

THE SPREAD OF THE HORSE INTO SE ASIA:

EVIDENCE FROM VERNACULAR NAMES



Roger Blench
Kay Williamson Educational Foundation
8, Guest Road
Cambridge CB1 2AL
United Kingdom
Voice/ Fax. 0044-(0)1223-560687
Mobile worldwide (00-44)-(0)7967-696804
E-mail rogerblench@yahoo.co.uk
<http://www.rogerblench.info/RBOP.htm>

Cambridge, 17 January, 2010

TABLE OF CONTENTS

ABBREVIATIONS	1
1. INTRODUCTION.....	1
2. ARCHAEOLOGICAL AND ICONOGRAPHIC EVIDENCE.....	1
3. THE #<i>M-R-(l)</i> ROOT AND AN INTRODUCTION VIA CHINA.....	4
4. THE #<i>?KULUT</i> ROOT AND A CONNECTION WITH INDIC	7
5. THE DIFFUSION OF SANSKRITIC #<i>?ASEH</i>	9
6. OTHER ROOTS	10
7. CONCLUSIONS	10
REFERENCES.....	11

TABLES

Table 1. Reflexes of # <i>marij</i> , ‘horse’ in SE and Eurasian languages	4
Table 2. Reflexes of # <i>?kulut</i> , ‘horse’ in SE Asian languages	8
Table 3. Reflexes of # <i>?aseh</i> , ‘horse’, in SE Asian languages	9
Table 4. North Caucasian forms for ‘horse’	10
Table 5. Various roots for ‘horse’ in SE Asian languages	10

FIGURES

Figure 1. Carriage with two horses excavated at Yinxu, Henan, ca. 3300 BP.....	1
Figure 2. Decorated brick showing a three horse carriage, Eastern Han	2
Figure 3. Bronze cowrie container, Dian kingdom	2
Figure 4. Horse being led, depicted at Borobudur	2
Figure 5. Horse and chariot at Candi Brahma, Prambanan	3
Figure 6. Cham frieze showing chariot-mounted archer.....	3
Figure 7. War-horse on the Bayon	3
Figure 8. Horse in current use in highland Vietnam	4

MAPS

Map 1. Old World distribution of the # <i>m-r-(ŋ)</i> root and its possible diffusion.....	7
--	---

ABBREVIATIONS

#	quasi-reconstruction	C ₁	first consonant
*	regular reconstruction	mtDNA	mitochondrial DNA
AD	Anno Domini	N	nasal
BC	Before Christ	PAN	Proto-Austronesian
BP	Before present	PIE	Proto-Indo-European
C	consonant	V	vowel

1. Introduction

The exact location and date of the domestication of the horse still remains controversial. Ancestors of the domestic horse are spread across an extremely wide range of Eurasia, from Andalusia to Alaska, so biogeography is of limited help. Undisputed archaeological evidence for domestication goes back only as far as the chariot burials in the Urals ca. 2000 BC and using size-variability measures this can be pushed back to 4500 BP (e.g. Levine 1999a). However, claims have been made for far earlier dates. Prior to chariots, claims for domestication depend on the interpretation of types of stress on skeletal material. Anthony (2007: 200) thinks that evidence from bit-wear in the Pontic-Caspian region may point to an antiquity as much as 6000 BP. This is early for many observers, and there is a sceptical literature warning about making too many assumptions based on limited material (e.g. Levine 1999b who considers the Botai horses were still wild). It is certainly true, as Kelekna (2009) points out, that the earliest unambiguous representations of a rider mounted on a horse are from Afghanistan and date to only 2100–1800 BC. This dispute may not be easily resolved, as it is clear that humans managed wild horse populations prior to true domestication, and without the evidence of vehicles, the exact dates and locations are likely to remain disputed (e.g. Raulwing 2000; Levine 2003).

The most recent attempts to use mtDNA suggest that there may have been several parallel domestications with different wild horse populations recruited into the gene pool (Jansen et al. 2002), as has also been found for other major domestic species, such as the pig or the goat. A study by Lindgren et al. (2004) suggested that relatively few stallions were involved in the original breeding pool, compared with a more diverse range of mares; in other words, selective breeding took off relatively early.

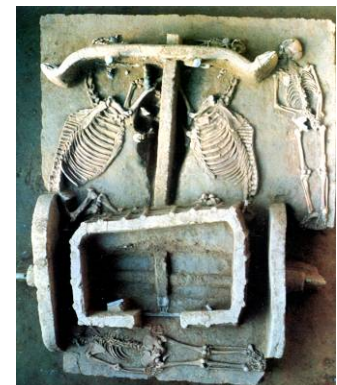
Going east, the spread of the horse into China is relatively well-dated both textually and archaeologically (Linduff 2003; Yuan et al. 2008). However, the further diffusion of the horse into SE Asia remains largely a black box. SE Asia is not the most attractive environment for the horse, as the high humidity increases pathogen load. As a consequence, horses are both more susceptible to humidity-related diseases, require more effective nutrition and gradually tend to become dwarfed (Blench 1993). Nonetheless, the positive aspects of horses, as transport animals and in warfare, clearly encouraged its gradual adoption, despite the difficulties of keeping equids alive. Indeed, the need to continually replenish the supply of horses stimulated a wide-ranging trade in fresh animals. The representations of horses on such monuments as Borobudur and Angkor Wat are a testimony to their importance by the time they enter the iconographic record.

Despite this, our understanding of the early period of the adoption of the horse in SE Asia is extremely limited. What papers exist on this topic (e.g. Clarence-Smith 2004) and papers in two edited books (Bankoff & Swart 2007; Fragner et al. 2009) confine themselves to the written historical record, which is relatively late. As a source of information, the linguistic evidence has so far gone largely unnoticed, although it has been of major importance in the debate about the role of horse domestication in the spread of Indo-European (e.g. Hänsel & Zimmer 1994). Indeed, the focused viewpoint of Indo-Europeanists has been such that non-Indo-European languages have been largely ignored. Anthony (2007) never even considers Kartvelian and North Caucasian, language phyla squarely in the centre of his proposed domestication area. This paper analyses the linguistic evidence for the spread of the horse in East and Southeast Asia, and what this may say about the early movement of horses both through Central Asia and across the Indian Ocean.

2. Archaeological and iconographic evidence

The best documented route into SE Asia is undoubtedly via China and there is every reason to think that pastoral peoples, herding horses and other steppe species have been on the northern borders of China for a long period. Osteological evidence for the domestic horse is largely confined to China, where it appears rather suddenly in the archaeological record at ca. 3300 BP, associated with wheeled vehicles (Shaughnessy 1988; Yuan et al. 2008). Figure 1 shows a carriage with two horses excavated at Yinxiu, Henan, ca. 3300 BP and soon after this many such burials are found in China (Yuan et al.

Figure 1. Carriage with two horses excavated at Yinxiu, Henan, ca. 3300 BP



Source: Yuan et al. (2008)

2008). Figure 2 shows a decorated brick excavated in 1955 in Qingbai village near Chengdu showing a three horse carriage of the Eastern Han period (25-220 AD) which gives a valuable impression of the way these carriages were constructed and driven.

There is little doubt that once wheeled vehicles were adopted they spread rapidly both east and west and introduced a transport revolution in both Europe and East Asia (Barbieri-Low 2000). Chariots appear in both China and Ancient Greece at almost the same time (i.e. ca. 1300 BC). The horse used to be considered the first among the six livestock species in ancient China and an administration system for horse management was established over 3000 years ago (Shao 2003).

Figure 3. Bronze cowry container, Dian kingdom



motif. Wheeled vehicles are not generally shown on the bronzes and similarities in motifs with Scythian art (felids attacking oxen, for example) have suggested the characteristic iconography of Dian originated in Central Asia.

For SE Asia, the archaeological record is weak to non-existent for many regions, and textual and iconographic evidence is more informative than excavation. We know that attempts to bring horses south must have begun quite early, as an imperial edict of 185 BC forbade further export of horses to Việt Nam, implying that some had already been traded there (Higham 1989: 289). However, horses must have been exported from other regions, perhaps south from northwest China or from India or Indian-influenced regions as they begin to appear in iconographic representations, with the rise of early states. Zhou Daguan, a Chinese traveller who visited Angkor in 1296, records that the horses, though small, were used in processions alongside elephants (Harris 2007).

Figure 2. Decorated brick showing a three horse carriage, Eastern Han



Source: Author photo, Sichuan Provincial Museum

Various authors have suggested this move eastwards was prompted by the search for copper/bronze resources in regions such as the Altai and modern-day Kazakhstan (e.g. Anthony 1998). Horses were clearly of considerable importance in the (non-Chinese) Dian kingdom (滇國, 滇王國), which flourished in present-day Yunnan between 279 and ca. 109 BC and is also known for its technically elaborate bronzes. Figure 3 shows a bronze cowry container from the Dian kingdom excavated in Burial No. 10, Shizhaishan, Jinning County with a striking horse and rider

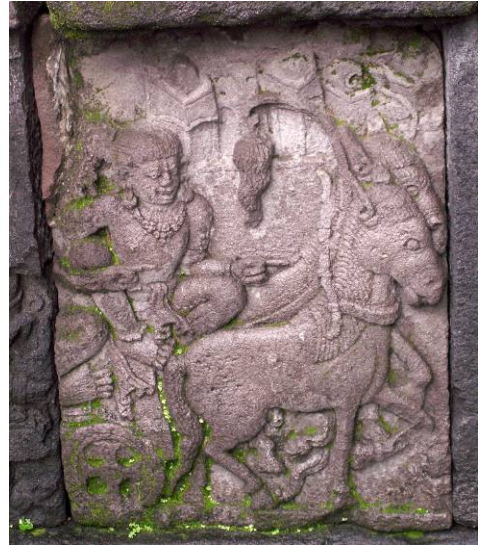
Figure 4. Horse being led, depicted at Borobudur



Source: Author photo

The status of the horse meant that it was represented on all the major monumental sites in SE Asia. For example, Figure 4 is a frieze at Borobudur (8th century) in Central Java showing a horse being led. Horses are extremely rare in these images compared with elephants, suggesting that the horse was still a rare exotic and the elephant the major working species at this period. A horse and chariot is also depicted at Candi Brahma, Prambanan, which is some two centuries earlier (Figure 5). However, Prambanan is so suffused with copies of Indian iconography that

Figure 5. Horse and chariot at Candi Brahma, Prambanan



Source: Author photo

we cannot be sure this frieze represents anything the carver actually saw in daily life. Figure 6 shows a representation of a war-horse on the Bayon, part of the Angkor complex, dating to the 11th century. It is also likely that horses were known in the Cham kingdoms of central Việt Nam, as horse-

Figure 6. War-horse on the Bayon



Source: Author Photo

drawn chariots are illustrated on friezes (Figure 7). However, the characteristic Indic stance of the archer again suggests that these representations should not be taken too literally.

Figure 7. Cham frieze showing chariot-mounted archer



Source: Author photo, Da Nang Champa Museum

Until recently, horses were only found in the more northern parts of SE Asia, Northern Thailand, Vietnam and China, but it seems they were slowly adapted to high humidity, as in the subhumid zone of West Africa. Figure 8 shows a typical horse from highland Việt Nam, where they remain popular in steep rocky areas. For the more recent period, Clarence-Smith (2004) provides an overview of the written sources. Following European maritime contact, horses were brought to the wetter areas of Cambodia and Vietnam to pull carts, and for riding and they have persisted, although they are now threatened by motorised transport.

3. The #*m-r-(ŋ)* root and an introduction via China

The single most widespread root for ‘horse’ globally is #*m-r-(ŋ)* which is recorded from the British Isles to Korea, into mainland SE Asia and also sub-Saharan Africa. It appears to be found in scattered South Asian languages but it will be argued that this is a coincidental similarity. With a distribution like this, it might seem to have spread out from a central point in the steppes both east and west, to account for this. Oddly, however, Indo-European words for ‘horse’ in the centre are apparently quite different (Hänsel & Zimmer 1994) and this root seems to have no reflexes in Kartvelian or North Caucasian. Table 1 shows its distribution;

Figure 8. Horse in current use in highland Vietnam



Table 1. Reflexes of #*marin*, ‘horse’ in SE and Eurasian languages

Phylum	Branch	Language	Attestation	Comment	Source
Altaic	Mongolic	Mongolian	*mori(n)		Starostin et al. (2002)
Altaic	Tungusic	Proto-Tungusic	*murin		Starostin et al. (2002)
Altaic	Koreanic	Korean	mal (말)		Starostin et al. (2002)
Altaic	Koreanic	Middle Korean	mār		
Japonic	Japonic	Japanese	uma (うま)		Schuessler (2007)
Sino-Tibetan	Sinitic	OCM	*mrâ?		
Sino-Tibetan	Sinitic	OC	*mraag (马)		Zhou (2002)
Sino-Tibetan	Sinitic	Chinese	mǎ (馬)		Allen (2007)
Sino-Tibetan	Bai	Bai	mɛ ³³		
Sino-Tibetan	Tujia	Tujia	meŋ ³ , ma ⁴		Brassett (2004)
Sino-Tibetan	Nungish	Trung	mu ³¹ gu ⁵³		Matisoff (2003)
Sino-Tibetan	Tibetic	Written Tibetan	mrāŋ		K & S (1999)
Sino-Tibetan	Loloish	Sida	mi ¹¹ ũ ¹¹		
Sino-Tibetan	Loloish	Lahu	mû		Matisoff (2006)
Sino-Tibetan	Loloish	Nusu	mri ³¹		Bradley (1997)
Sino-Tibetan	Loloish	Akha	maN ³		Bradley (1997)
Sino-Tibetan	Loloish	Phu Ka	mu ³¹		Edmondson (n.d.)
Sino-Tibetan	Loloish	Mantsi Muyang	moŋ ³¹		Edmondson (n.d.)
Sino-Tibetan	Loloish	Lhaovo	myoŋ L		Sawada (2004)
Sino-Tibetan	Loloish	Burmese	mraŋ		Bradley (1997)
Sino-Tibetan	Loloish	Burmese	myí မြိ		MLC (1993)
Sino-Tibetan	Kachinic	Jingpho	gumrà		Maran (1979)
Sino-Tibetan	Kuki-Chin	Lai	ràŋ		VanBik (2007)
Sino-Tibetan	Luish	Cak	`mraŋ	< Burmese ?	Bernot (1966)

Phylum	Branch	Language	Attestation	Comment	Source
Sino-Tibetan	Bodish	Kurtöp	mai	Archaic	Hyslop (p.c.)
Sino-Tibetan	Mishmi	Idu	maro		Pulu (2002)
Sino-Tibetan	Chepangic	Chepang	sěraŋ		Matisoff (2003)
Hmong-Mien		PMH	myæn ^B		Ratliff (in press)
Hmong-Mien	Mien	Mun of Hainan	maa ³¹	< Chinese	Shintani & Yang (1990)
Hmong-Mien	Mien	Mun of Funing	ma ⁵³	< Chinese	Shintani & Yang (2008)
Hmong-Mien	Mien	Biao Min	ma ⁴		Solnit (1985)
Hmong-Mien	Mien	Pa Hng	mhi ⁴²⁽⁴⁾		Wang & Mao (1995)
Austroasiatic	Khmeric	Khmer	maa ម៉ា		Headley et al. (1997)
Austroasiatic	Vietic	PV	*m-ŋəːʔ		Ferlus (ined.)
Austroasiatic	Vietic	Thavung	maɑ ²		Ferlus (1996b)
Austroasiatic	Vietic	Vietnamese	ngưɑ		Ferlus (ined.)
Austroasiatic	Vietic	Malieng [Kha Pong]	maŋəː ³		Ferlus (ined.)
Austroasiatic	Vietic	Tho	ŋia ⁴		Ferlus (ined.)
Austroasiatic	Palaungic	Rianglang	məraŋ		
Austroasiatic	Palaungic	Proto-Waic	*mroŋ		Dif1980
Austroasiatic	Mangic	Bolyu	lyiŋ ³³		Edmondson (1995)
Austroasiatic	Mangic	Bugan	lan ³¹		Li (1996)
Austroasiatic	Palaungic	Kontoi	ŋrəŋ ²		Paulsen (1989)
Austroasiatic	Palaungic	Samtao	mproŋ ²		Paulsen (1989)
Austroasiatic	Khmuic	P-Khmuic	*hmbran		Premisrat (2002)
Austroasiatic	Khmuic	Phong	rma		The (2000)
Austroasiatic	Khmuic	Khabit	maa	< Daic	K & S (1999)
Austroasiatic	Khmuic	Pray	praŋ		Filbeck (1978)
Austroasiatic	Monic	Lawa	mbrəŋ	Huf1971	
Daic	Kra	Gelao	nteau		Ostapirat (2000)
Daic	Kra	Lachi	ŋ		Ostapirat (2000)
Daic	Kra	Buyang	ŋaa		Ostapirat (2000)
Daic	Hlaic	Proto-Hlai	*ŋaaʔ		Norquest (2007)
Daic	Be-Tai	Be	ma ⁵	< Chinese	Hashimoto (1980)
Daic	Tai	Lu	ma ¹¹	< Chinese	K & S (1999)
Daic	Tai	Lao	hmaa H1		K & S (1999)
Daic	Tai	Lao	mā: ໓໑	< Chinese	Kerr (1972)
Daic	Tai	Shan	maa ⁵ မာ	< Chinese	Moeng (1995)
Daic	Tai	Aiton	maa ³	< Chinese	M & T (2001)
Nahali		Nahali	mav	< Dravidian	
Dravidian	South	Tamil	mā	animal, beast (esp. horse, elephant)	DEDR
Dravidian	South	Kol	māg	deer	DEDR
Dravidian	South	Ko.	maːv	deer	DEDR
Dravidian	South	Telugu	māvu	horse	DEDR
Afroasiatic	Cushitic	Beja	mehú, mehir	foal	<Arabic
Afroasiatic	Berber	Siwa	agmaar pl. əgmarən	horse	

Phylum	Branch	Language	Attestation	Comment	Source
Afroasiatic	Semitic	Arabic	muhr مهر	foal	
Indo-European	Germanic	English	mer [mare]		
Indo-European	Germanic	Old German	High merha		
Indo-European	Germanic	Icelandic	marr		
Indo-European	Celtic	Old Irish	marc	horse	
Nilo-Saharan	Eastern Sudanic	Ajang Nubian	mala	mare	Jakobi (p.c.)

Much can be deduced from the pattern of these terms. The most likely origin is Central Asia; linguistic geography points strongly to Mongolic speakers. Janhunen (1998) pointed out that its absence in Turkic (proto-Turkic **junt*) suggests that it is not an Altaic root, but a series of ancient loanwords. The uncertainty about the final velar points strongly to an original velar nasal, /ŋ/, as is attested in Written Tibetan and Old Burmese. Middle Korean looks like a direct loan from Altaic, with Modern Korean perhaps a secondary borrowing from Chinese. Japanese is probably also a late adoption from Sinitic. Most of the SE Asian Sino-Tibetan languages appear to have acquired the word prior to its reduction in Chinese, as they retain word-medial /r/. Chinese subsequently reduces the root to a simple CV, and this is then responsible for a wave of secondary borrowing, hence some of the Loloish and Bai forms. This late form is also borrowed heavily into Hmong-Mien, and it therefore seems somewhat doubtful that a proto-Hmong-Mien for ‘horse’ reconstruction is valid. Interestingly, the Tocharian languages in NW China (Tocharian A *yuk* and B *yakwe*) appear to reflect the most common Indo-European root for ‘horse’ **h₁ek’wo-* and are not a source for Sino-Tibetan forms.

Austroasiatic languages show a similar mixed pattern of chronological strata in borrowing. Some, such as Palaungic and Khmuic, may have borrowed the root from Burmese or Tibetan, perhaps via other Sino-Tibetan languages. The cluster *mbr-* developed form *mr-* and then eroded following different pathways to produce a variety of synchronic surface forms. By contrast, Vietic and Khmer seem to be recent Chinese borrowings. Just to add to the complexity, it is likely that there are secondary borrowings from Daic into Austroasiatic. Hence the Khmuic Khabit has *maa*, while other Khmuic languages attest the *m-r-ŋ* sequence characteristic of borrowing from Old(er) Chinese.

The Kra and Hlai branches of Daic are somewhat puzzling, as the initial *m-* has become *ŋ-* and yet in Tai proper, where it has a very uniform segmental morphology, the forms appear to correspond to Sinitic. This is an unusual sound-correspondence, although some Vietic languages also have initial *ŋ-*. It seems likely that a form with initial *ŋ-* existed in a language present in South China which was borrowed into both early Daic and Vietic and has since disappeared. The *maa* forms in Tai are probably borrowings from Sinitic rather than descendants of Kra. Hmong-Mien adapts the root from an unknown source, apparently not Sinitic, but presumably a language with *-r-*, which later weakens to *-y-*.

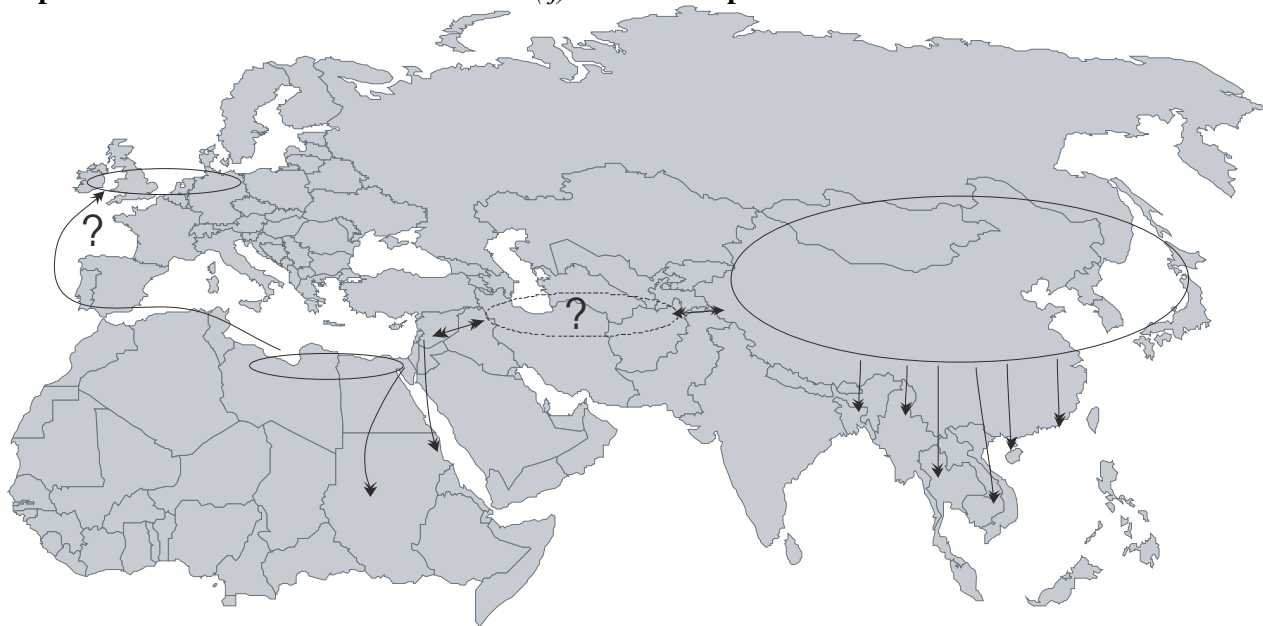
Surprising as it seems at first sight, the apparent Dravidian cognates are probably coincidence. The original meaning in Dravidian seems to have been broad, perhaps a generic for ‘animal’ or perhaps ‘Sambar deer’ and the root the longer and somewhat different *#mavu* (Burrows & Emeneau 1984). It shifted to ‘horse’ in some languages and coincidentally deleted the second syllable, thereby coming to resemble Chinese. The language isolate Nahali probably borrowed it Telugu or a similar language.

The most puzzling set of cognates are those in Celtic and Germanic. They resemble the East Asian terms too closely for this to be coincidence, yet it is difficult to imagine what process of contact would have excluded other Indo-European languages geographically closer to Mongolic. The most likely explanation is that the *#m-r* root was transmitted westwards via early contact between Afroasiatic and Altaic languages. It is conceivable that prior to the expansion of Arabic, there was contact between Mongolic and Semitic or other early Afroasiatic somewhere near the Caspian Sea. The *#m-r* root would have been transmitted through the

Near East, and into the Berber languages of North Africa. Contact with the Maghreb through the export of horses could have been responsible for the presence of this root in Celtic and thence across the North Sea to Germanic. This is the same monkish (?) contact that allowed the borrowing of the North African frame-drum which became the Celtic *bodhran*. The Nubian reflex is most probably a borrowing from a North African Berber language.

Map 1 shows the Old World distribution of the *#m-r-(ŋ)* root and the possible pathways of its diffusion. It should be emphasised that some of these are highly speculative; they are offered as a hypothesis awaiting more concrete data.

Map 1. Old World distribution of the *#m-r-(ŋ)* root and its possible diffusion



4. The *#?kulut* root and a connection with Indic

The second likely route into SE Asia for the horse is early contact with Indic peoples. The horse is strongly associated with the entry of Indo-Aryan peoples into India, and as Indian mariners and missionaries spread out in SE Asia, they carried both actual horses but also ideas about the religious significance of the horse. The exact beginning date for the process of Indianisation in mainland SE Asia remains disputed, but it is now thought that Indian ships were seeking commercial routes as early as the second century BC. The isthmus of Kra was an important transshipment point, as trade goods could be exchanged between the Indian Ocean and the Gulf of Thailand, thus making contact with goods coming from China (Bellina & Glover 2004; Munoz 2006). Unfortunately, the likely disposition of languages in the isthmus would have been rather different at this period so linguistic traces of these movements may be limited. However, we know that the process of Indianisation begins shortly after this, because monuments with Indic inscriptions and iconography start to appear by the second century AD.

There are two linguistic pieces of evidence attesting to Indic influence, a well-known Sanskrit root *#?aseh* (§5.) and a widespread but more puzzling root *#?kulut* which may be attested in Hittite and satisfyingly has North Caucasian cognates. Its original meaning is probably ‘colt’, ‘foal’ and it retained this meaning when it spread westwards towards Germanic. However, once borrowed into Indic languages, it seems to have become a generic for ‘horse’ with a diversity of specific referents in individual languages. It may well have originated somewhere in the Pontic-Caspian region and spread both east and west. This root is shown in Table 2;

Table 2. Reflexes of #?kulut, ‘horse’ in SE Asian languages

Phylum	Branch	Language	Attestation	Comment	Source
Sino-Tibetan	Sinitic	Chinese	jū (駒)		
Sino-Tibetan	Sinitic	MC	kyu		
Sino-Tibetan	Sinitic	OCM	*ko		
Sino-Tibetan	Loloish	Gong	gɔŋ. ³³	?	Mayuree (2007)
Sino-Tibetan	Tibetic	Monpa	kur-ta		
Sino-Tibetan	Tibetic	Memba	tah		Badu (2002)
Sino-Tibetan	Tibetic	Written Tibetan	rta		Matisoff (2003)
Sino-Tibetan	Tibetic	rGyalhang	tā		Krisadawan (2000)
Sino-Tibetan	Bodish	Manange	ta		Hildebrandt (2003)
Sino-Tibetan	Magaric	Magar	rta		Grunow-Hårsta (2008)
Sino-Tibetan	Bodish	Kurtöp	ta	? < Tibetan	Hyslop (p.c.)
Sino-Tibetan	Naga	Konyak	koi		Matisoff (2003)
Sino-Tibetan	Naga	Garó	gora, gura	< Bengali	Burling (2003)
Sino-Tibetan	Tangkhul	Lushai	sakor		Lorrain (1940)
Sino-Tibetan	Kuki-Chin	P-Tangkhul	*si.kol		Mortensen (2003)
Sino-Tibetan	Tani	P-Tani	*ku		VanBik (2007)
Sino-Tibetan	Tani	Galo	gurée	< Assamese	Post (2003)
Sino-Tibetan	Tani	Puroik	gura	< Assamese	Tayeng (1990)
Austroasiatic	Aslian	Kensiw	kudah	? < Malay	Bis1994
Austroasiatic	Nicobarese	Car	kōra	? < Hindi	Das (1977)
Austroasiatic	Khasian	Khasi	kulai		Singh (1906)
Austronesian	Philippines	Maranao	koda?	< Malay	Blust (2002)
Austronesian	Philippines	Tiruray	kuda?	< Malay	Blust (2002)
Austronesian	Malayic	Malay	kuda	horse	
Austronesian	Timor	Tetum	kuda	< Malay	Blust (2002)
Dravidian		Tamil	kutirai குதிரை	horse	Burrow and Emeneau (1984:#1711)
Dravidian		Malayalam	kutira	horse, cavalry	Burrow and Emeneau (1984:#1711)
Dravidian		Telugu	kudaramu కుదరము	horse	Brown (1903)
N. Caucasian		Chechen	gila	horse	
N. Caucasian		Tsez	gulu	stallion	
Indo-European		Hittite	kurka	foal	
Indo-European	Indo-Aryan	Sanskrit	ghota-	nag	
Indo-European	Indo-Aryan	Hindi	ghor		
Indo-European		Greek	kurnos [κῦρνος]	foal	
Indo-European	Germanic	English	kolt [colt]		
Indo-European	Germanic	Old Frisian	hors		
Indo-European	Albanian	Albanian	kalë		
Indo-European	Baltic	Lithuanian	kumelys		
Indo-European	Iranian	Tajik	kurra	foal	

This root is apparently borrowed into Indic languages, presumably at the same time that the horse entered India. Parpola (1988) points out that there is no clear archaeozoological evidence for horses antedating 2000 BC in the Indian archaeological record, and given the centrality of the horse to Indo-Aryan culture, this suggests their presence cannot be significantly older. If the root is borrowed into Indic languages it would also have been transmitted to Dravidian, and also into languages of NE India. Khasi is likely to be an old borrowing from an Indic language, as are the many forms in Sino-Tibetan languages. If so, this could also be

the source of one of the modern Chinese terms. If the Old Chinese reconstruction **ko* is accurate, then this root may have reached Sinitic through the languages of Assam¹. Interestingly, some of these forms provide a clue to the origin of the Tibetan term, which has itself been the subject of secondary borrowing into neighbouring languages. Conservative forms such as Monpa *kurta* are shortened to *rta* and thence to *ta* in Bodish languages such as Kurtöp and Memba. Coblin (1974) wrongly connects the Tibetan word with the previous *#m-r-(ŋ)* root.

In the other direction, the widespread Austronesian forms appear to be secondary borrowings from Malay *kuda* ‘horse’. Blust (2002) has no etymology for this word but it is almost certainly a borrowing from Dravidian, perhaps Telugu. In relation to island SE Asia, Blust (2002: 98) says; ‘Cognates of Malay *kuda* ‘horse’ are found in a number of the languages of insular Southeast Asia, as in Maranao *koda?*, Western Bukidnon Manobo, Tiruray, Tagabili *kuda?*, ‘horse’. All of these are clearly loanwords from Malay.’

As for the westward spread of this term, this is discussed by Mayrhofer (1990:517). English ‘colt’ is said by the OED to be of ‘obscure origin’, but it seems clear that it is cognate with Indo-Iranian and reflexes in Lithuanian and Albanian provide a root into Germanic. Indeed, German **hors* may be an alternative reflex of the same root.

5. The diffusion of Sanskrit *#ṛaseh*

The second Indic root in SE Asia is *#ṛaseh* (Headley 1978). Indo-European scholarship usually connects this root with the standard PIE reconstruction **h₁ekʷo-* but it is here suggested that its geographical distribution points to a quite different history. Table 3 shows that it is common in Austroasiatic, occurring in Monic, Khmer, Katuic, North Bahnaric and Palaungic. Pali looks like the most immediately comparable source for these languages, but if so, it must have been borrowed once, assumed a characteristic Austroasiatic shape and then been reborrowed into other branches, prior to the period of the Chamic incursions.

Table 3. Reflexes of *#ṛaseh*, ‘horse’, in SE Asian languages

Phylum	Branch	Language	Attestation	Comment	Source
Austroasiatic	Monic	Mon	cheh ခေ		Shorto (1962)
Austroasiatic	Monic	Nyah Kur [Central]	chēh		Diffloth (1984)
Austroasiatic	Khmeric	Khmer	seh សេ		Headley et al. (1997)
Austroasiatic	Pearic	Samre	seh ^A	? < Khmer	Ploykaew (2001)
Austroasiatic	Bahnaric	PB	*ṛəṣəh		Sidwell (1998: 459)
Austroasiatic	Bahnaric	Bahnar [Golar]	həseh		Ban1979
Austroasiatic	Bahnaric	Alak	seh		Huffman (1971)
Austroasiatic	Katuic	Kuy	ṛaasəh		T & G (1978)
Austroasiatic	Katuic	Pacoh	ṛaseh		Watson (n.d.)
Austronesian	Chamic	Proto-Chamic	*ṛaseh		Thurgood (1999)
Daic	Tai	Lao	ṛətsəwa ອັດສະວະ	< Sanskrit	Kerr (1972)
Daic	Tai	Shan	ṛa ¹ s ^h aa ⁵ ကသု	< Pali	Moeng (1995)
Indo-European	Indo-Aryan	Sanskrit	ásva- अश्व		
Indo-European	Indo-Aryan	Pali	assa		
Indo-European	Indo-Iranian	@ uḍṛsəm	aspa-		
Indo-European	Luvian	Hieroglyphic Luvian	azu(wa)-		

¹ I am assuming here that Sinitic is cognate and not an undetected version of Indo-European **h₁ekʷo-*

Phylum	Branch	Language	Attestation	Comment	Source
Indo-European	Baltic	Lithuanian	asva	mare	

N.B. Indo-European citations from Mallory (1996) and online references

In Daic languages, these look like learned borrowings, as Lao, Thai and Shan also use the Sinitic *#maa* for everyday purposes (Table 1).

The Lithuanian, Luvian and Avestan attestations of this root shows that it must have previously had a wide regional presence, and it certainly resembles North Caucasian roots for ‘horse’. Table 4 shows the reconstructed forms for the various subgroups of North Caucasian, as established by the late Sergei Starostin and made available on the ‘Starling’ website².

Table 4. North Caucasian forms for ‘horse’

Subgroup	proto-form
Proto-Avaro-Andian	*ʔič ^w a
Proto-Tsezian	*če (?)
Proto-Lak	č ^w u
Proto-Dargwa	*ʔurči
Proto-Lezghian	*ʔinš ^w (~ h-)
Proto-Khinalug	pši
Proto-West Caucasian	*č ^w ə
Proto-North Caucasian	*ɦi[n]čwĩ (~ -ě)

The connection is far from certain, although the labialisation of C₁ does parallel the dental fricative in Sanskrit, which typically weakens to a semi-vowel in related reflexes.

6. Other roots

Table 5 shows a variety of residual lexemes for ‘horse’ in SE Asian languages which show no clear pattern;

Table 5. Various roots for ‘horse’ in SE Asian languages

Phylum	Branch	Language	Attestation	Comment	Source
Sino-Tibetan	Tujia	Tujia	ge ³		Brassett & Brassett (2004)
Sino-Tibetan	Qiangic	Qiang	wə		LaPolla (2003)
Sino-Tibetan	Loloish	Naxi	zua ³³		Hashimoto (1988)
Sino-Tibetan	Loloish	Phola	ŋɔ ³¹		Pelkey (2009)
Sino-Tibetan	Karenic	Kayah Li	təsi		Solnit (1997)
Sino-Tibetan	Bugun	Bugun	sthū	? cf. Munda	Dondrup (1990)
Sino-Tibetan	Hrusish	Hruso	fu-gra	<fu ‘mithun’	Simon (1993)
Sino-Tibetan	Kiranti	Bantawa	k ^h iyiŋma		Doornenbaal (2009)
Austroasiatic	Khmeric	Khmer	toʔron ត្បែង		Headley et al. (1997)
Austroasiatic	Munda	PM	*sadom	? cf. Bugun	Stampe archive

Khmer toʔron is puzzling; the –ron element appears to be cognate with similar stems in other Austroasiatic languages (Table 1) but the to- syllable does not occur elsewhere. A source of words for horse in island SE Asia is Old Javanese *ajar-an*, which is essentially the verb ‘to learn’ but is widely borrowed as an unanalysable term in Sulawesi and the Lesser Sundas (Blust 2002: 98).

7. Conclusions

Archaeozoological evidence for the spread of the horse in SE Asia is virtually absent; iconography, textual data and comparative linguistics can help reconstruct a richer unseen history. Comparative lexical data shows that the most important source of horses on mainland SE Asia is China, and that in turn horses seem

² <http://starling.rinet.ru>

to have arrived in China fairly abruptly, along with wheeled vehicles from northern nomadic populations of Altaic affiliation. The tentative export of horses south from Yunnan probably began as early 200 BC, but disease limited their spread. Horses and horse imagery are also brought separately through Indian contact, both along maritime routes but apparently through contact with NE India. The early iconography of the horse in SE Asia can be misleading, since much of the imagery refers to stereotyped Indian mythological scenes. Until later it is less clear what role the horse played in everyday life. However, by the time of the Angkor and Pegu kingdoms, the horse clearly has been integrated with the ceremonial and military systems. Further research on both the archaeological context of horses and in particular on the DNA of the rapidly disappearing small breeds of horse still found in highland areas of SE Asia would clearly be desirable.

References

- Anthony, D.W. 1998. The opening of the Eurasian steppe at 2000 BCE. in: *The Bronze Age and Early Iron Age peoples of Eastern Central Asia*. Volume I. Victor Mair ed. 94-113. Washington, DC: Institute for the Study of Man.
- Anthony, D.W. 2007. *The horse, the wheel and language*. Princeton: Princeton University Press.
- Bankoff, Greg & Sandra Swart eds. 2007. *Breeds of Empire: The Invention of the Horse in Southeast Asia and Southern Africa 1500-1950*. (NIAS Studies in Asian Topics). Copenhagen: NIAS Press.
- Barbieri-Low, A.J. 2000. Wheeled vehicles in the Chinese Bronze Age (c. 2000-741 B.C.). *Sino-Platonic Papers* 99: 1-97.
- Bellina, Bérénice & Ian Glover 2004. The archaeology of early contact with India and the Mediterranean world, from the fourth century BC to the fourth century AD. In: I. Glover & P. Bellwood eds. *Southeast Asia: from prehistory to history*. 68-88. Abingdon: RoutledgeCurzon.
- Blench, Roger M. 1993. Ethnographic and linguistic evidence for the prehistory of African ruminant livestock, horses and ponies. In: *The Archaeology of Africa. Food, Metals and Towns*. eds. Shaw, T., Sinclair, P., Andah, B. and Okpoko, A. 71-103. London: Routledge.
- Blust, Robert 2002. The History of Faunal Terms in Austronesian Languages. *Oceanic linguistics*, 41(1):89-139.
- Burrow, T. & Murray B. Emeneau 1984. [2nd ed] *A Dravidian etymological dictionary*. Oxford: Clarendon Press.
- Clarence-Smith, William Gervase 2004. Horse breeding in Mainland Southeast Asia and its borderlands. in *Smallholders and stockbreeders; histories of foodcrop and livestock farming in Southeast Asia*. Peter Boomgaard and David Henley, eds. 189-210. Leiden: KITLV Press.
- Coblin, Weldon South 1974. An early Tibetan word for horse. *Journal of the American Oriental Society*, 94(1):124-5.
- Fragner, B. Ralph Kauz, Roderich Ptak, Angela Schottenhammer 2009. *Pferde in Asien: Geschichte, Handel Und Kultur. Horses in Asia: History, Trade and Culture*. Wien: Denkschriften Der Phil.-Hist. Klasse. [Austrian Academy of Sciences Press]
- Hänsel, B. and S. Zimmer, eds. 1994. *Die Indogermanen und das Pferd: Festschrift für B. Schlerath (Akten des Internationalen interdisziplinären Kolloquiums)*. Budapest: Archaeolingua 4.
- Harris, Peter 2007. *Zhou Daguan: a record of Cambodia, the land and its people*. Chiang Mai: Silkworm Books.
- Headley, Robert K. Jr. 1978. Proto-Pearic and the Classification of Pearic. In *Southeast Asian Linguistic Studies presented to André-G Haudricourt*. Ratanakul, Thomas and Premisrat eds., 355-88. Bangkok: Mahidol University.
- Higham, Charles 1989. *The archaeology of mainland Southeast Asia: from 10,000 BC to the fall of Angkor*. Cambridge: Cambridge University Press.
- Janhunen, Juha 1998. Ethnicity and Language in Prehistoric Northeast Asia. in R.M. Blench and M. Spriggs (eds) *Archaeology and Language II*, 195-208. London: Routledge.
- Jansen, T., Foster, P., Levine, M.A., Oelke, H., Hurles, M., Renfrew, C., Weber, J. & Olek, K. 2002. Mitochondrial DNA and the origins of the domestic horse. *Proceedings of the National Academy of Sciences of the United States of America*, 99: 10905-10910.
- Kelekna, Pita 2009. *The horse in human history*. New York: Cambridge University Press.
- Levine, Marsha A. 1999a. The origins of horse husbandry on the Eurasian Steppe. Late Prehistoric Exploitation of the Eurasian Steppe. M. A. Levine, Y. Y. Rassamakin, A. M. Kislenco and N. S. Tatarintseva. Cambridge, McDonald Institute: 5-58.

- Levine, Marsha A. 1999b. Botai and the Origins of Horse Domestication. *Journal of Anthropological Archaeology*, 18(1):29-78.
- Levine, Marsha A. 2003. Focusing on central Eurasian archaeology: east meets west. *Steppe Adaptation and the Horse*. M. Levine, C. Renfrew and K. Boyle. Cambridge, McDonald Institute for Archaeological Research: 1-7.
- Lindgren Gabriella, Niclas Backström, June Swinburne, Linda Hellborg, Annika Einarsson, Kaj Sandberg, Gus Cothran, Carles Vilà, Matthew Binns & Hans Ellegren 2004. Limited number of patrilineal lines in horse domestication. *Nature Genetics*, 36: 335 – 336.
- Linduff, K.M. 2003. A walk on the wild side: late Shang appropriation of horses in China. *Prehistoric Steppe Adaptation and the Horse*. M. Levine, C. Renfrew and K. Boyle 139-162. Cambridge: McDonald Institute for Archaeological Research.
- Munoz, Paul Michel 2006. *Early Kingdoms of the Indonesian Archipelago and the Malay Peninsula*. Singapore: Editions Didier Millet.
- Parpola, Asko 1988. The coming of the Aryans to Iran and India and the cultural and ethnic identity of the Dāsas. *Studia Orientalia*, 64:195-302.
- Raulwing, P. 2000. in *Horses, Chariots and Indo-Europeans*. Budapest: Archaeolingua.
- Shao, B.Y. 2003. Six livestock species and society in early Qin Dynasty. *Agricultural Archaeology*, 1: 239-254. [in Chinese]
- Shaughnessy, E.L. 1988. Historical perspectives on the introduction of the chariot into China. *Harvard Journal of Asiatic Studies* 48: 189-237.
- Yuan Jing, Han Jianlin, Roger Blench 2008. Livestock in ancient China: an archaeozoological perspective. In: Alicia Sanchez-Mazas, Blench, R.M., Ross, M.D., I. Peiros & Marie Lin eds. *Human migrations in continental East Asia and Taiwan. Matching archaeology, linguistics and genetics*. 84-104. London: Routledge.