

Identification of Mule (*Equus Hemionus*) as *Aśvataraya* in Ancient Sri Lanka by Unearthed Bones and Literature

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Introduction

The main objective of this study is to infer the presence of the mule (*Equus hemionus*) in the ancient Sri Lanka. The first ever archaeological identification of mule bones in Sri Lanka was carried out by the author (Chandraratne, 2005). The ancient Sri Lankan literature cites two kinds of horses, horses (*Assa/Aśva*) and Sind horses (*Saindhava*) that are identified referring to archaeological and literary sources.

Material

The sample consists of an isolated premolar of *Equus* from *Jetavana Pilimage* (JPL). Other sources of data are skeletal measurements of the modern horse, published archaeological data on the mule (Meadow and Patel, 1997) and ancient Sinhalese and Pali literature (*Ummagga Jataka*, 1966, *Jatakapali*, 1939).

Methodology

New Archaeological Theory advocated 'generalization of data' which came to be regarded as archaeology's supreme achievement (Redman, 1973). This methodology was used for the above literary evidence. The application of osteo-archaeological measurements which is employed for species separation, size variation and sex determination (Uermann, 1978) was used for the species separation between horse and mule. Specifically, the morphological features were compared with the osteometric data of *equid* teeth from the *Jetavana*, and *Surkotada*, and modern horses were used for the confirmation of this research.

Results

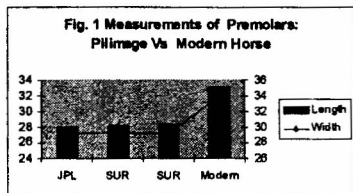


Figure 1

Figure 1 shows that a premolar of *Equus* species from the *JPL* is smaller in size to modern horses, but is metrically similar to that of *Surkotada*. The species at *Surkotada* are identified as mule (*Equus hemionus*). The *JPL* sample is similar to the mule hence it can be identified as the mule. Literary sources provide the words *Ājānīya Aśva*, *Sindhava* and *Aśvatarā (Sindhava?)* to identify the mule. In the *Jatakapali* (1932) and the *Ummagga Jataka*, mule is referred to *Sindhava*, and it is also mentioned that *Ājānīya Aśva* means an excellent (true) horse, i.e. not hybrid with other species.

Discussion

The hybrid species of equids may be described as a truly man-made animal. The mule's mother is mare (*Equus caballus*) while it is perhaps as the father mule (*Equus hemionus*) that it has made its greatest contribution to human economies in a way similar to that of the donkey (*Equus asinus*). It is a perfect example of hybrid vigour as a beast of burden and is more sure-footed than either the ass or the horse (Clutton-Brock, 1987). Its head is similar to the ass and the rest of the body is comparable with the horse. It is identified in the Egyptian and Mesopotamian Civilizations (1400 BC) and was also recorded from the Roman period (Clutton-Brock, 1987). Previous research on the horse remains found at *Gedige* (69) by *Deraniyagala* (1972) suggested that the teeth of the ancient small horse was metrically between *Mannar ponies* and modern horses, and indicates two species of horses, local and *Sind*. The local species might have derived from the South Indian wild horse (*Equus nomadicus*). The more recent research on horses raises several opinions on the origin of the South Asian species. The wild form of horses did not exist in India during the Post-Pleistocene period; consequently, the horse could not be domesticated there. Rather, domesticated horses had been introduced later (*Bökönyi*, 1997). Besides, wild horses were extinct during the late Pleistocene period and had not been domesticated in India. Nevertheless, domestic horses were considered

as introduced species from outside (Meadow and Patel, 1997). In the light of the above research, it is difficult to accept the opinion given by Deraniyagala (1972) on South Indian wild horses. Domestic horses and hybrid species were probably introduced into India

from the Persian Gulf region and subsequently spread all over India (Bökönyi, 1997).

The author believes that local and Sind horses refer to the mule. It is known as *Aśvatarya* in Sinhala and *Assataro* in Pali (Table 1).

Table 1. Selected literary evidence for *Sindhavo* and *Aśvatara* in Sri Lanka

Literary terms	Sources	Chronology
<i>Sindhavo</i> (mule?)	<i>Mahavamsa</i> (23: 71)	5 th Century AD
<i>Susetha chatura sindhavam</i> (four white mule?)	<i>Mahavamsa</i> (31: 38)	data is related to 2 nd century BC)
<i>Assataro</i> (mule)	<i>Jatakapali</i> (in Pali)	5 th Century AD
<i>Astara</i> (mule)	<i>Dampiya-Atuva-Geta-Padaya</i>	10 th Century AD
<i>Aśvataraya</i> (mule)	<i>UmmaggaJataka</i>	14 th Century AD

The early evidence goes back to the Anuradhapura Period (900 BC-1000 AD), *The Dampiya Atuva Geta Padaya* (74/31) states that it was born after interbreeding of ass and mare. The Mahavamsa refers to horses that were commonly used by kings and royal officials for transportation and warfare. For instance, Sena and Guttika (177-155 BC), had brought Saindhava horses. The state chariot of King Dutugemunu (101-77 BC) was drawn by the white Sindhu horses while Velusumana tamed a wild Sindhu horse. Finally it appears that a mule (*Sindhava*) was more useful than a horse at that time and was common in comparison to true horses because of its adaptability to the environment.

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