe imports of the 2nd millenium B.C. Variations on the theme have resulted in many different breeds or strains. The Assyrians in the first half of the 1st millenium B.C. bred a refined horse with stock they acquired from the Medes and the Urartians in repeated 'razzias'. The Medes, according to Herodotus (21), bred a smaller horse than their vanquishers and the Achaemenians, in turn, developed the massive Nisaean breed that so impressed the Greeks. The Urartians reputedly (22) produced a large, useful animal which took full advantage of the lush pastures surrounding Lake Urmia. The Parthians, starting from their first capitol on the eastern slopes of the Kopet Dagh, Nisa, produced a variety of breeds, if osteological remains left in their expansion westward are any indication (23). They made good use of the native horse of their original habitat, the modern Turkoman, which would account for the stature and straight heads of the larger horses, slowly mixing with the existing breeds as they advanced, incorporating the indigenous types as they encountered the drier regions of the Kavir periphery, leaving the lush pastures of the Turkoman steppe and upper Alborz behind in their search for power and territory. The Sassanians are generally shown on stocky mounts lacking the stature of the Parthian horse (a notable exception being Shabdiz, the horse of King Khosrow Parviz in Tak-i-Boustan from the late Sassanian period), but osteological material from archaeological sites indicates the size was well up to 15 hands (24).

Throughout the fabric of early breeds of horses in this area runs the thin silk thread of the miniature horse. It emerges in terra cotta relief plaques from the early 2nd millenium B.C. Mesopotamia (25), ridden by small Assyrian boys during the reign of Tiglath Pileser 111, and pulling a chariot on a relief from Dur Sharrukin the period of Sargon 11. The Achaemenians appeared to have a special fondness for the small horse,depicting a pair pulling King Darius' hunting chariot in a trilingual seal, and immortalized in gold in the Oxus Treasure (26). After the Sassanian frieze at Darabgird from the 3rd century A.D. (and there is some doubt about the identity of this animal), the small horse drops from view. He reappears occasionally in Moghul paintings of young princes out for a hunt with their older brothers but, for practical purposes, the miniature horse disappeared from view for 17 centuries.

The paradox of how there came to be such an unusual animal in a geographical area whose only known sub-fossil example of the

equid was the hemione is probably to be found in the phenomenon of the Ice Age, ending ca. 10,000 years ago. Four major periods of glaciation in Eurasia during the Pleistocene forced great migrations of local faunal populations, with the inevitable result that distributions of species became scattered as they either fled south from the bitter cold of the spreading glaciers or retreated northward once again as the climate and changing vegetation dictated (27). As this see-saw movement continued some forms of species became trapped behind formidable natural barriers and adapted to the change remaining in new habitats. Others, having adapted made no attempt to brave the natural barriers separating them from their northern habitat. This explains the widespread distribution of the hemione , sub-species of which occur in eastern Russia, India, Pakistan, Iran and ,until recently Iraq.The presence of a prehistoric wild horse in Persia is probably explained the same way. Residents of the Dasht-i-Kavir in central Persia have reported that there are wild horses in the desert as well as wild asses. They describe them as being the same fawn colour as the ass but that they have short ears and a full tail (I have not myself seen one).

Isolated from other horses (and gene pools) the prehistoric wild horse would gradually have developed distinctive characteristics, eventually forming a new species , had man's intervention not stopped the process. As it is, both the Caspian in its pure form and its derivative (the Oriental horse) have distinctive skeletal features which differentiate them from any other breeds lacking this blood ; the Caspian standing at one end of the spectrum and its close relatives on a sliding scale (28).

The Persian horse normally described by 16th and 17th century travellers is the animal bred around the crescent of the great deserts (Dasht-i-Kavir and Dasht-i-Lut). Of typically Oriental conformation (vaulted forehead, large eyes, short back, high tail carriage, dense bone, strong hoof with a receding frog etc), these breeds were taller and stronger than their desert-bred cousin, the Arab, although, inevitably, not as resistant to the rigours of the waterless wilderness. Their forte was great stamina in rugged territory and a working elegance that gained them local and international renown.

Sir John Chardin, who visited Persia in 1666, 1669 and 1672, wrote :

> "The horses of PERSIA are the finest in all the EAST.
> They are taller than the ENGLISH Saddle-horses are, strait before, a litle Head, and Legs that are wonderfully thin and fine, exactly proportioned, mighty
> gentle, good Travellers, and very light and sprightly...They are very gentle and managable, easy to

> feed, and do good service till they are eighteen or twenty years old. They know not what a gelding is among all the Horses they have in PERSIA...I have told you that they are the finest in the East; but they are not for that Reason the best, nor the most sought after. Those in ARABIA surpass them far, and are mightily esteemed in Persia for their lightness; They are in their Make like perfect Jades, and being lean and withered, they make a wretched Figure " (29)

So many millenia of breeding, empires built and destroyed, incursions by invaders and travellers will have changed the forms of breeds, dispersed the great herds and varied forms as use alternated, forage disappeared and more sophisticated equipment (the invention of the stirrup, stronger bits etc) was developed. What remains now is certainly not the same as was originally developed. Nor will this remain static, assuming that Persia's horse populations survive the onslaught of the 20th century at all.

From 1969 to 1993 nine papers were published in scientific journals detailing the discovery of the Caspian horse (named after the provenance) and the possibility that a miniature horse similar to the Caspian might have existed in pre-historic times in ancient Persia.

In 1991, I was approached by Dr. Gus Cothran of the University of Kentucky to send blood samples for different breeds of horses from Iran for a study he was doing on comparative analysis of breed relationships and their derivatives using DNA and genetic markers.

I sent him a chart based on the analysis of bone remains of equids from archaeological sites in Iran illustrated with art forms from contemporary periods (fig--) . After two years study of blood samples from Caspian, Kurd, Persian Arab (unmixed with western blood)Turkoman horses (including Yamoud, Akhal Teke, Goklan, Jargalan and Yabou), Dr. Cothran was able to state in a dendogram based on a phylogenetic reconstruction of the Oriental horse group that the Caspian and Turkoman populations he had studied were in the most ancestral positions . He also maintained that the dendogram corroborated the conclusions of the chart based on faunal remains of equids from archaeological sites.

Therefore we are able to state without doubt that : 1) a tiny form of *E. caballus* existed in ancient Persia and, 2) that this horse is the same as the modern Caspian and is ancestral to all forms of Oriental horse and, 3) that the Turkoman existed in its present state atleast as early as 3000 B.C. and that it also is ancestral to the Oriental horse.

Dr. Sandor Bokonyi stated in an interview in the Kayhan news papers in the 1970's that Iran was the first place to practise selective breeding of horses. He based this claim on the presence of atleast three different types of horses in the same level at different archaeological sites (from faunal remains excavated by the British Institute of Persian Studies).

Because of the diversity ancient Persia was able to provide later civilizations with the raw material from which to develop their own distinctive breeds at later dates; viz the Arab horse in all its many forms from southern Persian through Iraq, Arabia and Egypt.

Although it is doubtful that the tiny horse of the Achamaenians contrived to contribute to the development of breeds beyond about the 6th century A.D. in any significant form , the Turkoman certainly did so as importations from Turkmenistan are recorded until the end of the Ottoman Empire in 1920 and, indeed, continue to this day. Whole villages of Turkomans with their herds of mares and stallions were transplanted to the Anatolian plateau where they continued to provide mounts for the Sultan's Janissaries until the Ottoman Empire was disbanded at the end of the first World War.

FOOTNOTES TO NOTES ON THE ORIENTAL HORSE IN PERSIA

1. See ANTIQUITY L111(1979), 218-19.

2. This was not the end of incursions from thenorth into Persia. The Mongols in the 12th century changed history but, for the purposes of an equine survey the Mongols added little but sheer stamina to the existing breeds.

3. Bokonyi, S., 1967 "The Prehistoric Vertebrate Fauna of Tal-i-Iblis, in J.R. Caldwell (ed.) Investigations at Tal-i-Iblis (Illinois State Museum Preliminary Reports No. 9), Springfield Illinois, 311-12.

4. Duerst, J.U., 1908, "Animal remains from the excavations at Anau and the horse of Anau in its relation to the races of domestic horses," in R. Pumpelly, Recent explorations in Turkestan, Expedition of 1904ï, Vol. 11, pp. 339-442, Washington.

5. Anderson, J.K., 1961, **Ancient Greek Horsemanship** p.2, Berkeley. Mrs. M.A. Littauer, however, notes "the Sumerian term (Anse-Kur-Ra) has only been translated as far as "ass" (Anse) goes, and this is sometimes taken merely to mean "equid". The remainder of the term is guesswork and "of foreign lands" of the east and "of the Volga" (Ra being an ancient term for the Volga) are various other interpretations. Anyway, these were referred to in the text where the term was found as pack animals" .Personal communication.

6. Moorey, P.R.S., 1970, "Pictorial Evidence for the history of horse-riding in Iraq before the Kassite Period", Iraq, Vol. XXX11, Spring, pp.36-50.

7. Bokonyi, S., 1968, "Data on Iron Age horses of Central and Eastern Europe", American School of Prehistoric Research, Bulletin No. 25, Peabody Museum, Cambridge, U.S.A., pp.3-71.

8. Artamonov, M.I., 1969. Treasures from Scythian Tombs, London, pp.162-176.

9. Littauer, M.A., 1971, "The figured evidence for a small pony in the Ancient Near East", Iraq, Vol. XXX111, Spring,pp. 24©30.

10.Bokonyi, S., "Once more on the osteological differences of the horse, the half-ass and the ass", 1972, in L. Firouz, The Caspian Miniature Horse of Iran, Field Research Projects, Miami, Florida pp12-23. Bokonyi, S. "Tepe Nushi-Jan" 1970, Second Interim Report in Roaf M. and Stronach, D. , Iran X1, p. 140.

11. Coon, C.S., 1950, Cave Explorations in Iran, 1949, Museum Monographs, Philadelphia, pp. 43-4.

12. Duerst, supra no. 4.

13.ï Hilzheimer, M., 1941, "Animal Remains from Tell Asmar". Studies in Ancient Oriental Civilization, No. 20, Oriental Institute, Chicago, pp. 8-14, Table 1.

14.ú Lundholm, B. 1949, Zoologista Bidrag, Fran Uppsala Band, XXV11, "Abstammug und Domestikation des Haupferdes" pp. 153-715. Bokonyi,S., supra no.3

16. Bokonyi, S. , personal communication.

17 Hosseinion, M. and Shahresevi, H., 1972, "A preliminary reporton the basic skeletal differences of the Caspian miniature horse as compared to other Iranian and European breeds", Appendix B in L. Firouz, The Caspian Miniature Horse of Iran, Field Research Projects,Miami, Florida, pp. 24-5.

18 Hosseinion and Shahresevi, supra no. 17.

19 Brown, W.R., 1948, **The Horse of the Desert**, New York; "The first point of excellence looked for is that the forehead should exhibit a bulge between the eyes up to a point between the ears and down across the first third of the nasal bones - a formation of the frontal and parietal bones in the form of a shield known as the 'jibbah'".

20. Alle and Schmidt, **Ecological Animal Geography**, 2nd Edition, 1965, New York.

21. Anderson, supra. no 5.

22. Anderson, supra no. 4.23 Bokonyi, supra no. 16.

24 Bokonyi, S. 1978, "Excavations at Tepe Nushi Jan, Part 3, The Animal Remains, A Preliminary Report, 1973, 1974" Iran, vol. 16, pp. 24-8.

25. Moorey, supra no.6.

26. Dalton, O.M., 1964, **The Treasure of the Oxus**, British Museum, London, XXXV11-XL.

27. Life Series (check reference)

28. Bokonyi, supra no. 24.

29 Chardin, Sir John,1927, **Travels in Persia**, Argonaut Press, reprint, London.

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