



Venison for the Citadel: Early Historic Tissamaharāma, in Ruhuna, Sri Lanka

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Abstract

Tissamaharāma known from historic times as Mahagama is one of the earliest and largest urbanised centres in Sri Lanka, dating from the Early Historic period. As part of the collaborative research programme between the Department of Archaeology of the Government of Sri Lanka and the Commission for Archaeology of Non-European Cultures (KAAK) of the German Archaeological Institute, excavations were conducted at Tissamaharāma from 1992 to 2010. These extensive excavations at the Tissamaharāma citadel have yielded a very large quantity of excellently preserved faunal remains from the Early Historic Period of ca. 500 BCE to 250 BCE. The analysis of these animal bones indicates the presence of a significant component of large mammals notably, deer (*Axis axis*). Of considerable importance is the rib of a deer with an embedded broken quartz arrowhead, from the microlithic tradition. The deer represented in this sample was presumably part of the supply of venison to the city dwellers, brought from outside. Our data show that microlithic technology had persisted to at least the Early Historic phase in Sri Lanka.

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Background for the archaeological research at Tissamaharāma

For almost twenty years the Department of Archaeology in Sri Lanka and the Commission for Archaeology of Non-European Cultures (KAAK) of the German Archaeological Institute has been dedicated to archaeological research in the ancient Kingdom of Ruhuna in the south of the Sri Lanka (Weisshaar and Wijeyapala, 2001; 2005; 2008; Weisshaar & Dissanayake, 2010; Weisshaar, et al., 2001). This long-standing cooperation was very successful due to the support of several Directors General of the Department of Archaeology in Sri Lanka.

Sri Lanka has been inhabited since prehistoric times with communities of hunter-gatherers who lived mostly in rock shelters, and later in small rural settlements scattered all over the island in the 1st Millennium BCE. When around the middle of the 1st millennium BCE new cities emerged on the South Asian subcontinent, the settlement pattern of the island changed as well. Newcomers arrived from Northern India and Buddhism was introduced to the Island.

Mahagama was the southernmost city of a development in South Asia that is called the “Second Urbanization”. The Citadel of Mahagama (present day Tissamaharāma - Akurugoda) was the centre of the kingdom of Ruhuna (Rohana) in the south of Sri Lanka from the Early Historical Period to Mediaeval times. The Department of Archaeology of Sri Lanka and the German Archaeological Institute investigated the site next to the ancient irrigation tank Tissāvāva from 1992 to 2010. The fieldwork revealed a workmen’s quarter (Tissa 1) in the south of the rectangular citadel (600 x 200 m) and a residence area of noble families at two sites near its western wall (Tissa 2 and Tissa 3).



Figure 1. Tissamaharāma: workmen’s quarter (Tissa 1) of the Citadel, seen from the South (photo H.-J. Weisshaar).

Traces of three long battery furnaces for bronze casting were discovered on the lower part of the south-facing slope of the workmen's quarter (Figure 1). Dwellings with wooden posts and wattle and daub were observed on the upper part of the slope. They belonged to the last centuries BCE, with the earliest built in the 5th century BCE. Both areas of working and living were divided by a 4.5 m wide pavement of flat stone slabs from a street or open place (Weisshaar et al., 2001:12ff). Not far away had been a large octagonal pillar with a Brahmi-inscription and a small square well built with bricks.

The phases of the settlement are as follows:

Phase a (5th/4th century BCE),

Phase b (3rd century BCE),

Phase c1 (2nd century BCE), phase c2 (1st century BCE),

Phase d1 (1st century CE), phase d2 (2nd century CE),

Phase e (3rd century CE),

Phase f1 (4th century CE), phase f2 (5th century CE),

Phase g1 (late 5th/6th century CE), phase g2 (late 6th/7th century CE),

Phase h (8th/9th century CE).

Faunal remains from Tissamaharāma

Large quantities of animal bones were found in all layers of the excavation areas (Benecke, 2005). According to zooarchaeological studies, zebu cattle, pigs and water buffalo were the most frequently exploited domestic animals here. In addition, there were remains of chickens, sheep, goats, cats, horses and donkeys. The use of elephants is also documented by a partial skeleton. More than half of the identified bone finds belong to wild animals, most of which were axis (spotted) deer (Figure 2). Fish was another important food component of the inhabitants of the citadel, dominated by marine species such as barracuda, grouper and bream. They originated from fishing along the coast of the Indian Ocean. To some extent, various species of birds, reptiles and molluscs were also used as food.



Figure 2. Axis deer at Yala National Park (photo by H.-J. Weisshaar)

The layers of the BCE-periods revealed a high percentage - about 80% of game animals. In layers of the 2nd – 1st centuries BCE a fragment of an arrowhead of quartz embedded in the bone of an axis deer was found (Benecke 2005; Weisshaar & Dissanayake, 2010: 368 Fig. 11). The bone with the arrowhead embedded is the first rib on the left side of the animal's body. The arrowhead is stuck in the upper part of the rib (Figures 3 and 4). This indicates that the animal was hit from the side. Archaeologically verifiable shot injuries/wounds in deer, as in the present case, are often found on bones of the anterior trunk like scapula, vertebrae and ribs. Although in general, the rib cage protects vulnerable vital organs such as the heart and lungs, fatal injuries to the region are prevalent in zooarchaeological analyses (Noe-Nygaard, 1974).



Figure 3. Rib of axis deer with embedded broken microlithic arrowhead (photos by H.-P. Wittersheim)

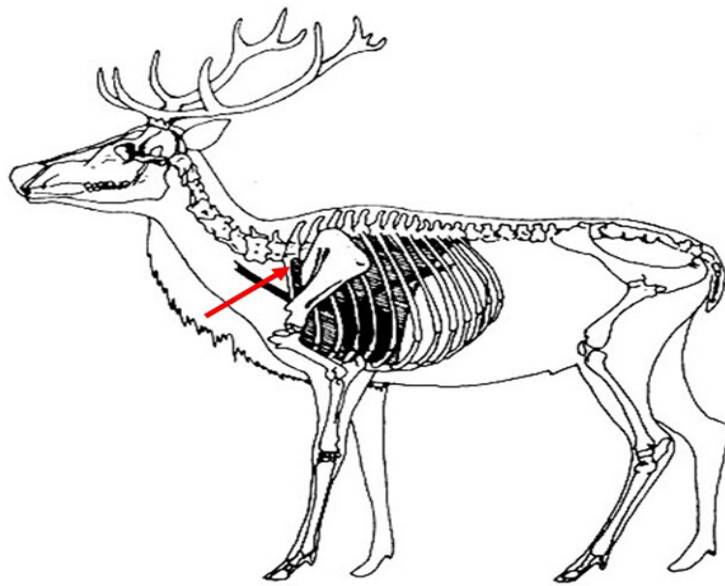


Figure 4. Axis deer with arrow placement (graphic by N. Noel-Nygaard, modified by N. Benecke).

Microlithic technology

In Eurasian archaeological contexts microliths are often related to the “Mesolithic” time ca. 12 ky to 3 ky. The Mesolithic time frame refers to a phase representing a hunting and gathering-dependent subsistence strategy in certain regions, as a transition between the Palaeolithic and the Neolithic archaeological periods. In Sri Lanka, the first artefacts made of quartz and chert were reported from J. Pole of the British Museum in the late 19th century. Excavations in several caves in Sri Lanka, were conducted by the Swiss anthropologists Fritz and Paul Sarasin. In the first decade of the 20th century, lithic analysis was still in its fledgling stage. Therefore, the Sarasins had attempted to date the lithics from Sri Lanka by means of typological comparisons with lithics from Europe. The small-sized lithics from Sri Lanka were designated as the “Vedda facies”, while other researchers including Seligmann and Hartley observed the “microlithic character” of stone tools from Sri Lanka (Seligmann, 1908; Hartley, 1914). Hartley postulated a typological relationship between microliths from Sri Lanka and those from other parts of the world (Hartley, 1914).

Microlithic technologies first appeared about 50,000 years ago in Sub-Saharan Africa. Some of the earliest evidence in the world of a microlithic industry outside of Africa is from Sri Lanka, dated from ca. 48,000 to 4000 cal BP in rock shelters of the south-western quadrant of the island such as Batadomba-lena, Beli-lena and Fa-Hien-lena (Deraniyagala 1988; Wijeyapala 1997; Perera 2010; Wedage et al. 2019). The microlithic phase of Sri Lanka is characterised by small microlithic stone tools (less than 2 cm long) fashioned into geometric shapes (lunates, triangles, trapezoids). Microliths are the replaceable parts of composite tools like barbed spears, arrows and sickles (Perera, 2010)

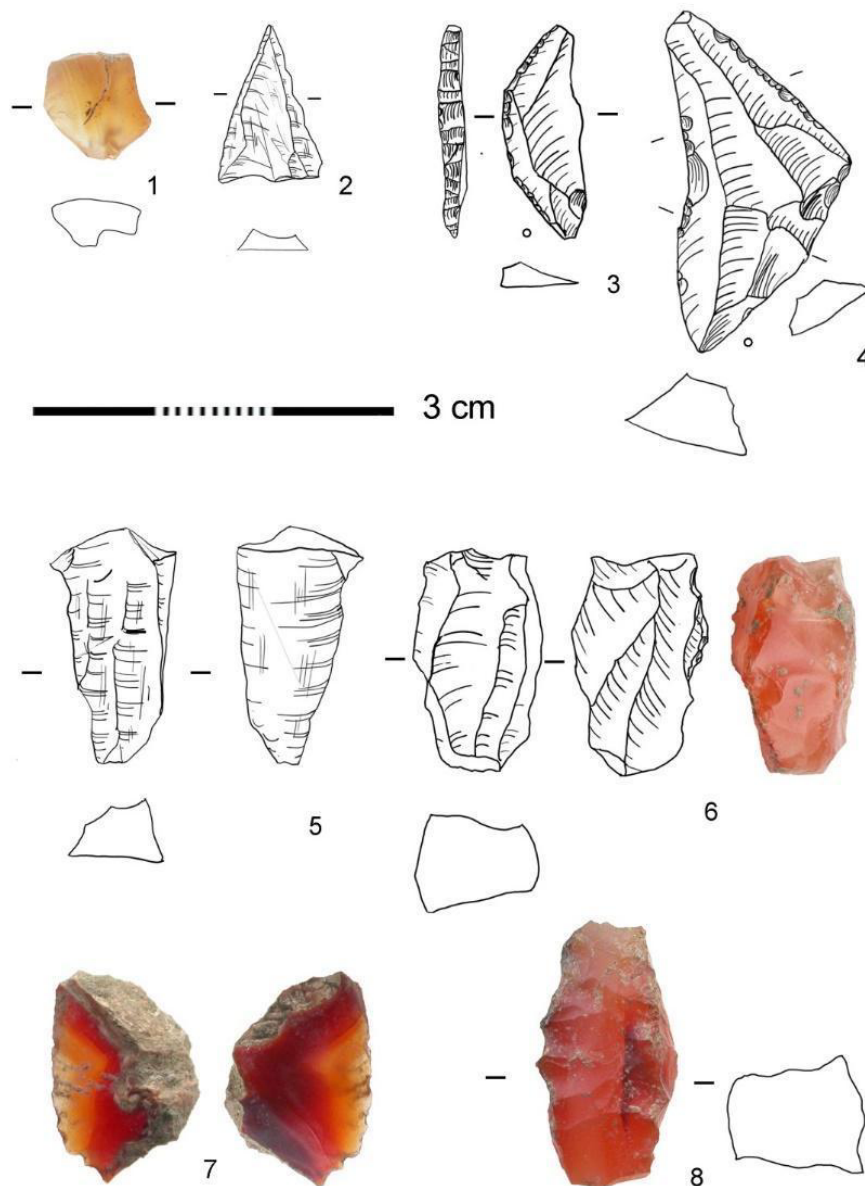


Figure 5. Microlithic stone tools from Tissamaharāma (J. Moser).

1. Flake unmodified, translucent, orange chalcedony. Label: Tissa 3; 3L, 22/76, layer 10, 60N, 7E, +21,48 MSL; phase c1 late (photo: H.-P. Wittersheim). **2.** Geometric microlith, triangle, quartz. Label: Tissa 1; 1B, 24/32, layer 8, 61N, 86E, + 19,11 MSL; phase c2 (drawing by B. Steinbring). **3.** Lunate with backed retouch, chert. Label: Tissa 1; 1A, 24/24, 10N, 89E; mixed layer (drawing by J. Eiwanger). **4.** Triangle with irregular edge retouch or damage caused by use, chert. Label: Tissa 1; 1A, 21/23, layer 3; mixed layer (drawing: J. Eiwanger). **5.** Bladelet, medial distal fragment. Label: Tissa 1; 1G, 25/86, layer 12, 76N, 24E, MSL+ 21,33; phase d1 early (drawing by M. Gollwitzer). **6.** Core or semi-product, carnelian/chalcedony. Label: Tissa 3; 3E,47/77, layer 24, 98N, 53E, + 21,91 MSL; phase d1 early (photo: H.-P. Wittersheim). **7.** Flake with edge damage probably caused by usage. Label: Tissa 3; 3L, 20/76, layer 10, 70N, 82E, +21, 37 MSL; phase c1 late (photo: H.-P. Wittersheim). **8.** Micro-core or semi-product, carnelian/chalcedony with transversal retouching on all faces. Label: Tissa 3; 3L, 21/77, layer 10,64N, 80E, +21,48 MSL; phase c1 late (photo: H.-P. Wittersheim).

The microliths are preferentially made from quartz, rock crystal (a clear and transparent variety of the silica mineral quartz), cornelian or chalcedony, since the raw material chert is very rare in Sri Lanka. Deraniyagala (1988: 584) calculated a portion of less than 1% chert for the inventories of diverse find-localities. The frequency of milk-quartz artefacts represents more than 60% and that of rock crystal lies around 40%. Due to the good quality of the raw material, the majority of microliths and bladelets or lamellae among the finds from several sites in Sri Lanka were made of rock crystal (Deraniyagala 1988: 580). The lithic assemblage from Tissamaharama consists of unmodified flakes and some modified microliths (Figure 5).

Since the research conducted by the Sarasins and the Seligmanns in the 19th and early 20th century (Sarasin & Sarasin 1886; 1907; Seligmann 1908, 1911; Kennedy 1994), we know that the microlithic tradition endured through the Iron Age. At some Early Historic sites, especially in caves and rock shelters, microlithic stone chips of hunters and Iron Age tools of settlers are mingled in the same layers. It is possible that different groups lived on the same site at different periods of the year, or a group returned after a couple of years. A good example is the Upper Rockshelter at Pidurangala (Kilian & Weisshaar, 1994) where a microlithic stone industry was observed in the layers of the Early Historic Period (Moser, 1994).

Discussion

Microlithic stone tools are very rare among the finds of the Tissamaharāma citadel. They were not used intensively by the early historic settlers. So far there are no reports of contemporary dwellings of hunter-gatherers in close proximity. Sites with microliths nearby are much older and at least from the 2nd millennium BCE, such as Yala, Bundala, and the shell middens at Pallemalla (Somadeva & Ranasinghe 2006), Godavaya (Krause-Kyora & Weisshaar 2009; 2010; 2011; 2012) and Mini-athiliya (Kulatilake et al., 2018). Therefore, we suggest that the deer rib representing a deer kill must have been brought into the citadel from outside, possibly as a supply of venison for the city dwellers.

The deer rib with the embedded arrowhead was recovered from the workmen's quarter (Tissa 1). A clue as to the identity of the hunters of this deer can be provided using accounts in historical sources described below.

The Chinese monk Fa Hien, who travelled from China to India in the 4th century CE, visited the island of Sinhala (Sri Lanka) and lived there for two years. He described the barter between the settlers and the hunter-gatherer Vedda people as a very profitable business, which even attracted foreign merchants (Beal, 2014; Legge 1886: 101). In another instance, the Arabian geographer Alberuni visited South Asia in the 11th century CE and wrote about the barter between settlers and the Vedda people on the island (Dharmadasa 1990a: 39). According to the Englishman Robert Knox who was a prisoner on the island in the 17th century, the "wild men of the jungle" supplied the venison for the settler communities (Knox, 1681:61). Another European, Jacob Haafner, when travelling on foot on the island in the late 18th century, noted that the Veddas traded ivory, honey, wax, and deer, in exchange for cloth, iron, and knives and that the Vedda hunted deer, wild boar and other game near ponds (Haafner, 1821:22-36). The British surgeon R. L. Spittel also described the mutual advantage of

this form of exchange, when travelling in Sri Lanka's forests in the early 20th century (Spittel, 1924:159). Bartering was a common practice up to the early part of the last century (Dharmadasa 1990b: 147).

The deer killed with the arrowhead was probably brought to the Citadel of Tissamaharāma from elsewhere. We propose that in Tissamaharāma during the 1st century BCE, the Vedda people traded meat and other products from the jungle with the settlers and received other goods in exchange. The deer rib with the arrowhead from Tissamaharama does not seem to be a singular observation. The Director-General of the Department of Archaeology the late Dr. W.H. Wijeyapala informed us that among the bone material of the Mantai excavation in the northwest of Sri Lanka, such a fragment of an embedded microlithic arrowhead was found in a habitation context dated to ca. 4170 cal BP, which represents the upper boundary of the microlithic phase in Sri Lanka (Deraniyagala, 1988). Beside the information from written sources, the deer bone from the Tissamaharāma citadel can provide archaeological evidence of barter between the settlers and the Vedda people. Moreover, the presence of the arrowhead in the early historic context highlights the existence of microlithic technology during the Early Historic Period of Sri Lanka.

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