

1951: 660). The early date of the finds from the early phases of structural period I, c. fourth century BC, provides

further indirect evidence for the early development of writing within the island (Coningham *et al.* 1996).

Special find no: **15115** Context: **634nw**
Stratigraphic Phase: **LXIX** Weight: **4.94g**
Description: **Styli?**
Material: **Bone.**
Comments: **Smoothed plain point and flattened square butt.**
Dimensions: **7.6cm long; 0.9cm maximum diameter.**
[Fig. 10.3]

Special find no: **10459** Context: **977nw**
Stratigraphic Phase: **XXVIII** Weight: **5.90g**
Description: **Styli?**
Material: **Bone.**
Comments: **Irregular plain point and irregular butt.**
Dimensions: **9.3cm long; 1.2cm maximum diameter.**
[Fig. 10.3]

Special find no: **16673** Context: **970sw**
Stratigraphic Phase: **XXXI** Weight: **5.31g**
Description: **Styli?**
Material: **Bone.**
Comments: **Smoothed plain point and rounded butt.**
Dimensions: **8.1cm long; 0.9cm maximum diameter.**
[Fig. 10.3]

Special find no: **15026** Context: **602nw**
Stratigraphic Phase: **LXXII** Weight: **4.99g**
Description: **Styli?**
Material: **Ivory.**
Comments: **Broken point and rounded butt.**
Dimensions: **7.3cm long; 0.9cm maximum diameter.**
[Plate 10.9; Fig. 10.3]

Arrowheads

Two bone objects, sfs 15687 and 16589, have been tentatively identified as arrowheads. Both have smoothed tips divided from well-defined tangs by projecting flanges, allowing their fitting into wooden hafts. Sf 15687 was recovered from structural phase G2 and sf 16589 from structural phase I5, suggesting dates of c. the fourth and third centuries BC. Similar examples were recorded at

Anuradhapura by Deraniyagala (1972: 131) and by Marshall at the site of the Bhir Mound, Taxila, and were also dated to between the third and fourth centuries BC (Marshall 1951: 665). Marshall's suggestion (1951: 664) that such arrowheads might have been used for the hunting of birds is supported by more recent ethnographic studies (MacGregor 1985: 163).

Special find no: **15687** Context: **601se**
Stratigraphic Phase: **LXXII** Weight: **3.47g**
Description: **Arrowhead.**
Material: **Bone.**
Dimensions: **4.6cm long; 0.9cm head diameter; 0.3cm tang diameter.**
[Plate 10.10; Fig. 10.3]

Special find no: **16589** Context: **880nw**
Stratigraphic Phase: **XXXIII** Weight: **2.92g**
Description: **Arrowhead.**
Material: **Bone.**
Dimensions: **3.4cm long; 0.9cm head diameter; 0.5cm tang diameter.**
[Plate 10.10; Fig. 10.3]

Cube, bead or dice

Sf 5594 is a bone cube with clear evidence of having been sawn from a larger piece. It was recovered from structural phase F, which is dated to between the fourth and seventh centuries AD, although it may have been incorporated from the earlier deposits which form the foundation packing of the pillared building. The object's function is equally

unclear since it might represent an incompletely drilled bead or an incompletely marked dice. Examples of dice from the excavations at Sirkap and Sirsukh, Taxila, are all oblong or parallel piped (Marshall 1951: 662) and the cubic form commonly associated with Roman influence (MacGregor 1985: 129).

Special find no: **5594** Context: **365ne**
Stratigraphic Phase: **XCII** Weight: **2.95g**
Description: **Cube.**
Material: **Bone.**
Dimensions: **0.9cm square.**
Comments: **Single hole (0.5cm diameter) on face one, dot and one concentric ring on face two, dot and two concentric rings on face three, partial concentric ring on face four, nothing on faces five and six.**
[Fig. 10.3]

10.3.2 Birds

In addition to the two main species of birds identified at ASW2, fowl (*Gallus* sp.) and Indian peafowl (*Pavo cristatus*), a number of unidentified bird bones were recovered. One possible source of this unknown material could be migrating flocks. Deraniyagala (1992: 375) points out that Sri Lanka is on the flight path of many seasonal bird migration routes. Given the taboos placed on a wide range of birds in the *Laws of Manu* (see section 10.2 above) (Coningham and Young 1999), it may be suggested that perhaps the majority of bones represent known types. In his

discussion of the *Mahavamsa* chronicles, Geiger says that the keeping and breeding of domestic poultry is rare, but fowl is eaten (1960: 91). It is possible that wild birds were taking advantage of the regular food supply provided by both the increase in cultivation around Anuradhapura and the settlement itself and in turn were being captured for sport or as a food source, or even as a supply of feathers or other items. Table 10.7 lists the weight of bones recovered for each species by period.

10.3.2.1 *Gallus* sp. (jungle or domestic fowl)

There are three species of the genus *Gallus* known in South Asia (*G. sonneratii*, *G. gallus* and *G. lafayettii*). However, *G. lafayettii* (Lesson 1831 [Ali and Ripley 1969: 109]), or the Ceylon red jungle fowl, is endemic and limited to Sri Lanka. It is not known whether the bones identified as

Context: 14 Stratigraphic Phase: CII
No. of pieces: 1 Weight: 4g
Identification and comments: **tibio-tarsus**

Context: 100 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **tibio-tarsus**

Context: 259 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **corocoid - right**

Context: 316 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 4g
Identification and comments: **femur**

Context: 367 Stratigraphic Phase: XCH
No. of pieces: 1 Weight: 2g
Identification and comments: **corocoid - right**

Context: 376 Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 4g
Identification and comments: **humerus - left**

Context: 385 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 3g
Identification and comments: **humerus - left**

Context: 389 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 4g
Identification and comments: **humerus**

Context: 424 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 5g
Identification and comments: **tarsometatarsus**

Context: 446 Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 4g
Identification and comments: **carpo-metacarpus**

Context: 602 Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 1g
Identification and comments: **ulna**

Context: 670 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 2g
Identification and comments: **humerus - right**

Context: 698 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 3g
Identification and comments: **pelvis**

Context: 714 Stratigraphic Phase: LXIII
No. of pieces: 1 Weight: 2g
Identification and comments: **humerus - right**

Context: 1175 Stratigraphic Phase: XVIII
No. of pieces: 1 Weight: 2g
Identification and comments: **corocoid - right**

Gallus sp. from ASW2 are wild or domesticated, or which species they belong to (Ali and Ripley 1969: 102). Jungle fowl are found in all the habitat types of Sri Lanka and feed mainly on grains, weed seeds, berries, insects and small lizards (ibid.: 110).

Context: 25 Stratigraphic Phase: CX
No. of pieces: 1 Weight: 3g
Identification and comments: **scapula**

Context: 180 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 4g
Identification and comments: **humerus**
Context: 296 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: **scapula - right**

Context: 365 Stratigraphic Phase: XCH
No. of pieces: 1 Weight: 2g
Identification and comments: **femur - left**

Context: 367 Stratigraphic Phase: XCH
No. of pieces: 1 Weight: 2g
Identification and comments: **tibio-tarsus**

Context: 376 Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 2g
Identification and comments: **carpo-metacarpus**

Context: 386 Stratigraphic Phase: XCI
No. of pieces: 2 Weight: 7g
Identification and comments: **humerus, femur**

Context: 416 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6g
Identification and comments: **humerus - right**

Context: 444 Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 3g
Identification and comments: **tibio-tarsus**

Context: 602 Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 2g
Identification and comments: **tarsometatarsus**

Context: 670 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 2g
Identification and comments: **scapula - left**

Context: 697 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 3g
Identification and comments: **tibio-tarsus - left**

Context: 714 Stratigraphic Phase: LXIII
No. of pieces: 1 Weight: 2g
Identification and comments: **tibio-tarsus - right**

Context: 788 Stratigraphic Phase: LIII
No. of pieces: 1 Weight: 2g
Identification and comments: **corocoid - left**

Context: 1206 Stratigraphic Phase: XXXVI
No. of pieces: 1 Weight: 5g
Identification and comments: **femur - right**

10.3.2.2 *Pavo cristatus* (common peafowl)

The peafowl is approximately the size of a domesticated turkey, with the peacock being 92–122 cm high and the peahen around 86 cm high (Ali and Ripley 1969: 123). When wild, peafowl gather in small flocks of one male and between three and five females. They prefer forest to open land, though they are often found near cultivation, which may be because they require running water. The peafowl

diet is omnivorous, including seeds, grains, nuts, shoots, small reptiles and snakes. The peafowl is sacred in Hindu myth and as such is protected on religious grounds (ibid.: 124, 126) despite being destructive of crops. It is mentioned in the *Mahavamsa* (Geiger 1960: 16) and the tail feathers of the male are greatly valued.

Context: 365 Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 8g
Identification and comments: **femur - right**

Context: 445 Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 4g
Identification and comments: **femur**

Context: 714 Stratigraphic Phase: LIV
No. of pieces: 1 Weight: 9g
Identification and comments: **humerus - right**

Context: 788 Stratigraphic Phase: LIII
No. of pieces: 1 Weight: 8g
Identification and comments: **tarso-metatarsal - left**

Context: 413 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 4g
Identification and comments: **coracoid - right**

Context: 659 Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 2g
Identification and comments: **scapula**

Context: 714 Stratigraphic Phase: LIV
No. of pieces: 1 Weight: 8g
Identification and comments: **femur**

10.3.2.3 *Ardeola* or *Ardea* sp. (heron)

The Ardeidae family is found throughout South Asia, with a high representation of herons in Sri Lanka, including the giant heron (*Ardea goliath*), the grey heron (*Ardea cinerea*), the purple heron (*Ardea purpurea*), the little green heron (*Ardeola striatus*) and the pond heron or paddybird

(*Ardeola grayii*) (Ali and Ripley 1969: 49). Herons are generally solitary birds, and they are found in a range of habitats, including marshes, tidal creeks, mangrove swamps, tidal estuaries and rocky shorelines (ibid.).

Context: 251 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 10g
Identification and comments: **tibio-tarsus**

10.3.2.4 Unidentified bird finds

Context: 304 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **thoracic vertebra**

Context: 363 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **humerus - right**

Context: 600 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **tarso-metatarsus**

Context: 716 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 3g
Identification and comments: **coracoid**

Context: 739 Stratigraphic Phase: LXIII
No. of pieces: 1 Weight: 7g
Identification and comments: **humerus - left**

Context: 791 Stratigraphic Phase: XLVII
No. of pieces: 1 Weight: 1g
Identification and comments: **humerus - left**

Context: 358 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 4g
Identification and comments: **humerus**

Context: 376 Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 1g
Identification and comments: **tarso-metatarsal**

Context: 600 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **carpo-metatarsus**

Context: 726 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 11g
Identification and comments: **femur**

Context: 767 Stratigraphic Phase: LX
No. of pieces: 1 Weight: 1g
Identification and comments: **humerus - right**

10.3.3 Reptiles

The considerable amount of reptile bone in the faunal assemblage, particularly of both hard and soft terrapin, strongly suggests a suitable environment for these and the other reptiles close to the site. A river, or the type of habitat resulting from increased tank irrigation, could be considered suitable. In conjunction with the increase in

Indian wild pig, with a preferred habitat of marshy ground, there is certainly faunal evidence that points towards a site environment including substantial areas of water. Table 10.8 gives the weight and numbers of the reptilian and fish remains recovered by period. While some are eaten, many are today hunted for their shells or skins (Daniel 1983: 7).

10.3.3.1 *Crocodylus palustris* or *Crocodylus porosus* (crocodile)

Four bones belonging to the crocodile species were recovered from trench ASW2, one from structural period B and three from period C, D & E. Of the three species of crocodile which occur in the Indian subcontinent, only two are found in Sri Lanka, the mugger or marsh crocodile (*Crocodylus palustris*), and the estuarine or salt-water

crocodile (*Crocodylus porosus*) (Daniel 1983: 8–16). The former, growing as long as 5.5 m, commonly inhabits rivers, lakes, tanks and waterholes; the latter, growing as long as 7 m, inhabits tidal estuaries, marine swamps and coastal brackish water (ibid.). It is probable that the remains represent the mugger or marsh crocodile since they

have been commonly found in the vicinity of Anuradhapura. As the *Mahavamsa* refers to man-eating crocodiles (Geiger 1960: 15), it seems unlikely that these

bones are the result of the hunting of crocodiles for their flesh.

Context: 24ne Stratigraphic Phase: C
No. of pieces: 1 Weight: 2gm
Identification & comments: mandible.

Context: 88ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 5gm
Identification & comments: vertebra.

Context: 325ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2gm
Identification & comments: tooth

Context: 133ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 5gm
Identification & comments: mandible - right.

10.3.3.2 *Lissemys punctata granosa* (peninsular mud or flap-shell turtle)

A total of 92 bones belonging to *Lissemys punctata* were recovered from trench ASW2. Although no bones were found in structural periods A, J and K, 1 bone was recovered from B, 11 from C, D & E, 14 from F, 57 from G, 3 from H and 6 from I. This species, growing as large as 0.27 m in carapace length, is widely distributed throughout perennial and non-perennial ponds, tanks and

river systems (Daniel 1983: 27–8; Deraniyagala 1953: 26–7). Its increased presence at the Citadel of Anuradhapura has been previously interpreted as a marker of the establishment and development of irrigation agriculture through the widening of its habitats by a human agency (Deraniyagala 1972: 158).

Context: 83sw Stratigraphic Phase: XCVI
No. of pieces: 1 Weight: 4gm
Identification and comments: carapace

Context: 88ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 7gm
Identification and comments: carapace

Context: 133ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 141ne Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 5gm
Identification and comments: carapace

Context: 151se Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3gm
Identification and comments: carapace

Context: 158se Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 175nw Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 3gm
Identification and comments: carapace
Context: 296ne Stratigraphic Phase: XCV
No. of Pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 200sw Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace
Context: 296se Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 304ne Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 306sw Stratigraphic Phase: XCIII
No. of pieces: 2 Weight: 5gm
Identification and comments: carapace

Context: 306sw Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 3gm
Identification and comments: carapace

Context: 358se Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 358se Stratigraphic Phase: XCIII
No. of pieces: 2 Weight: 4gm
Identification and comments: carapace

Context: 359nw Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 5gm
Identification and comments: carapace

Context: 364ne Stratigraphic Phase: XCII
No. of pieces: 3 Weight: 6gm
Identification and comments: carapace

Context: 365nw Stratigraphic Phase: XCII
No. of pieces: 4 Weight: 8gm
Identification and comments: carapace and plastron

Context: 365nw Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 6gm
Identification and comments: carapace

Context: 365nw Stratigraphic Phase: XCII
No. of pieces: 5 Weight: 15gm
Identification and comments: carapace and plastron

Context: 365nw Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 4gm
Identification and comments: limb bone with sharp cut marks

Context: 365nw Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 3gm
Identification and comments: carapace

Context: 368nw Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1gm
Identification and comments: carapace

Context: 374nw Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2gm
Identification and comments: carapace

Context: 374nw Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 5gm
Identification and comments: **plastron**

Context: 376nw Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 1gm
Identification and comments: **carapace**

Context: 386nw Stratigraphic Phase: XCI
No. of pieces: 2 Weight: 8gm
Identification and comments: **carapace**

Context: 386sw Stratigraphic Phase: XCI
No. of pieces: 3 Weight: 8gm
Identification and comments: **carapace**

Context: 400se Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6gm
Identification and comments: **carapace**

Context: 406sw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6gm
Identification and comments: **carapace**

Context: 409 Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 13gm
Identification and comments: **carapace**

Context: 409nw Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 4gm
Identification and comments: **carapace**

Context: 414sw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6gm
Identification and comments: **carapace**

Context: 416se Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 8gm
Identification and comments: **carapace**

Context: 418se Stratigraphic Phase: XCI
No. of pieces: 2 Weight: 8gm
Identification and comments: **carapace**

Context: 437ne Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 3gm
Identification and comments: **carapace**

Context: 444ne Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 3gm
Identification and comments: **carapace**

Context: 468ne Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 4gm
Identification and comments: **carapace**

Context: 470sw Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 3gm
Identification and comments: **carapace**

Context: 470sw Stratigraphic Phase: LXXXI
No. of pieces: 2 Weight: 8gm
Identification and comments: **carapace**

Context: 487ne Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 1gm
Identification and comments: **carapace**

Context: 600 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2gm
Identification and comments: **humerus**

Context: 601se Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 5gm
Identification & comments: **carapace**

Context: 376nw Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 5gm
Identification and comments: **carapace (sf 6105)**

Context: 386ne Stratigraphic Phase: XCI
No. of pieces: 6 Weight: 30gm
Identification and comments: **carapace**

Context: 386nw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 4gm
Identification and comments: **limb bone**

Context: 399ne Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 2gm
Identification and comments: **carapace**

Context: 404ne Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 4gm
Identification and comments: **carapace**

Context: 407nw Stratigraphic Phase: LXXXV
No. of pieces: 3 Weight: 10gm
Identification and comments: **carapace**

Context: 409 Stratigraphic Phase: LXXXVIII
No. of pieces: 11 Weight: 21gm
Identification and comments: **carapace**

Context: 413se Stratigraphic Phase: XCI
No. of pieces: 2 Weight: 5gm
Identification and comments: **carapace**

Context: 414sw Stratigraphic Phase: LCI
No. of pieces: 1 Weight: 3gm
Identification and comments: **limb**

Context: 417sw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 15gm
Identification and comments: **plastron and carapace**

Context: 425sw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 5gm
Identification and comments: **plastron**

Context: 442se Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 10gm
Identification and comments: **plastron**

Context: 449sw Stratigraphic Phase: LXXXVII
No. of pieces: 2 Weight: 8gm
Identification and comments: **carapace**

Context: 470sw Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 3gm
Identification and comments: **carapace**

Context: 470sw Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 3gm
Identification and comments: **carapace**

Context: 487ne Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 4gm
Identification and comments: **carapace**

Context: 487ne Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 8gm
Identification and comments: **plastron**

Context: 601 Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 5gm
Identification and comments: **carapace**

Context: 601se Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 2gm
Identification & comments: **carapace**

Faunal Remains

Context: **601se** Stratigraphic Phase: **LXXII**
No. of pieces: **10** Weight: **26gm**
Identification and comments: **carapace**

Contexts: **602nw** Stratigraphic Phase: **LXXII**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **plastron**

Context: **602nw** Stratigraphic Phase: **LXXII**
No. of pieces: **1** Weight: **2gm**
Identification & comments: **carapace**

Context: **602nw** Stratigraphic Phase: **LXXII**
No. of pieces: **1** Weight: **11gm**
Identification & comments: **plastron**

Context: **605sw** Stratigraphic Phase: **LXXXIII**
No. of pieces: **2** Weight: **7gm**
Identification and comments: **carapace**

Context: **607se** Stratigraphic Phase: **LXXI**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **carapace**

Context: **635nw** Stratigraphic Phase: **LXXXIII**
No. of pieces: **3** Weight: **8gm**
Identification and comments: **carapace and plastron**

Context: **635nw** Stratigraphic Phase: **LXXXIII**
No. of pieces: **1** Weight: **7gm**
Identification & comments: **plastron**

Context: **663ne** Stratigraphic Phase: **LXVI**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **carapace**

Context: **669nw** Stratigraphic Phase: **LXIX**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **carapace**

Context: **693nw** Stratigraphic Phase: **LXXXIV**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **carapace**

Context: **697ne** Stratigraphic Phase: **LXIV**
No. of pieces: **1** Weight: **6gm**
Identification and comments: **carapace**

Context: **715se** Stratigraphic Phase: **LXII**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **plastron**

Context: **750se** Stratigraphic Phase: **LVII**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **plastron**

Context: **791nw** Stratigraphic Phase: **XLVI**
No. of pieces: **1** Weight: **11gm**
Identification and comments: **mandible - right**

Context: **602nw** Stratigraphic Phase: **LXXII**
No. of pieces: **3** Weight: **9gm**
Identification and comments: **carapace**

Context: **602nw** Stratigraphic Phase: **LXXII**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **plastron**

Context: **602nw** Stratigraphic Phase: **LXXII**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **plastron**

Context: **605sw** Stratigraphic Phase: **LXXXIII**
No. of pieces: **2** Weight: **7gm**
Identification & comments: **carapace**

Context: **605sw** Stratigraphic Phase: **LXXXIII**
No. of pieces: **2** Weight: **6gm**
Identification and comments: **carapace**

Context: **615ne** Stratigraphic Phase: **LXVIII**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **carapace**

Context: **635nw** Stratigraphic Phase: **LXXXIII**
No. of pieces: **2** Weight: **8gm**
Identification and comments: **carapace**

Context: **643nw** Stratigraphic Phase: **LXXII**
No. of pieces: **1** Weight: **7gm**
Identification and comments: **plastron**

Context: **669nw** Stratigraphic Phase: **LXIX**
No. of pieces: **1** Weight: **4gm**
Identification & comments: **carapace**

Context: **670sw** Stratigraphic Phase: **LXIV**
No. of pieces: **2** Weight: **4gm**
Identification and comments: **carapace**

Context: **693nw** Stratigraphic Phase: **LXXXIV**
No. of pieces: **1** Weight: **12gm**
Identification and comments: **plastron**

Context: **714sw** Stratigraphic Phase: **LIV**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **carapace**

Context: **744nw** Stratigraphic Phase: **LXII**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **carapace**

Context: **791nw** Stratigraphic Phase: **XLVI**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **carapace**

Context: **837se** Stratigraphic Phase: **XXXV**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **carapace**

10.3.3.3 *Melanochelys trijuga thermalis* (Indian pond terrapin)

A total of 82 bones belonging to the Indian pond terrapin were recovered from ASW2: 2 from structural period B, 8 from period C, D & E, 13 from F, 55 from G, 1 from H and 3 from J. This species grows to a maximum length of 0.22 m in carapace length and is commonly found in slow-flowing or sedentary bodies of water (Daniel 1983: 23-4). As in the case of *Lissemys punctata*, it is tempting to see its

increasing representation within the faunal record as an indicator of the development of tank irrigation. As already recorded by Deraniyagala, its presence among the faunal remains at the site is something of a surprise as it emits a disagreeable odour if disturbed, and eating it was uncommon (Deraniyagala 1972: 155).

Context: **41sw** Stratigraphic Phase: **C**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **carapace**

Context: **59nw** Stratigraphic Phase: **XCVI**
No. of pieces: **1** Weight: **6gm**
Identification and comments: **plastron**

Context: **88ne** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **7gm**
Identification and comments: **carapace**

Context: **141ne** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **marginal bone**

Context: **196se** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **carapace**

Context: **209ne** Stratigraphic Phase: **XCIII**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **carapace**

Context: **334ne** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **carapace**

Context: **358se** Stratigraphic Phase: **XCIII**
No. of pieces: **2** Weight: **4gm**
Identification and comments: **carapace**

Context: **364ne** Stratigraphic Phase: **XCII**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **marginal bone**

Context: **365nw** Stratigraphic Phase: **XCII**
No. of pieces: **2** Weight: **5gm**
Identification and comments: **carapace**

Context: **365nw** Stratigraphic Phase: **XCII**
No. of pieces: **1** Weight: **10gm**
Identification and comments: **plastron**

Context: **366se** Stratigraphic Phase: **XCII**
No. of pieces: **1** Weight: **6gm**
Identification and comments: **carapace**

Context: **376nw** Stratigraphic Phase: **LXXXVI**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **carapace**

Context: **378se** Stratigraphic Phase: **XCIII**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **marginal bone**

Context: **386sw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **15gm**
Identification and comments: **plastron**

Context: **386sw** Stratigraphic Phase: **XCI**
No. of pieces: **2** Weight: **8gm**
Identification and comments: **carapace**

Context: **406sw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **8gm**
Identification and comments: **carapace**

Context: **409nw** Stratigraphic Phase: **LXXXVII**
No. of pieces: **1** Weight: **1gm**
Identification and comments: **carapace**

Context: **416nw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **20gm**
Identification and comments: **plastron**

Context: **417nw** Stratigraphic Phase: **XCI**
No. of pieces: **2** Weight: **10gm**
Identification and comments: **plastron**

Context: **424nw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **10gm**
Identification and comments: **plastron**

Context: **113ne** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **marginal bone**

Context: **175nw** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **3gm**
Identification and comments: **marginal bone**

Context: **200sw** Stratigraphic Phase: **XCIII**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **carapace**

Context: **263nw** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **marginal bone**

Context: **356nw** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **plastron**

Context: **358se** Stratigraphic Phase: **XCIII**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **carapace**

Context: **364ne** Stratigraphic Phase: **XCII**
No. of pieces: **1** Weight: **8gm**
Identification and comments: **carapace**

Context: **365nw** Stratigraphic Phase: **XCII**
No. of pieces: **2** Weight: **6gm**
Identification and comments: **plastron**

Context: **365nw** Stratigraphic Phase: **XCII**
No. of pieces: **2** Weight: **15gm**
Identification and comments: **plastron**

Context: **373ne** Stratigraphic Phase: **XCV**
No. of pieces: **1** Weight: **6gm**
Identification and comments: **carapace**

Context: **378se** Stratigraphic Phase: **XCIII**
No. of pieces: **1** Weight: **10gm**
Identification and comments: **plastron**

Context: **385sw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **15gm**
Identification and comments: **carapace**

Context: **386sw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **10gm**
Identification and comments: **carapace**

Context: **399se** Stratigraphic Phase: **XCI**
No. of pieces: **7** Weight: **20gm**
Identification and comments: **carapace & plastron**

Context: **406sw** Stratigraphic Phase: **XCI**
No. of pieces: **2** Weight: **10gm**
Identification and comments: **carapace**

Context: **409nw** Stratigraphic Phase: **LXXXVIII**
No. of pieces: **1** Weight: **2gm**
Identification and comments: **carapace**

Context: **417nw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **5gm**
Identification and comments: **plastron**

Context: **424nw** Stratigraphic Phase: **XCI**
No. of pieces: **1** Weight: **4gm**
Identification and comments: **carapace**

Context: **424nw** Stratigraphic Phase: **XCI**
No. of pieces: **3** Weight: **8gm**
Identification and comments: **carapace**

Faunal Remains

Context: 425sw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: XCI Weight: 5gm	Context: 426ne No. of pieces: 1 Identification and comments: marginal bone	Stratigraphic Phase: LXXXVIII Weight: 8gm
Context: 426ne No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXXVIII Weight: 30gm	Context: 445sw No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXXVII Weight: 25gm
Context: 409nw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXXVII Weight: 1g	Context: 448sw No. of pieces: 3 Identification and comments: carapace	Stratigraphic Phase: LXXXVII Weight: 30gm
Context: 449sw No. of pieces: 3 Identification and comments: carapace & plastron	Stratigraphic Phase: LXXXVII Weight: 10gm	Context: 450nw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXXVII Weight: 10gm
Context: 457sw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXXVI Weight: 7gm	Context: 486se No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXXII Weight: 8gm
Context: 470sw No. of pieces: 2 Identification and comments: carapace & plastron	Stratigraphic Phase: LXXXI Weight: 10gm	Context: 470sw No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXXI Weight: 8gm
Context: 470sw No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXXI Weight: 20gm	Context: 487ne No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXXI Weight: 40gm
Context: 601se No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXII Weight: 3gm	Context: 601se No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXII Weight: 6gm
Context: 601se No. of pieces: 1 Identification & comments: carapace	Stratigraphic Phase: LXXII Weight: 5gm	Context: 601se No. of pieces: 1 Identification & comments: carapace	Stratigraphic Phase: LXXII Weight: 6gm
Context: 602nw No. of pieces: 1 Identification & comments: carapace	Stratigraphic Phase: LXXII Weight: 7gm	Context: 602nw No. of pieces: 1 Identification & comments: plastron	Stratigraphic Phase: LXXII Weight: 3gm
Context: 602nw No. of pieces: 3 Identification & comments: carapace & plastron	Stratigraphic Phase: LXXII Weight: 11gm	Context: 602nw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXII Weight: 7gm
Context: 602nw No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXII Weight: 3gm	Context: 602nw No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXII Weight: 8gm
Context: 602nw No. of pieces: 3 Identification and comments: plastron & carapace	Stratigraphic Phase: LXXII Weight: 11gm	Context: 605sw No. of pieces: 2 Identification and comments: plastron & carapace	Stratigraphic Phase: LXXXIII Weight: 14gm
Context: 607se No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXI Weight: 3gm	Context: 615ne No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXVIII Weight: 5gm
Context: 615ne No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXVIII Weight: 5gm	Context: 615ne No. of pieces: 2 Identification and comments: carapace	Stratigraphic Phase: LXVIII Weight: 8gm
Context: 616se No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXX Weight: 3gm	Context: 632nw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXXXIII Weight: 4gm
Context: 632nw No. of pieces: 4 Identification and comments: carapace	Stratigraphic Phase: LXXXIII Weight: 20gm	Context: 634nw No. of pieces: 3 Identification and comments: plastron & carapace	Stratigraphic Phase: LXIX Weight: 30gm
Context: 635nw No. of pieces: 1 Identification and comments: plastron	Stratigraphic Phase: LXXIII Weight: 9gm	Context: 669nw No. of pieces: 1 Identification and comments: carapace	Stratigraphic Phase: LXIX Weight: 7gm
Context: 684nw No. of pieces: 1 Identification and comments: limb	Stratigraphic Phase: LXVII Weight: 1gm	Context: 685nw No. of pieces: 3 Identification and comments: carapace	Stratigraphic Phase: LXIX Weight: 15gm

Context: 693nw Stratigraphic Phase: LXXXIV
No. of pieces: 1 Weight: 8gm
Identification and comments: **plastron**

Context: 729nw Stratigraphic Phase: LIII
No. of pieces: 1 Weight: 3gm
Identification and comments: **plastron**

Context: 791nw Stratigraphic Phase: XLVII
No. of pieces: 1 Weight: 7gm
Identification and comments: **pelvis**

Context: 698nw Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 10gm
Identification and comments: **plastron**

Context: 788nw Stratigraphic Phase: LIII
No. of pieces: 1 Weight: 29gm
Identification and comments: **plastron and carapace**

10.3.3.4 Snake

A total of five snake bones, all vertebrae, were recovered from trench ASW2: one from structural period A, one from B and one from period C, D & E. Sri Lanka has one of the highest mortality rates from snake bites in the world, and Anuradhapura itself contains many varieties of snakes from the largest (pythons) to the smallest (common worm snake)

(Daniel 1983: 61–128). It may be hypothesized that the very low representation of snake at ASW2 suggests a chance incorporation within archaeological deposits rather than an indicator of diet, although snakes are eaten within South Asia (ibid.: 73).

Context: 9se Stratigraphic Phase: CVI
No. of pieces: 1 Weight: 3gm
Identification and comments: **vertebra**

Context: 25nw Stratigraphic Phase: XCVII
No. of pieces: 1 Weight: 2gm
Identification and comments: **vertebra**

Context: 87sw Stratigraphic Phase: XCV
No. of pieces: 3 Weight: 5gm
Identification and comments: **vertebrae**

10.3.3.5 *Varanus salvator* and *Varanus bengalensis* (water and common monitor lizard)

A total of 22 monitor lizard bones, all vertebrae, were recovered from ASW2, 3 from structural period C, D & E, 2 from F, 13 from G, 3 from H and 1 from I. It is interesting that two – one from period C, D & E and one from G – were marked with sharp cut marks, presumably from butchering. Two types of monitor lizard are found in Sri Lanka, the water monitor (*Varanus salvator*) and the

common Indian monitor (*Varanus bengalensis*) (Daniel 1983: 58–60). The former has a maximum length of 2.5 m and is found in, or close to, both fresh and salt water: the latter, with a maximum length of 1.75 m, lives in all biotopes (ibid.). The common Indian monitor is considered a delicacy in many parts of Sri Lanka, while the water monitor is widely considered taboo there.

Context: 73sw Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 2gm
Identification and comments: **vertebra**

Context: 88ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4gm
Identification and comments: **vertebra**

Context: 141ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4gm
Identification and comments: **vertebra**

Context: 304ne Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 3gm
Identification and comments: **vertebra**

Context: 316ne Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2gm
Identification and comments: **vertebra with sharp cut marks**

Context: 386nw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 5gm
Identification and comments: **vertebra**

Context: 386nw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 4gm
Identification and comments: **vertebra**

Context: 409nw Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 5gm
Identification and comments: **vertebra**

Context: 409nw Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 5gm
Identification and comments: **vertebra**

Context: 424nw Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6gm
Identification and comments: **vertebra**

Context: 426ne Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 3gm
Identification and comments: **vertebra with sharp cut marks**

Context: 437se Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 10gm
Identification and comments: **vertebra**

Context: 442se Stratigraphic Phase: LXXXVII
No. of pieces: 1 Weight: 2gm
Identification and comments: **vertebra**

Context: 467nw Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 3gm
Identification and comments: **vertebra**

Context: 470sw Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 3gm
Identification and comments: **vertebra**

Context: 470sw Stratigraphic Phase: LXXXI
No. of pieces: 1 Weight: 3gm
Identification and comments: **vertebra**

Context: 493se Stratigraphic Phase: LXXV
No. of pieces: 1 Weight: 6gm
Identification and comments: vertebra

Context: 670sw Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 4gm
Identification and comments: vertebra

Context: 698nw Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 4gm
Identification and comments: vertebra

Context: 645ne Stratigraphic Phase: LXIX
No. of pieces: 1 Weight: 2gm
Identification and comments: vertebra

Context: 697ne Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 2gm
Identification and comments: vertebra

Context: 714sw Stratigraphic Phase: LIV
No. of pieces: 1 Weight: 1gm
Identification and comments: vertebra

10.3.3.6 Marine turtle

A total of 18 fragments of marine turtle, all carapace, were identified at trench ASW2, 3 from structural period I and the remaining 15 from the fill of a pit cut into period J. Four species of marine turtles are known in the Indian Ocean. These are the Green Turtle (*Chelonia mydas* [Linnaeus]), the Olive Ridley Turtle (*Lepidochelys olivacea* [Eschscholte]), the Hawksbill Turtle (*Eretmochelys*

imbricata [Linnaeus]) and the Leathery Turtle (*Dermochelys coriacea* [Linnaeus]) (Daniel 1983: 17–22). Reaching a maximum carapace length of 1.5 m, males lead a completely aquatic life and females return to shore solely to lay eggs (ibid.: 17). Traditionally caught for their flesh, the scutes of the Hawksbill turtle are commonly used in the manufacture of ornaments (ibid.).

Context: 962nw Stratigraphic Phase: XXX
No. of pieces: 1 Weight: 20gm
Identification and comments: carapace

Context: 1175se Stratigraphic Phase: XVIII
No. of pieces: 2 Weight: 45gm
Identification and comments: carapace

Context: 1214sw Stratigraphic Phase: XXIX
No. of pieces: 4 Weight: 35gm
Identification and comments: carapace

Context: 1214sw Stratigraphic Phase: XXIX
No. of pieces: 11 Weight: 270gm
Identification and comments: carapace

10.3.4 Fish

The majority of fish bones recovered from ASW2 have not been identified as to genus or species and therefore cannot be designated as freshwater or marine types. If the species present and their habitats are known, it may be possible to build up models of capture strategies and technologies, as Belcher has done for the site of Harappa in Pakistan (Belcher 1994: 71–3). In this case, ethnographic work among modern fisherfolk in the region has proved

particularly useful in identifying artefacts indicative of particular fishing techniques (ibid.: 77). It may be that, if further identification to species level of the ASW2 fish material was possible, along with ethnographic investigation and analysis of any relevant artefacts, predictive models for fishing strategies could be developed here. The total numbers of fish bones recovered from ASW2 are given in Table 10.8 with the reptilian material.

10.3.4.1 Shark and ray (*Euselachii*)

A total of three vertebrae belonging to members of the *Euselachian* family were recovered from ASW2, however it is difficult to identify whether they are Batoid or Shark, let alone which of the 815 species (Nelson 1994: 43–65). Sharks were often encountered during the pearl diving season, and Tennent recorded that a ceremony involving a shark charmer was necessary with every season (Tennent

1859). Evidently the transportation of fresh meat inland to Anuradhapura seems most unlikely and therefore we may suggest that it was dried at the coast prior to transport. Such dried shark meat is commonly encountered on the Kenyan coast. Certainly shark meat is eaten today on the west and east coasts of India (McCormick *et al.* 1970: 175).

Context: 194 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2g
Identification and comments: vertebra

Context: 316 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: vertebra

Context: 324 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: vertebra

10.3.4.2 *Mystus* sp. (catfish)

Catfish form one of the categories of identified fish bone from trench ASW2. In most cases it has been impossible to identify a species, but a small number have been attributed to the genus *Mystus* (Scoopoli). This is commonly found in ponds and small streams (Deraniyagala 1952: 53). While

Mystus range in length between 0.24 m and 0.10 m, the largest catfish, *Wallago attu* (Bloch et Schneider), reaches a maximum length of 1.5 m and is also known as the 'freshwater shark' (ibid.).

Context: 12 Stratigraphic Phase: CVIII
No. of pieces: 1 Weight: 1g
Identification and comments: pectoral spine

Context: 313 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: pectoral spine

10.3.4.3 *Ophicephaloidea (snakeheads)*

Of the 18 species of *Ophicephaloidea* found in South Asia (Nelson 1994: 435), four are present in Sri Lanka: *Ophicephalus striatus*, *Ophicephalus ara*, *Ophicephalus punctatus*, *Ophicephalus gachua kelaarti* (Deraniyagala 1952: 120–30). *Ophicephalus striatus*, the largest, is known to grow to a maximum length of 0.68 m and is described as

one of the most important freshwater food fish in Sri Lanka (ibid.). They are found in rivers, streams and tanks. In the height of the dry season, when crops fail, they are an important food resource and moreover are more accessible as tanks dry up. They are known, however, to migrate between ponds (ibid.).

Context: 41 Stratigraphic Phase: C
No. of pieces: 1 Weight: 5g
Identification and comments: **mandible**

Context: 56 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **mandible - right**

Context: 56 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **mandible**

Context: 414 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6g
Identification and comments: **mandible - right**

10.3.4.4 *Unidentified fish*

Context: 42 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 4g
Identification and comments: **vertebra**

Context: 73 Stratigraphic Phase: XCIII
No. of pieces: 4 Weight: 7g
Identification and comments: **vertebrae, maxilla**

Context: 87 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 5g
Identification and comments: **skull**

Context: 88 Stratigraphic Phase: XCV
No. of pieces: 5 Weight: 15g
Identification and comments: **vertebra, spines, skull**

Context: 113 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 158 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 4g
Identification and comments: **vertebra, skull**

Context: 196 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 15g
Identification and comments: **bone fragments**

Context: 251 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 8g
Identification and comments: **vertebra**

Context: 252 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 6g
Identification and comments: **skull**

Context: 253 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **skull**

Context: 254 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: **skull**

Context: 255 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 6g
Identification and comments: **skull**

Context: 256 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: **skull**

Context: 259 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 8g
Identification and comments: **mandible - left**

Context: 261 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **skull**

Context: 272 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 298 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: **vertebra**

Context: 304 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 6g
Identification and comments: **maxilla, spine**

Context: 306 Stratigraphic Phase: XCIII
No. of pieces: 6 Weight: 5g
Identification and comments: **spines, jaw**

Context: 316 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 320 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2g
Identification and comments: **mandible**

Context: 320 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: **vertebra**

Context: 324 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **vertebra**

Context: 332 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 345 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **vertebra**

Context: 358 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **vertebra**

Context: 358 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 3g
Identification and comments: **maxilla**

Context: 365 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 3g
Identification and comments: **vertebra**

Faunal Remains

Context: 365 Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 1g
Identification and comments: **vertebra**

Context: 369 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 3g
Identification and comments: **skull**

Context: 375 Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 386 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 3g
Identification and comments: **vertebra**

Context: 404 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 6g
Identification and comments: **maxilla - left**

Context: 417 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 4g
Identification and comments: **vertebra**

Context: 431 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 3g
Identification and comments: **vertebra**

Context: 449 Stratigraphic Phase: LXXXVII
No. of pieces: 2 Weight: 6g
Identification and comments: **dorsal fin spine, skull**

Context: 492 Stratigraphic Phase: LXXV
No. of pieces: 1 Weight: 4g
Identification and comments: **vertebra**

Context: 600 Stratigraphic Phase: XCV
No. of pieces: 3 Weight: 3g
Identification and comments: **vertebrae**

Context: 601se Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 3g
Identification and comments: **skull**

Context: 659ae Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 787se Stratigraphic Phase: XLIII
No. of pieces: 1 Weight: 12g
Identification and comments: **axis vertebra**

Context: 366 Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 1g
Identification and comments: **vertebra**

Context: 374 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2g
Identification and comments: **vertebra**

Context: 379 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **vertebra**

Context: 401 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 8g
Identification and comments: **vertebra**

Context: 416 Stratigraphic Phase: XCI
No. of pieces: 2 Weight: 7g
Identification and comments: **vertebra, maxilla - left**

Context: 426 Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 4g
Identification and comments: **vertebra**

Context: 448 Stratigraphic Phase: LXXXVI
No. of pieces: 1 Weight: 4g
Identification and comments: **mandible - right**

Context: 457 Stratigraphic Phase: LXXXVI
No. of pieces: 2 Weight: 10g
Identification and comments: **vertebra, skull**

Context: 600 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 4g
Identification and comments: **skull**

Context: 600 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **fin spine**

Context: 602nw Stratigraphic Phase: LXXII
No. of pieces: 1 Weight: 2g
Identification and comments: **jaw**

Context: 714sw Stratigraphic Phase: LIV
No. of pieces: 1 Weight: 6g
Identification and comments: **skull**

10.3.5 Shells

The shells recovered and identified include both marine and freshwater molluscs, which again suggests that either trade with coastal sites or travel to the coast was taking place, as well as the exploitation of local resources. The shells may represent food waste or they may have been artefacts in their own right. The genera and species identified cover both decorative and more utilitarian shells, which may be the result of selection for different purposes. As there is no record for the shells of visible signs of work done to them or marks suggesting they have been prepared for food, this

can only be based on the fact that certain shells, particularly among the marine group, are today considered sacred or are collected purely for their visual or symbolic appeal (Kenoyer 1991: 217; Wye 1991: 184). A number of the shell remains do consist of cores, something which is known from other sites and ethnographic studies to represent waste from shells used for jewellery and decorative purposes (Kenoyer 1991: 216–17). Table 10.9 lists the total numbers of shells recovered by period.

10.3.5.1 *Anadara* sp. (marine bivalves)

Anadara is a genus of the Arcidae family of shells, otherwise known as 'ark clams'. This is a subtidal, shallow-water genus and specimens are usually found attached to

rocks, in cracks in cliff faces or on shallow reefs (Abbott and Dance 1991: 291–2; Wye 1991: 242).

Context: 409 Stratigraphic Phase: LXXXVIII
No. of pieces: 1 Weight: 10g

Context: 420 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 3g

Identification and comments: **shell**

Context: 493 Stratigraphic Phase: LXXV
No. of pieces: 1 Weight: 8g
Identification and comments: **shell**

10.3.5.2 *Bivalvia sp. (marine bivalves)*

There are over 10,000 living species known to belong to the Bivalvia class of molluscs (Abbott and Dance 1991: 2).

Context: 151 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 256 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 2g
Identification and comments: **shell**

Context: 313 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **shell**

Context: 663 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 698 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 1206 Stratigraphic Phase: XXXVI
No. of pieces: 1 Weight: 3g
Identification and comments: **shell**

10.3.5.3 *Cryptozona sp. (land snail)*

Context: 65 Stratigraphic Phase: CX
No. of pieces: 12 Weight: 8g
Identification and comments: **shell**

Context: 134 Stratigraphic Phase: XCV
No. of pieces: 3 Weight: 10g
Identification and comments: **shell**

Context: 255 Stratigraphic Phase: XCV
No. of pieces: 4 Weight: 5g
Identification and comments: **shell**

Context: 256 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 2g
Identification and comments: **shell**

Context: 306 Stratigraphic Phase: XCIII
No. of pieces: 2 Weight: 2g
Identification and comments: **shell**

Context: 316 Stratigraphic Phase: XCV
No. of pieces: 4 Weight: 4g
Identification and comments: **shell**

Context: 324 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 334 Stratigraphic Phase: XCV
No. of pieces: 3 Weight: 3g
Identification and comments: **shell**

Context: 334 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 364 Stratigraphic Phase: XCII
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Identification and comments: **shell**

Context: 182 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **shell**

Context: 271 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 5g
Identification and comments: **shell**

Context: 334 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 698 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 1125 Stratigraphic Phase: XXIII
No. of pieces: 1 Weight: 3g
Identification and comments: **shell**

Context: 105 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 158 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 2g
Identification and comments: **shell**

Context: 256 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 262 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 316 Stratigraphic Phase: XCV
No. of pieces: 3 Weight: 3g
Identification and comments: **shell**

Context: 320 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 324 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 2g
Identification and comments: **shell**

Context: 334 Stratigraphic Phase: XCV
No. of pieces: 3 Weight: 3g
Identification and comments: **shell**

Context: 355 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 373 Stratigraphic Phase: XCV
No. of pieces: 2 Weight: 4g
Identification and comments: **shell**

Context: 375 Stratigraphic Phase: LXXXVIII
 No. of pieces: 1 Weight: 1g
 Identification and comments: **shell**

Context: 409 Stratigraphic Phase: LXXXVIII
 No. of pieces: 1 Weight: 2g
 Identification and comments: **shell**

10.3.5.4 *Cypraea* sp. (cowrie)

There are over 200 named species in the Cypraeidae family, of which *Cypraea* is the main genus. This marine gastropod is omnivorous and is found in tropical and warm seas (Abbott and Dance 1991: 83; Wye 1991: 82). Cowries

are known for the smooth, glossy surface of their shells and they usually have a toothed aperture (Abbott and Dance 1991: 83).

Context: 254 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 3g
 Identification and comments: **shell**

Context: 305 Stratigraphic Phase: XCIII
 No. of pieces: 1 Weight: 1g
 Identification and comments: **shell**

Context: 313 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 2g
 Identification and comments: **shell**

Context: 324 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 5g
 Identification and comments: **shell**

Context: 325 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 3g
 Identification and comments: **shell**

Context: 369 Stratigraphic Phase: XCIII
 No. of pieces: 1 Weight: 3g
 Identification and comments: **shell**

10.3.5.5 *Lamellaria* sp. (marine gastropod)

These marine gastropods are found frequently under stones in the lower shore area. The molluscs themselves are slug-

like but are not actually sea slugs (Beedham 1972: 52). They are related to the cowrie (ibid.).

Context: 256 Stratigraphic Phase: XCV
 No. of pieces: 3 Weight: 3g
 Identification and comments: **shell**

Context: 256 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 2g
 Identification and comments: **shell**

Context: 381 Stratigraphic Phase: LXXXIX
 No. of pieces: 1 Weight: 2g
 Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
 No. of pieces: 1 Weight: 5g
 Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
 No. of pieces: 1 Weight: 10g
 Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
 No. of pieces: 1 Weight: 6g
 Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
 No. of pieces: 1 Weight: 9g
 Identification and comments: **shell**

Context: 1125 Stratigraphic Phase: XXIII
 No. of pieces: 1 Weight: 2g
 Identification and comments: **shell**

Context: 1174 Stratigraphic Phase: XX
 No. of pieces: 2 Weight: 4g
 Identification and comments: **shell**

10.3.5.6 *Oliva* sp. (marine gastropod)

Oliva are considered the 'true' olive genus out of the six main genera of the Olividae family (Wye 1991: 187), and there are over 50 species in the *Oliva* genus alone (Abbott

and Dance 1991: 190). These small gastropods tend to burrow under sand during the day, coming out to feed at night (Wye 1991: 187).

Context: 977 Stratigraphic Phase: XXVIII
 No. of pieces: 1 Weight: 8g
 Identification and comments: **shell**

Context: 1125 Stratigraphic Phase: XXIII
 No. of pieces: 1 Weight: 4g
 Identification and comments: **shell**

Context: 1172 Stratigraphic Phase: XXII
 No. of pieces: 1 Weight: 4g
 Identification and comments: **shell**

Context: 1172 Stratigraphic Phase: XXII
 No. of pieces: 1 Weight: 4g
 Identification and comments: **shell**

10.3.5.7 *Pila* sp. (freshwater snail)

This freshwater gastropod is found today in tropical, inland, stagnant water and is considered edible (Deraniyagala 1992: 302; Morton 1958: 181). As the habitat of this genus is stagnant water, this makes it quite suited to areas such as irrigation tanks that are known through the archaeology at

ASW2. Shells identified as *Pila globosa*, the apple snail, have been recovered from Mesolithic shell middens on the island (Deraniyagala 1992: 302). *Pila* has also been reported as a food source in the Jaffna peninsula (Ragupathy 1987: 164).

Context: 269 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 2g
 Identification and comments: **shell**

Context: 316 Stratigraphic Phase: XCV
 No. of pieces: 1 Weight: 1g
 Identification and comments: **operculum**

Context: 676 Stratigraphic Phase: LXVII
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 961 Stratigraphic Phase: XXXI
No. of pieces: 1 Weight: 2g
Identification and comments: **shell**

Context: 1125 Stratigraphic Phase: XXIII
No. of pieces: 1 Weight: 7g
Identification and comments: **shell**

10.3.5.8 *Strombus* sp. (marine gastropod, conch)

Species of the *Strombus* genus found in the Sri Lankan region include *S. labiatus* and *S. mutabis* (Abbott and Dance 1991: 77). Both of these species are found in areas of shallow water (Wye 1991: 76). All members of the

Context: 374 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 2g
Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
No. of pieces: 1 Weight: 13g
Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
No. of pieces: 1 Weight: 11g
Identification and comments: **shell**

Context: 1101 Stratigraphic Phase: XXVII
No. of pieces: 1 Weight: 17g
Identification and comments: **shell**

Context: 1208 Stratigraphic Phase: XXI
No. of pieces: 1 Weight: 15g
Identification and comments: **shell**

10.3.5.9 *Thiara* sp. (freshwater snail)

Thiara is a freshwater gastropod and, like the *Pila* genus, can be found in stagnant or running water (Purchon 1977: 355). This would be in keeping with recovery from irrigation tanks or associated areas of water at ASW2.

Context: 307 Stratigraphic Phase: XCIII
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

10.3.5.10 *Turbinella* sp. (marine gastropod)

Turbinella is a genus in the Vasidae or vase shell family and is also known as 'chank' shell, a name derived from the Hindu word *cankh*, meaning shell (Wye 1991: 181). Several species of chank shells are found in South Asia, including *T. pyrum*, which is endemic to southeastern India

Context: 26 Stratigraphic Phase: CIV
No. of pieces: 1 Weight: 2g
Identification and comments: **shell**

Context: 272 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 4g
Identification and comments: **shell**

Context: 320 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 8g
Identification and comments: **shell**

Context: 837 Stratigraphic Phase: XXXV
No. of pieces: 1 Weight: 2g
Identification and comments: **shell**

Context: 698 Stratigraphic Phase: LXIV
No. of pieces: 1 Weight: 1g
Identification and comments: **operculum**

Context: 977 Stratigraphic Phase: XXVIII
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 385 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 1g
Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
No. of pieces: 1 Weight: 14g
Identification and comments: **shell**

Context: 977 Stratigraphic Phase: XXVIII
No. of pieces: 1 Weight: 15g
Identification and comments: **shell**

Context: 1124 Stratigraphic Phase: XXV
No. of pieces: 1 Weight: 25g
Identification and comments: **shell**

There are over 20 genera of the Thiariidae family, and they occupy a wide range of habitats, including brackish water. Some species can be found in tidal estuaries (Mason 1996: 245).

Context: 363 Stratigraphic Phase: XCIII
No. of pieces: 2 Weight: 2g
Identification and comments: **shell**

and Sri Lanka. This particular species, especially the sinistral form, is sacred to Hindus and is known to be used for ceremonial and religious purposes, as well as for making jewellery (Abbott and Dance 1991: 210; Wye 1991: 184).

Context: 158 Stratigraphic Phase: XCV
No. of pieces: 1 Weight: 8g
Identification and comments: **shell**

Context: 292 Stratigraphic Phase: XCV
No. of pieces: 4 Weight: 4g
Identification and comments: **shell**

Context: 404 Stratigraphic Phase: XCI
No. of pieces: 1 Weight: 5g
Identification and comments: **shell**

Context: 837 Stratigraphic Phase: XXXV
No. of pieces: 2 Weight: 29g
Identification and comments: **shell**

Context: 837 Stratigraphic Phase: XXXV
 No. of pieces: 3 Weight: 48g
 Identification and comments: shell

10.3.5.11 Worked shell (unidentified)

Context: 502 Stratigraphic Phase: LXXVI
 No. of pieces: 1 Weight: 0.4g
 Identification and comments: worked shell

10.4 Conclusions

The faunal bone assemblage from ASW2 is large and covers a wide range of wild and domesticated species. This indicates that the occupants of the site were able to exploit a wide range of habitats and possibly even take advantage of alterations in habitats to gain a range of meat sources. The presence of sea-animal bones and shells suggests that trade or other links with the coast were well established at Anuradhapura, in keeping with its status as a royal capital and rapidly expanding city. The early increase in overall bone quantities also follows the trend of a site where the population shows rapid growth. The later contraction in overall bone numbers can be attributed to a number of possible reasons, perhaps even the influence of the dominant vegetarian Buddhists, but this would require further work in such areas as cut marks, butchering patterns and herd structure to obtain more information. The minor animal species recovered and identified from ASW2 are important, not only because of their diversity but also because they give information about activities at and around the site. While the four major species present are likely to have provided the bulk of the animal food being consumed at ASW2 in varying proportions over time, the bones or shells from the minor species are as likely to be representative of other activities as they are a food source. These other activities may have included trade or other forms of contact with areas outside the ecozone in which ASW2 is situated. There are also the remains of crop pests and scavengers, which may be considered an integral part of settlement and agriculture – with certain species perhaps particularly attracted by the irrigation aspect, providing a reliable water source and habitat. Other species, such as the three types of deer, may have been hunted, but their tendency to solitary, nocturnal behaviour would make them far less suitable than the herd, diurnal behaviour of the far more numerous *Axis axis ceylonensis*. The presence of a range of reptiles and species whose habitat is water-based, such as the two terrapin species, indicates that the environment surrounding ASW2 was suitable for these animals. This corresponds with the increase in irrigation and water control, providing water or marshy ground over a sufficient area in the dry zone to support water-demanding species. Alternatively, these animals may have been acquired through trade or brought onto the site from other regions. The presence of *Dugong dugon*, in addition to the mangrove charcoal identified (see section 12.3.2 below), suggests contact with the coastal region, either through trade or a more direct link. The sea shells identified from a number of contexts also confirm this.

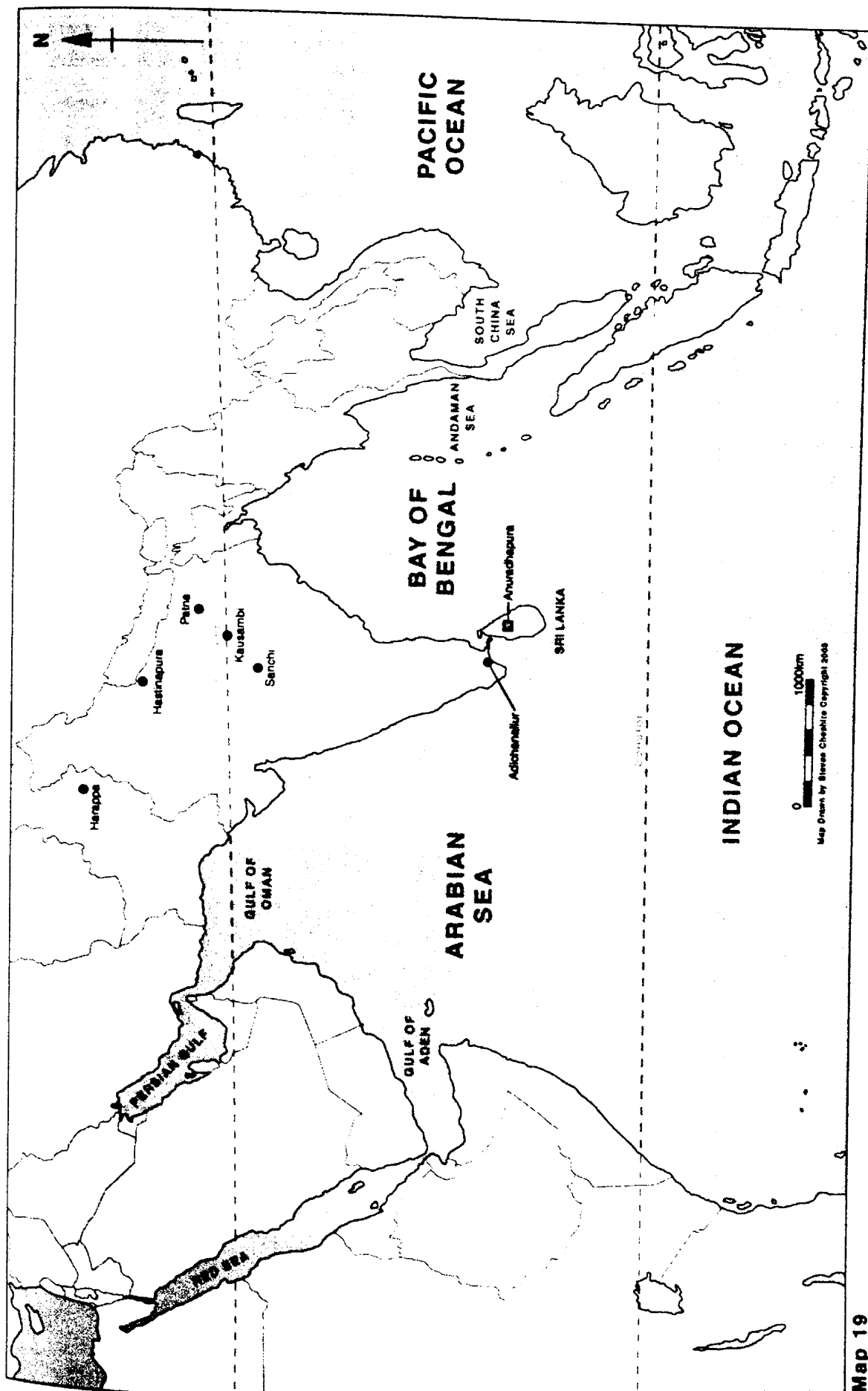
In order to gauge the representative nature of the faunal assemblage from ASW2, it is useful to compare it with the assemblage from the Gedige site, also on the Citadel. The excavations cover a similar sequence to those at ASW2 and

the species *Bos*, *Axis*, *Sus* and terrapin are also represented, but shellfish is either absent or not included in the faunal report. Generally, the same overall trends are repeated at the Gedige, with an increase in total bone numbers from the earliest period sampled, reaching a peak at the equivalent to period I. The numbers then decline in the period equivalent to G and later, but unlike ASW2 the numbers fall well below those of the earliest period examined (P.E.P. Deraniyagala 1972). Deraniyagala likewise considers that the terrapins are at Gedige as a food source, as they are not taboo animals. He also claims that cattle were being eaten there during the Hindu period of ascendancy as well as during later phases of occupation and suggests (1972: 157) that '... the "tabu" on beef was imposed in Ceylon during the middle or late historic period when there was a marked increase of Hindu influence on Sinhalese culture'. This would mean that assessing *Bos* as an indicator of social change with regard to taboo animals and religious changes at ASW2 during the period under examination might not be reliable.

These comments from Deraniyagala highlight the fact that the extent to which faunal assemblages can be used to indicate social change or differentiation is an extremely complex matter. The very presence of the caste system and the taboo status of animals negate simplistic economic models of subsistence. The importance and the problems of recognizing and interpreting the spiritual or symbolic dimensions of human actions within an archaeological context have been addressed by a number of post-processual archaeologists (Hodder 1986; Moore 1982) and can be considered primarily in terms of caste issues and religious change in relation to food consumption. The 'sacred cow' controversy is a prime example of the problems involved in trying to explain economically the symbolism and spiritualism in human behaviour. In his paper on the origins of the sacred cow concept, Harris states: '... I believe the irrational non-economic and exotic aspects of the Indian cattle concept are greatly overemphasised at the expense of the rational, economic and mundane interpretations' (1966: 51). Harris argued that the sacred cow concept did not evolve from religious ideas but could be explained from a technological-environmental perspective. Thirty years later, a number of other researchers (e.g. Batra 1982; Freed and Freed 1981; Simoons 1979) have exposed methodological and interpretative flaws in Harris's work. By trying to impose a purely rational and economic justification of the sacred cow concept, Harris diminished the influence of religion and spirituality, and the central role these play in South Asia (Freed and Freed 1981; Lodrick 1979). The issue of taboo animals is also important as it places great emphasis on purity and penance with regard to the eating of flesh and

animal products. The earliest historical record relating to taboo animals is a set of laws written down during the Vedic period and known as the *Manudharmasastra* or *Laws of Manu* – Manu being the father of mankind, according to Hindu teaching (Muller 1967). These laws set out required behaviour in relation to animals and animal products, including flesh suitable for consumption and circumstances under which certain meat can be eaten, and purification and atonement for eating forbidden material. The major categories of taboo animals are: carnivorous birds, or birds living in the village; sparrow, woodpecker, parrot or starling; webbed-feet birds; birds or animals that eat fish; village pig; unknown animals. There are also dictates regarding cattle products and handling of cattle by Brahmins and others (ibid.). The representation of taboo animals in the assemblage from ASW2 might be expected to alter with the change from Hinduism to Buddhism, as attitudes towards animals altered. It is also important to

consider that patterns of rubbish disposal themselves might change as ideology changes within a group (Hodder 1986: 78). It may be that the material recovered from ASW2 represents only a small or specific part of the total faunal waste, and the social controls determining bone disposal may be the result of religious or social beliefs. This could mean that changes in the faunal assemblage may be as much the result of changes in disposal patterns as attitudes to meat procurement and consumption. The limits of the archaeological record are also emphasized by the wealth of material which is recorded ethnographically; for example, whilst the skeletal remains of the *Ophicephalus marulius*, or giant snakehead, may be indistinguishable from those of the *Ophicephalus striatus*, or striped snakehead, the flesh of the former is not commonly eaten (Deraniyagala 1952: 128), whereas the flesh of the latter is very popular, whether fresh or dried (ibid: 123)!



Map 19

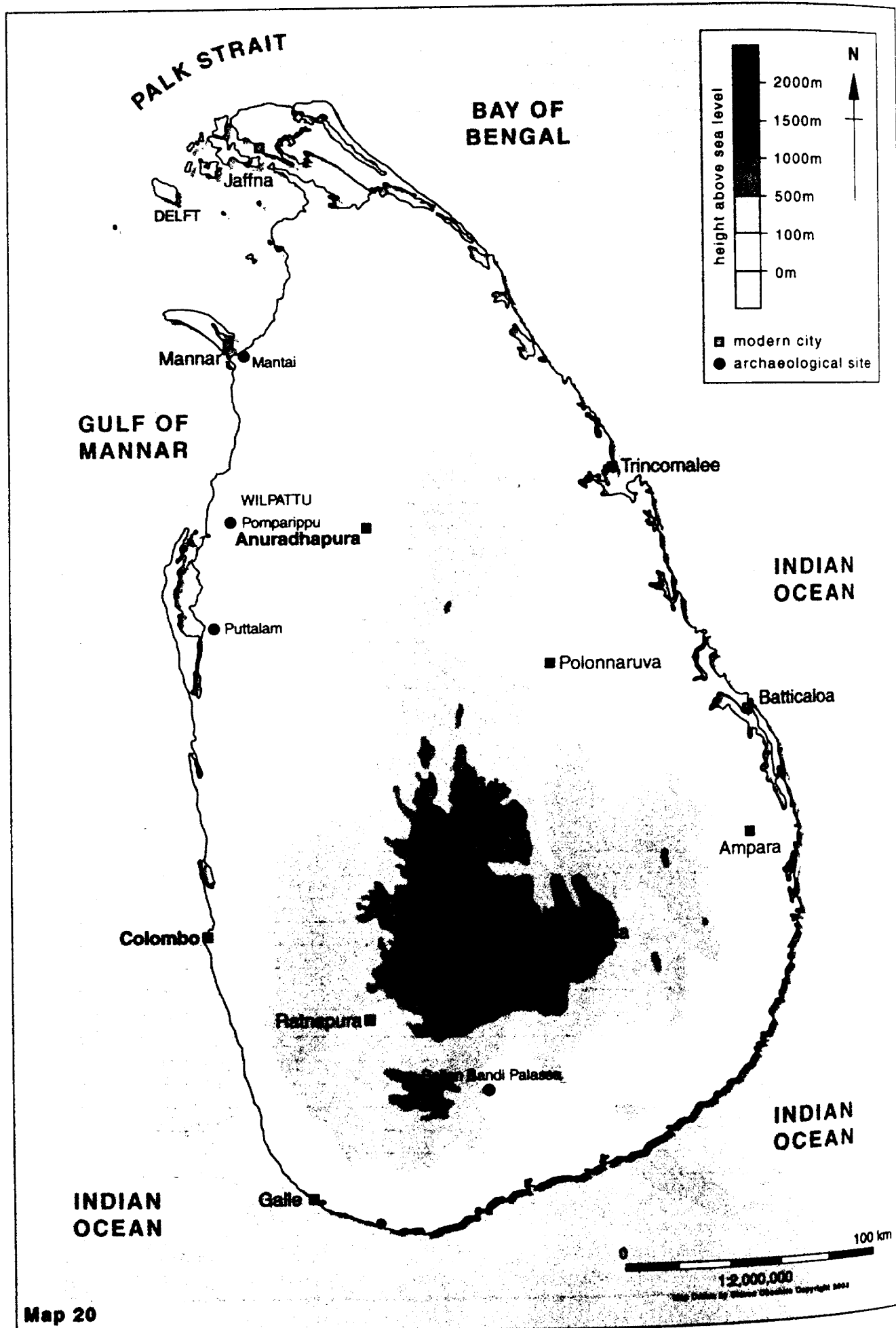


Table 10.1 Animal species represented

Mammals		
<i>Axis axis ceylonesis</i>		Ceylon spotted deer
<i>Bandicota sp.</i>		Bandicoot rat
<i>Bos indicus</i> or <i>Bos taurus</i>		Cattle
<i>Bubalus bubalis bubalis</i>		Indian water buffalo
<i>Canis aureus lanka</i> or <i>Canis familiaris</i>		Ceylon jackal or domestic dog
<i>Capra hircus</i>		Goat
<i>Cervus unicolor unicolor</i>		Sambhur
<i>Dugong dugon</i>		Common dugong or sea cow
<i>Elephas maximus maximus</i>		Indian elephant
<i>Equus caballus</i>		horse
<i>Felis sp.</i>		Cat
<i>Herpestes sp.</i>		Mongoose
<i>Hystrix indica</i>		Indian porcupine
<i>Lepus nigricollis</i>		Ceylon black naped hare
<i>Microchiroptera sp.</i>		Insectivorous or carnivorous bat
<i>Muntiacus muntjak malabaricus</i>		South Indian muntjak or barking deer
<i>Pteropus giganteus giganteus</i>		Indian flying fox
<i>Sus scrofa cristatus</i>		Indian wild pig
<i>Tragulus meminna</i>		Indian mouse deer or chevotain
Bird		
<i>Gallus sp.</i>		Fowl
<i>Pavo cristatus</i>		Indian peafowl
<i>Ardeola</i> or <i>Ardea sp.</i>		Heron sp.
Reptiles		
<i>Crocodylus sp.</i>		Crocodile
<i>Lissemys punctata</i>		Soft terrapin
<i>Melanocheilus trijuga thermalis</i>		Hard terrapin
<i>Serpentis sp.</i>		Snake
<i>Varanus sp.</i>		Water or land monitor
Fish		
<i>Euselachii</i>		Shark or ray
<i>Mystus sp.</i>		Catfish
<i>Ophicephalus sp.</i>		Snakehead
Shell		
<i>Anadara sp.</i>		Marine bivalve
<i>Bivalva sp.</i>		Marine bivalve
<i>Cryptonozona sp.</i>		Land mollusc
<i>Cypraea sp.</i>		Marine gastropod, Cowrie
<i>Lamellidens sp.</i>		Freshwater bivalve
<i>Oliva</i>		Marine gastropod
<i>Parreysia corrugata</i>		Freshwater corrugated clam
<i>Pila sp.</i>		Freshwater mollusc
<i>Strombus</i>		Marine gastropod, Conch
<i>Turbinella sp.</i>		Marine gastropod

Table 10.2 Faunal remains

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Major species											
Axis	number	4	116	49	2	235	80	353	40	3	882
	weight (g)	40	68.24	47.57	20	40.87	35.09	24.66	18.52	30	324.95
Bos	number	3	81	28	1	140	86	380	113	3	836
	weight (g)	30	47.65	27.18	10	24.35	37.72	33.52	52.31	30	292.73
Parusysia	number				5	36	18	346	53	2	480
	weight (g)				50	6.26	7.89	24.16	24.54	20	132.85
Sus	number	3	56	26	2	164	44	253	10	2	560
	weight (g)	30	32.94	25.25	20	28.52	19.3	17.67	4.63	20	198.31
All others											
	number	4	28	95	61	220	109	249	38	3	807
	weight (g)	6	1107.17	409	236	6254	3001	29233.99	6108	48	46403.16
Total	number	14	281	198	71	795	337	1581	254	13	3544
	weight (g)	106	1256	509	336	6354	3101	29334	6208	148	47352

Table 10.3 Major mammals, age estimation based on tooth wear

Category	Period	A	B	C, D & E	F	G	H	I	J	K	Total
Species	Young adult (M3 erupting, M1 and 2 little wear)										
Axis	number		1	3	1	4	5	10	1	1	26
Bos	number		1	3		3	1	5			12
Sus	number		2			3		3			8
Species	Adult (M3 fully erupted)										
Axis	number		2	3		5	5	13	1	1	30
Bos	number			5		3	1	5		1	16
Sus	number		1			3		3			7
Species	Ageing adult (M1, 2 and 3 showing signs of wear)										
Axis	number		1	2		8	4	16		1	32
Bos	number		1	5		3	1	3			13
Sus	number		1			1		3			5
Species	Elderly adult (M1, 2 and 3 showing considerable wear)										
Axis	number		2	2		3	1	8			16
Bos	number					1		2			3
Sus	number					1		2			3
Total	number		12	23	1	38	18	73	2	4	170

Table 10.4 Minor Mammals

Category	Period	A	B	C, D & E	F	G	H	I	J	K	Total
Bandicota	number weight (g)			1 2							1 2
Bubalus	number weight (g)		1 41	3 11		9 340	8 309	12 403	2 89	1 52	36 1345
Canis	number weight (g)		4 28	17 132	1 6	3 24	1 7	12 95	2 16		40 308
Capra	number weight (g)			2 22		3 68	1 7	6 101			12 198
Cervus	number weight (g)		1 15	5 78		3 37	1 16	8 122	1 14	1 23	20 305
Dugong	number weight (g)	1 45									1 45
Elephus	number weight (g)							1 81			1 81
Equus	number weight (g)					1 34					2 79
Felis	number weight (g)		1 3	6 19		3 12	1 45	3 7			14 43
Herpestes	number weight (g)					1 3	1 2				1 3
Hystrix	number weight (g)								1 4		1 4
Lepus	number weight (g)	1 4	4 15	25 58	6 34	15 75	7 49	21 62	4 25	1 3	84 325

Category	Period	A	B	C,D&E	F	G	H	I	J	K	Total
Microchiroptera	number weight (g)				1 1						1 1
Muntjak	number weight (g)			1 7			1 6	1 5			3 16
Pteropus	number weight (g)			1 8							1 8
Rattus	number weight (g)		1 3	6 13		8 19		4 7	2 9		21 51
Tragulid	number weight (g)		1 6	5 37	1 2	1 4	1 2	4 13	3 4		16 68
Total		14 106	281 1256	198 509	71 336	796 6364	337 3101	1581 29334	254 6208	13 148	3844 47352

Table 10.5 Minor mammal teeth

Category	Period	A	B	C, D & E	F	G	H	I	J	K	Total
Bandicota	number			1							1
	weight (g)			1							1
Bubalus	number					2	1	1			4
	weight (g)					6	3	2			11
Canis	number			4		2	2	2			10
	weight (g)			18		12	14	11			55
Capra	number		1	7		4	2	4	1		19
	weight (g)		6	43		25	14	17	6		111
Cervus	number		1	3	1	3	3	6	1		18
	weight (g)		5	12	7	13	14	22	7		80
Equus	number					3		8			11
	weight (g)					60		170			230
Herpestes	number								1		1
	weight (g)								1		1
Hystrix	number			1							1
	weight (g)			2							2
Lepus	number		2	1	1	3		1	1		9
	weight (g)		5	1	1	4		1	1		13
Muntjak	number			1	1	1		1			4
	weight (g)			4	3	4		5			16
Rattus	number			1		2	1	1			5
	weight (g)			1		2	1	1			5
Total	number		4	19	3	20	9	24	4		525
	weight (g)		16	82	11	126	46	229	15		

Table 10.6 Carved bone and Ivory objects

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Mirror stand	number										
	weight (g)					1					1
Draftsman?	number										356
	weight (g)					356					
Draftsman?	number										
	weight (g)					1					1
Handles?	number					23.12					23.12
	weight (g)										
Handles?	number							1			2
	weight (g)					1		4.12			6.59
Bangles	number					2					3
	weight (g)			1		12.31					20.82
Carved plaques	number										
	weight (g)					4					4
Vessels	number					121.65					121.65
	weight (g)										
Carved disc	number					2					3
	weight (g)			1		36.62					55.08
Styli	number										
	weight (g)										
Arrowheads	number										1
	weight (g)										3.82
Cube or dice	number					2		2			4
	weight (g)					9.93		11.21			21.14
Total	number					1		1			2
	weight (g)					3.47		2.92			6.39
Total	number				1						1
	weight (g)				2.95						2.95
Total	number			3	1	14		4			22
	weight (g)			30.79	2.95	565.57		18.25			617.56

Table 10.7 Birds

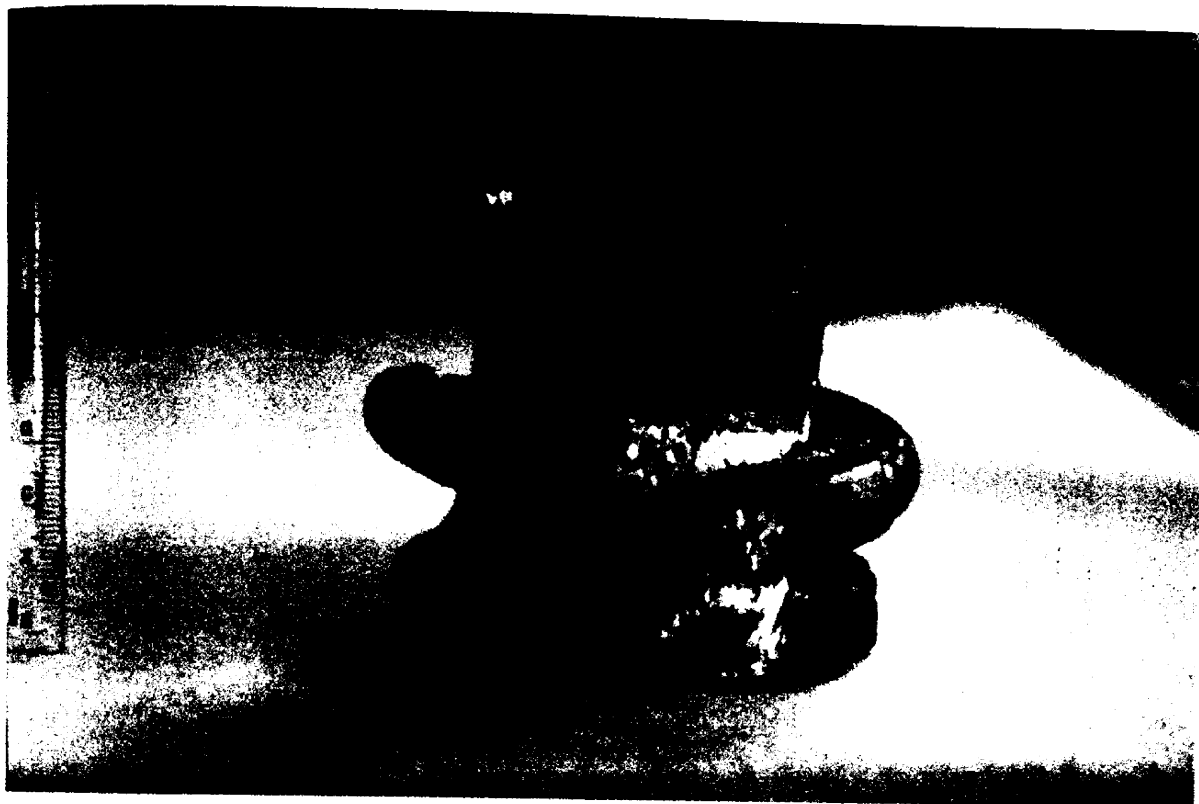
Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Gallus	number		2	8	1	11	6	4			32
	weight (g)		7	24	3	35	18	9			96
Pavo	number				1	2	1	2			7
	weight (g)				8	8	2	26			44
Aredaea	number			1							1
	weight (g)			10							10
Unident- ified	number			3	4	1	1	1	1		11
	weight (g)			9	13	4	1	3	2		32
Total	number		2	12	6	14	8	8	1		51
	weight (g)		7	43	24	47	21	38	2		182

Table 10.8 Reptiles and fish

Category	Period	A	B	C, D & E	F	G	H	I	J	K	Total
Crocodylus	number		1	3							
	weight (g)		3	11							4
Liasomys	number		1	11	14	57	3	6			
	weight (g)		2	70	108	330	3	10			92
Melanochely	number		2	8	13	55	1				623
	weight (g)		33	75	115	490	13				79
Monitor	number			3	2	13	3	1			
	weight (g)			13	7	51	10	2			22
Serpentoid	number	1	1	3							83
	weight (g)	2	2	6							
Turtle	number										6
	weight (g)										10
Shark or ray	number		1	2							
	weight (g)		2	4							18
Mystus	number										3
	weight (g)										6
Ocephelus	number			2							2
	weight (g)			2							2
Unidentified	number		3	4	2	7	45	15	1		77
	weight (g)		28	35	18	22	126	68	7		304
Total	number	1	9	38	31	132	52	26	16		172
	weight (g)	2	70	224	248	893	152	145	312		2046

Table 10.9 Shells

Category	Period	A	B	C,D & E	F	G	H	I	J	K	Total
Anadara	number					3					3
	weight (g)					21					21
Bivalvia	number			6			3	2			11
	weight (g)			18			3	6			27
Cryptozonia	number		2	28	6	1	7	8			52
	weight (g)		2	30	8	2	8	8			58
Cypraea	number			4	2						6
	weight (g)			13	4						17
Lamelliden	number			2	1	3	3	2	1		12
	weight (g)			5	4	8	10	13	3		43
Oliva	number						1	3			4
	weight (g)						8	12			20
Pila	number			3	1		2	1			7
	weight (g)			4	2		2	7			15
Strombus	number			3		2	1	1	1		9
	weight (g)			36		28	15	17	17		113
Thais	number				2						2
	weight (g)				3						3
Turbinella	number	1	1	6	1	1	2	3			16
	weight (g)	2	5	48	9	7	13	28			112
Total	number	1	3	52	13	10	19	20	2		120
	weight (g)	2	7	154	30	66	59	91	20		429



Ivory mirror stand (sf 10196)

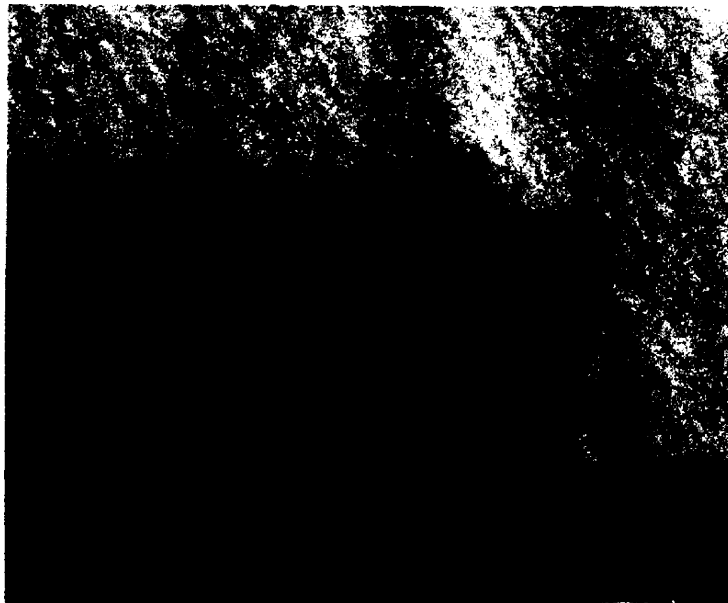


Ivory mirror stand (sf 10196)

Plate 10.1: Ivory and bone objects

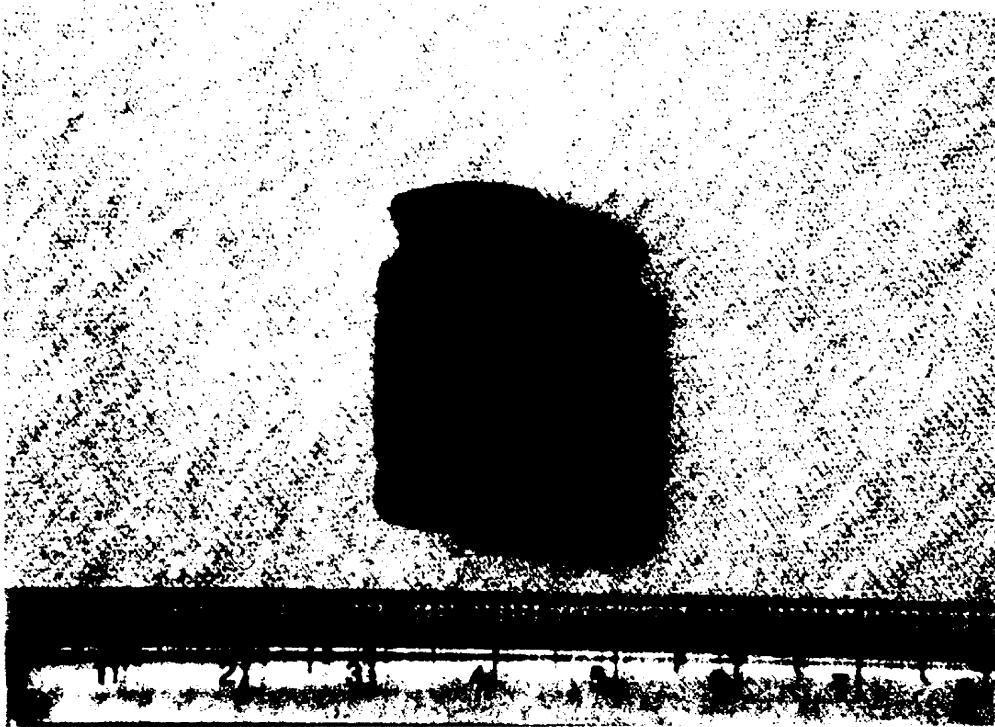


Ivory draftsman, counter or stopper (sf 6619)

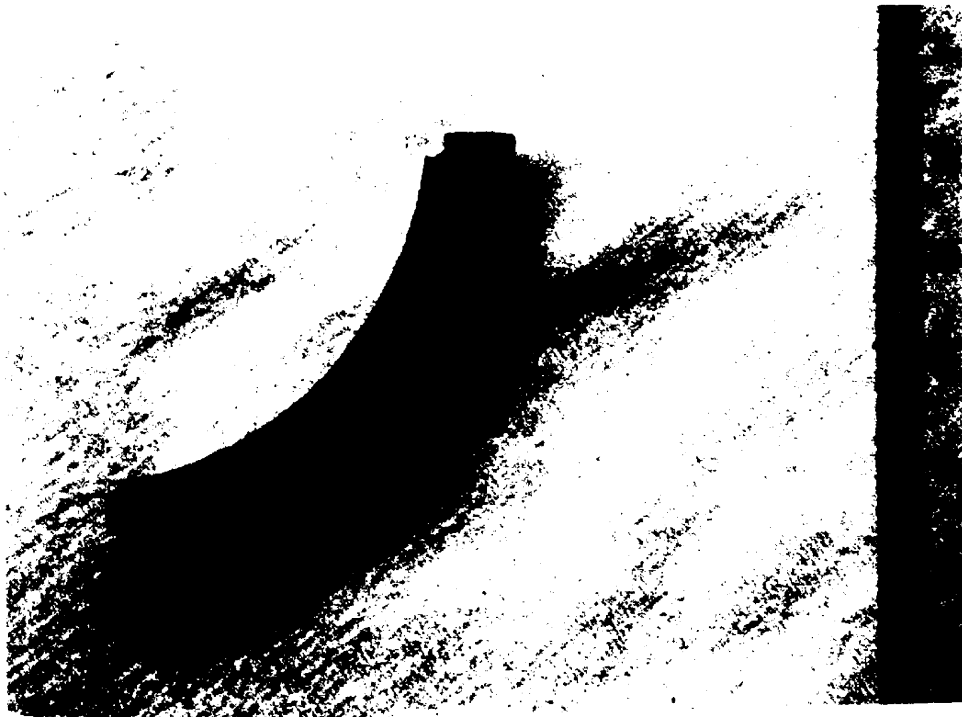


Ivory draftsman, counter or stopper (sf 6619)

Plate 10.2: Ivory and bone objects



Ivory handle or terminal (sf 16406)



Ivory bangle (sf 1569)

Plate 10.3: Ivory and bone objects

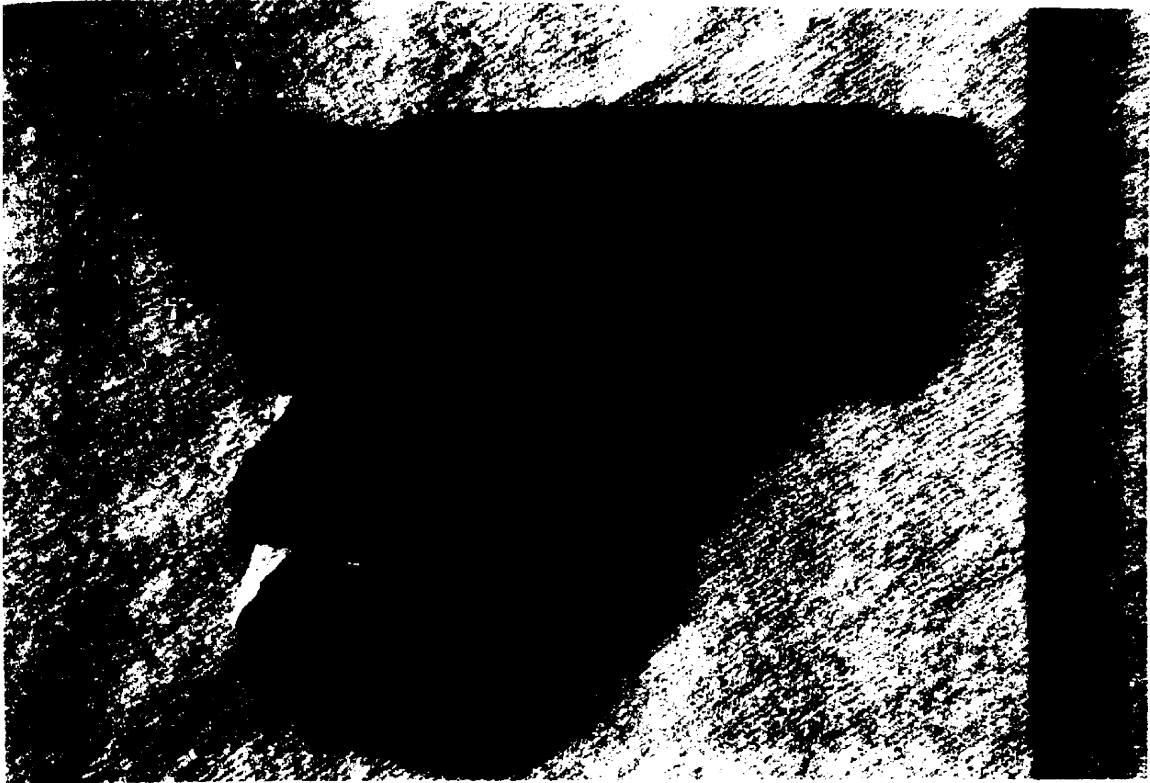


Ivory plaque (sf 6810)



Bone plaque (sf 6988)

Plate 10.4: Ivory and bone objects



Bone plaque (sf 6981)



Bone plaque (sf 6372)

Plate 10.5: Ivory and bone objects



Ivory vessel lid (sf 6370)



Ivory vessel lid (sf 6370)

Plate 10.6: Ivory and bone objects

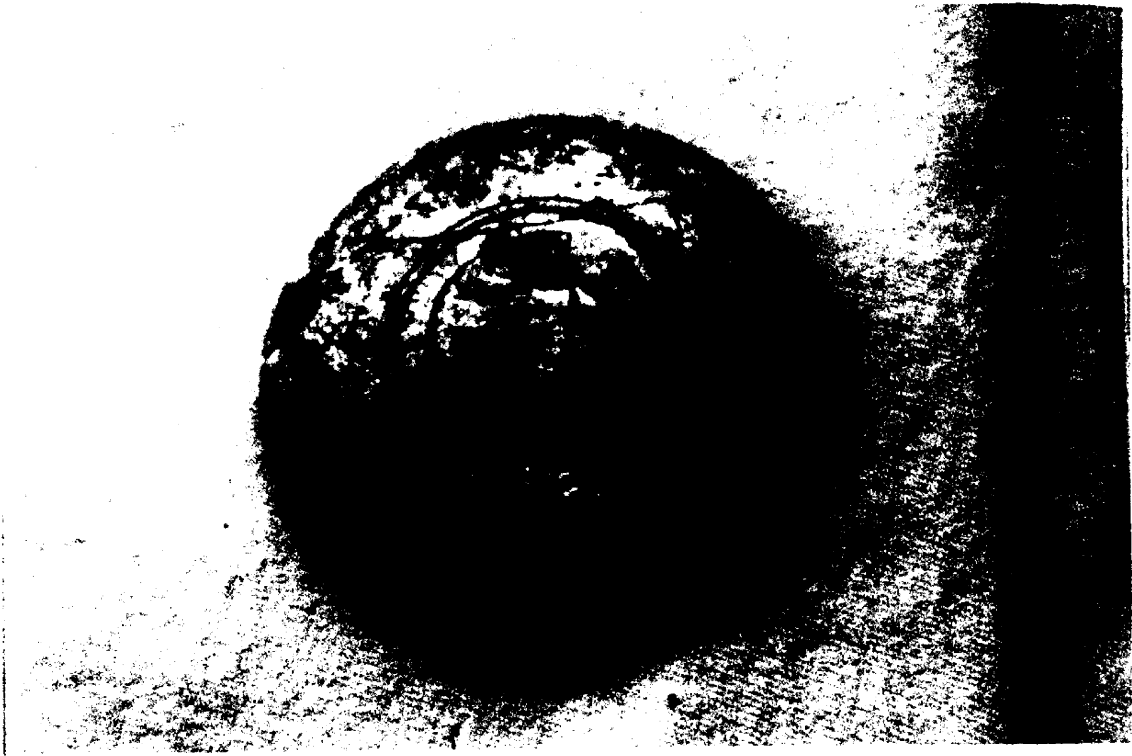


Ivory vessel base (sf 6970)



Ivory vessel base (sf 6970)

Plate 10.7: Ivory and bone objects

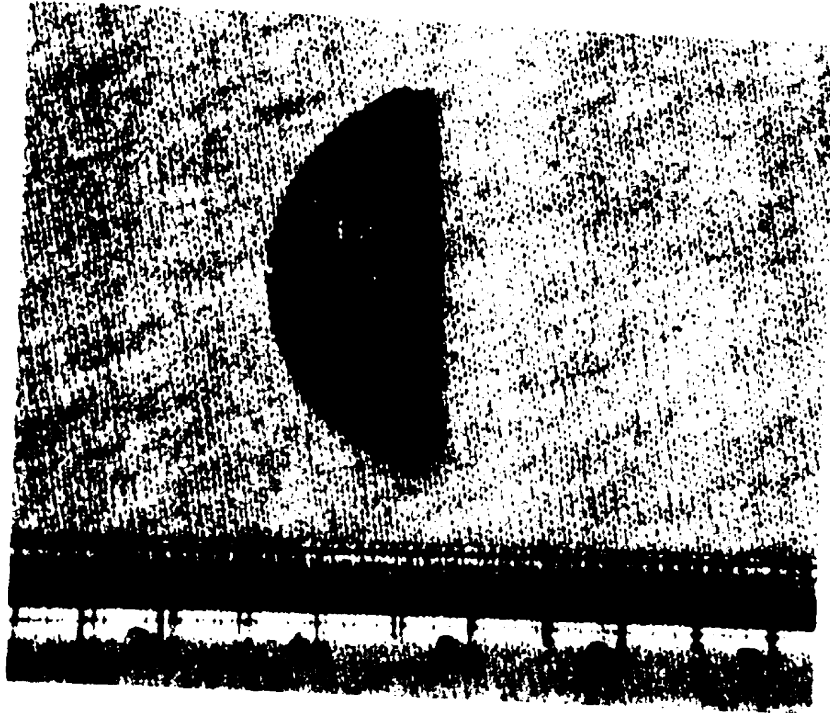


Ivory vessel lid (sf 8025)

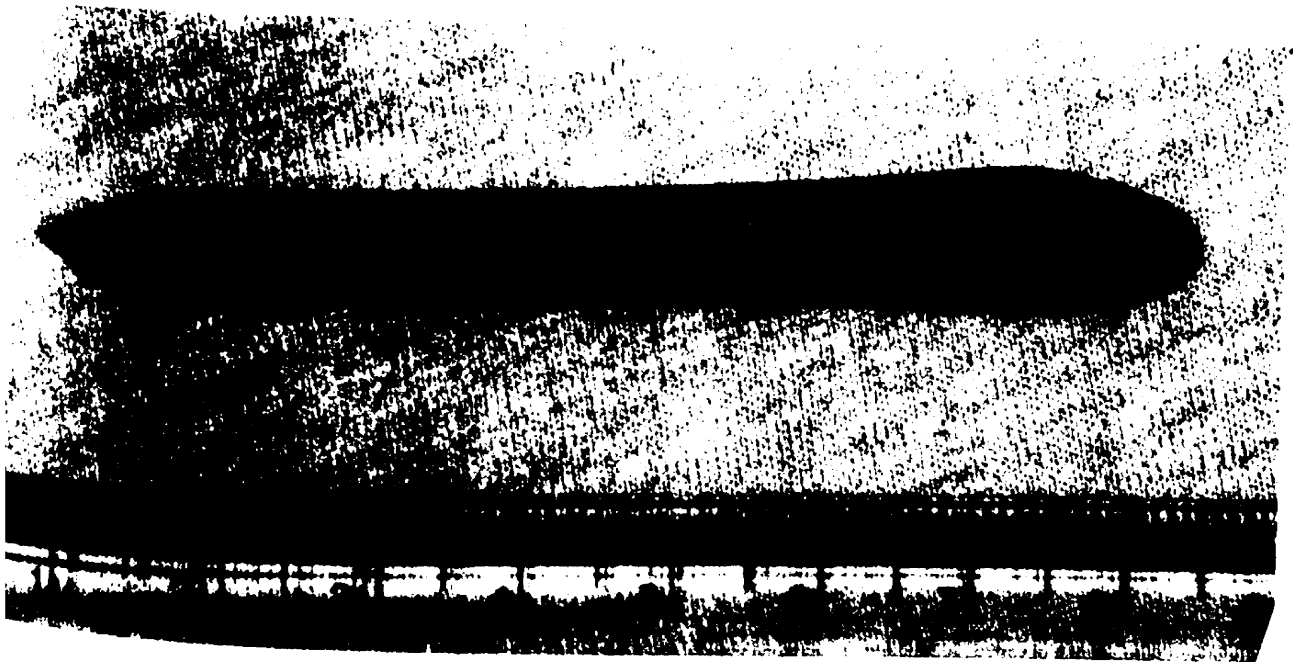


Ivory vessel lid (sf 8025)

Plate 10.8: Ivory and bone objects

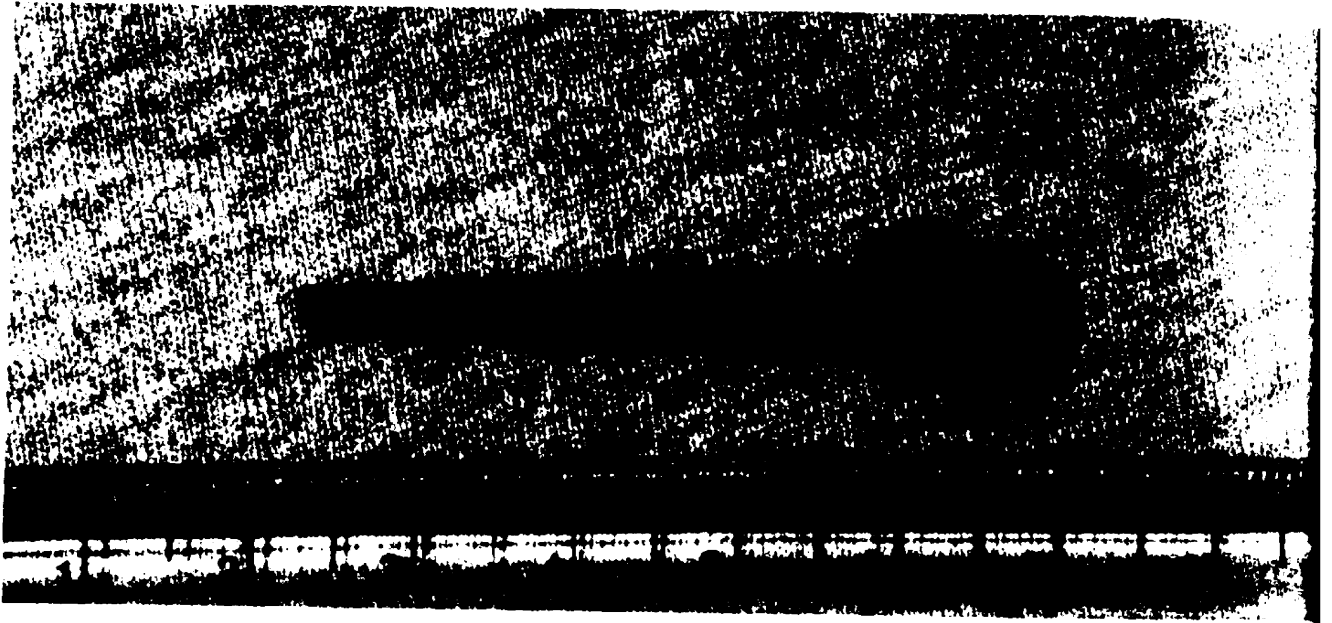


Carved ivory disc (sf 15686)

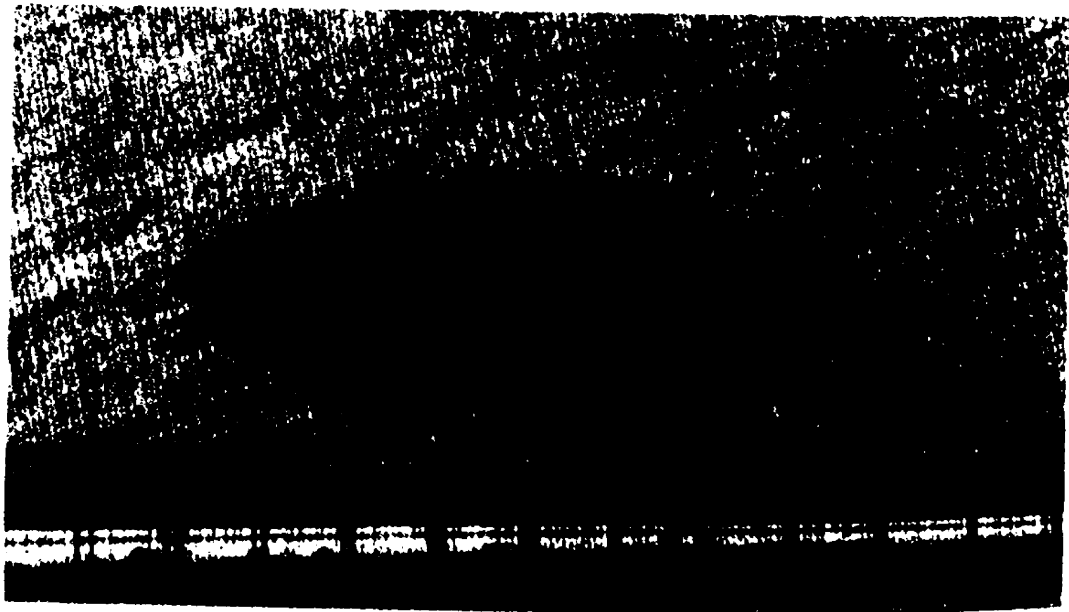


Ivory styli (sf 15026)

Plate 10.9. Ivory and bone objects



Bone arrowhead (sf 15687)



Bone arrowhead (sf 16589)

Plate 10.10: Ivory and bone objects

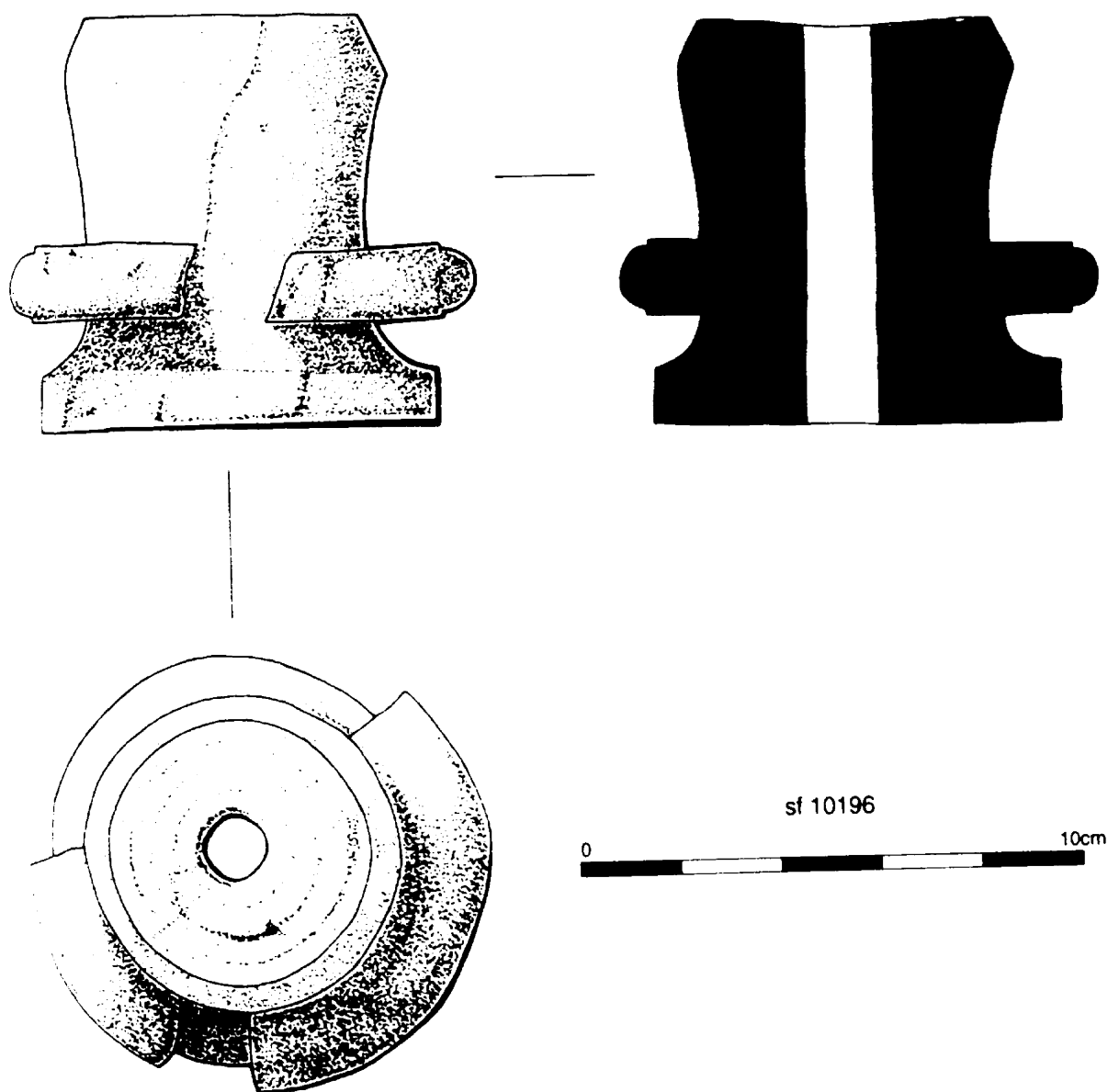


Figure 10.1 Ivory and Bone Objects

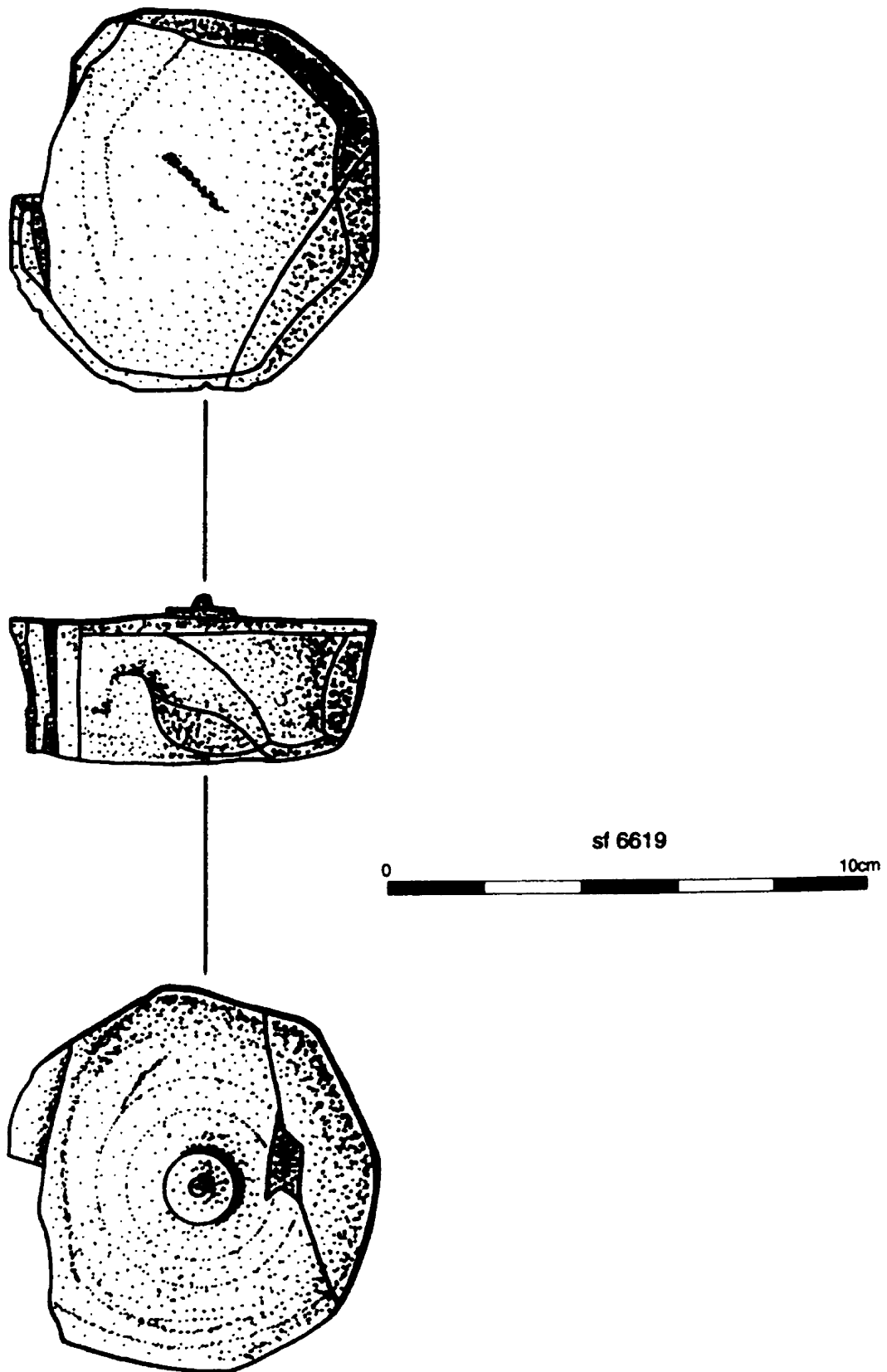


Figure 10.2 Ivory and Bone Objects

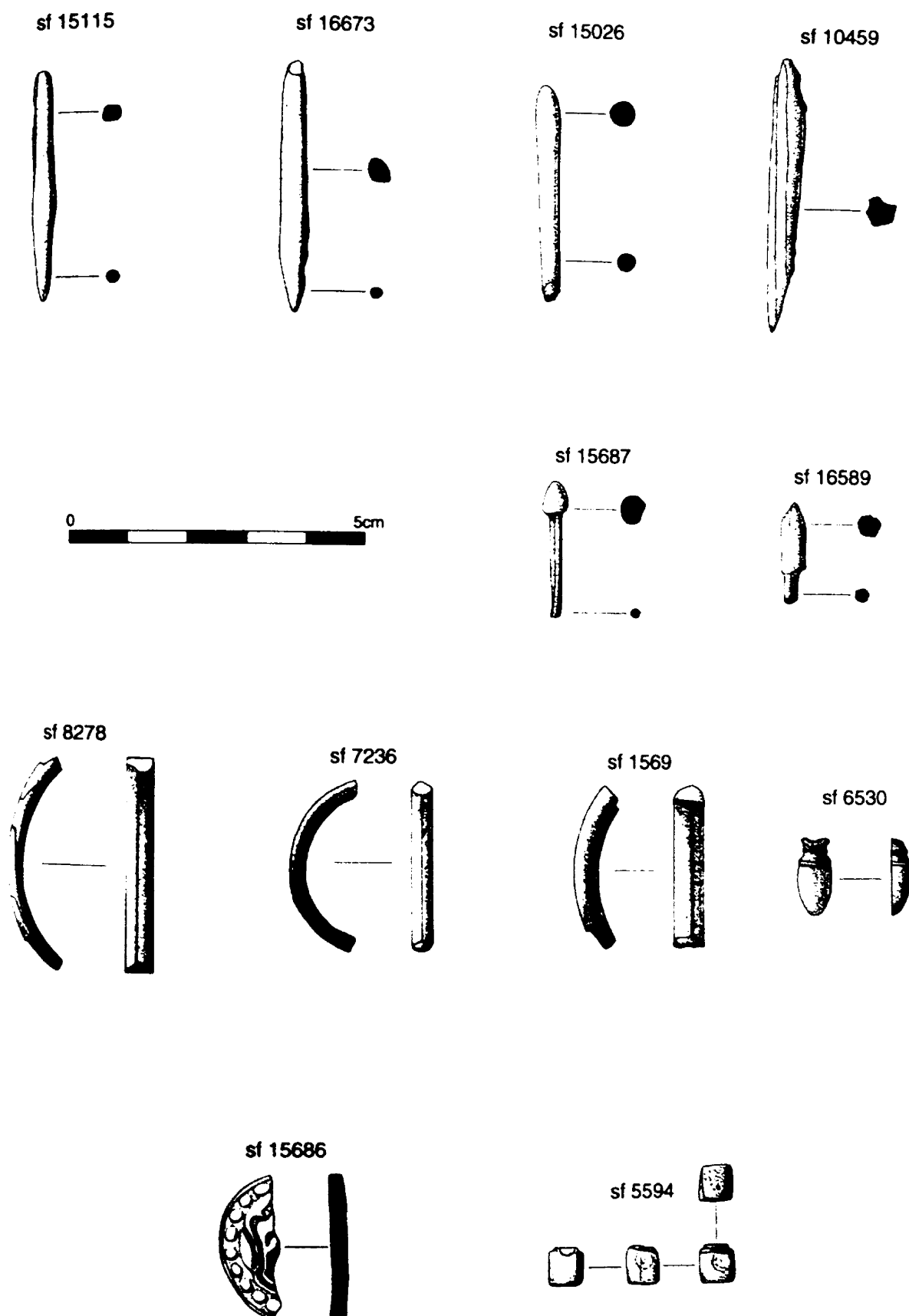


Figure 10.3 Ivory and Bone Objects

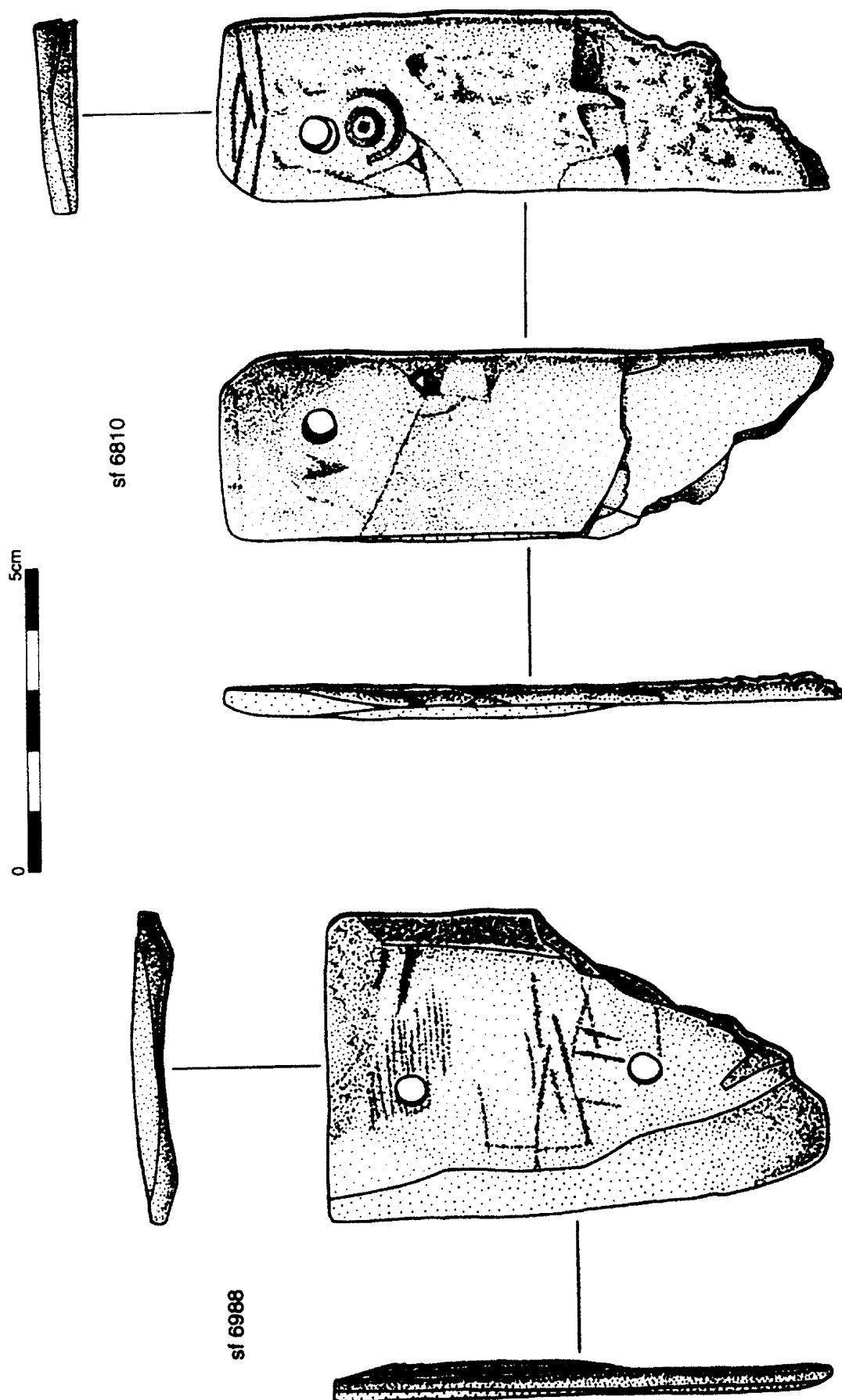
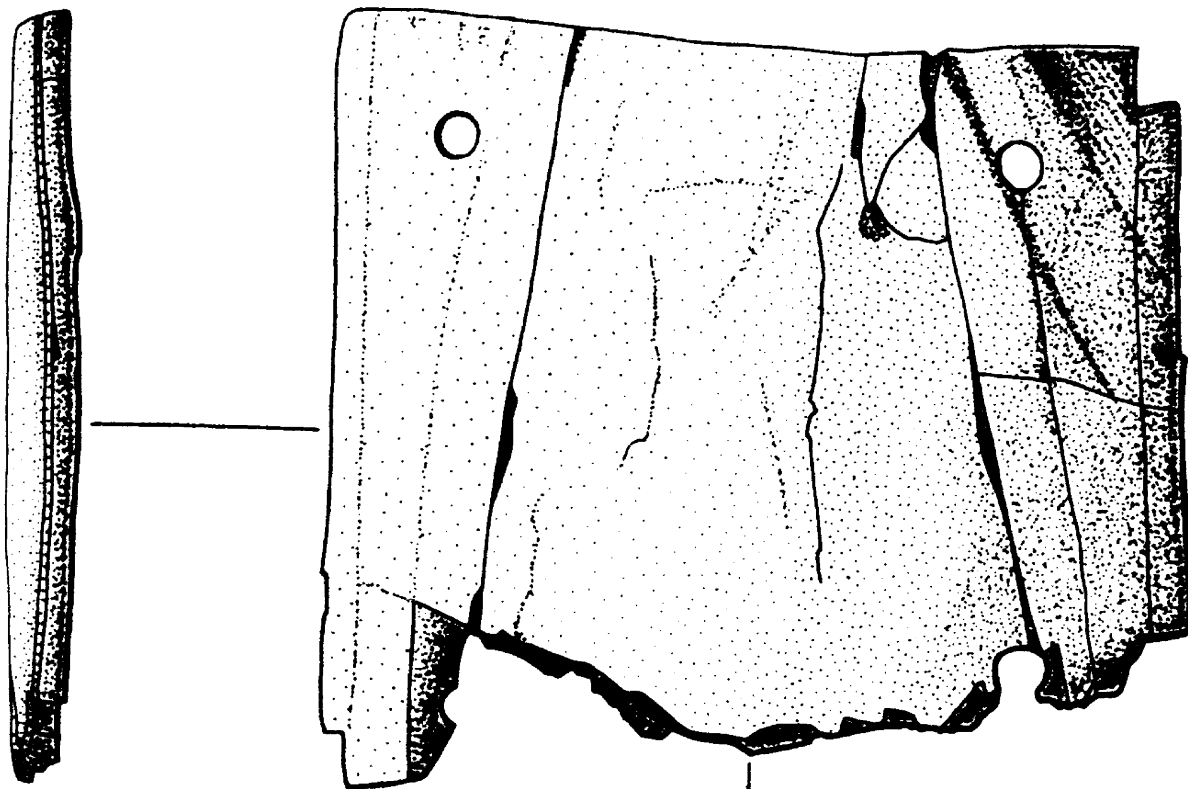


Figure 10.4 Ivory and Bone Objects



sf 6372



sf 6981

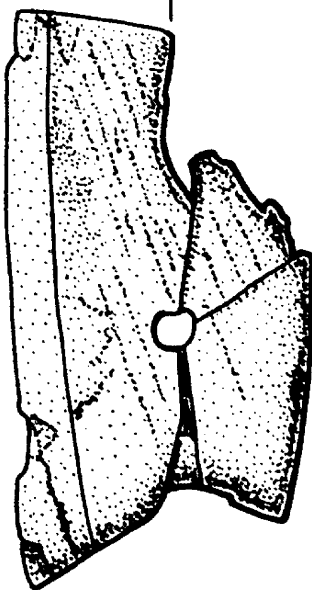


Figure 10.5 Ivory and Bone Objects

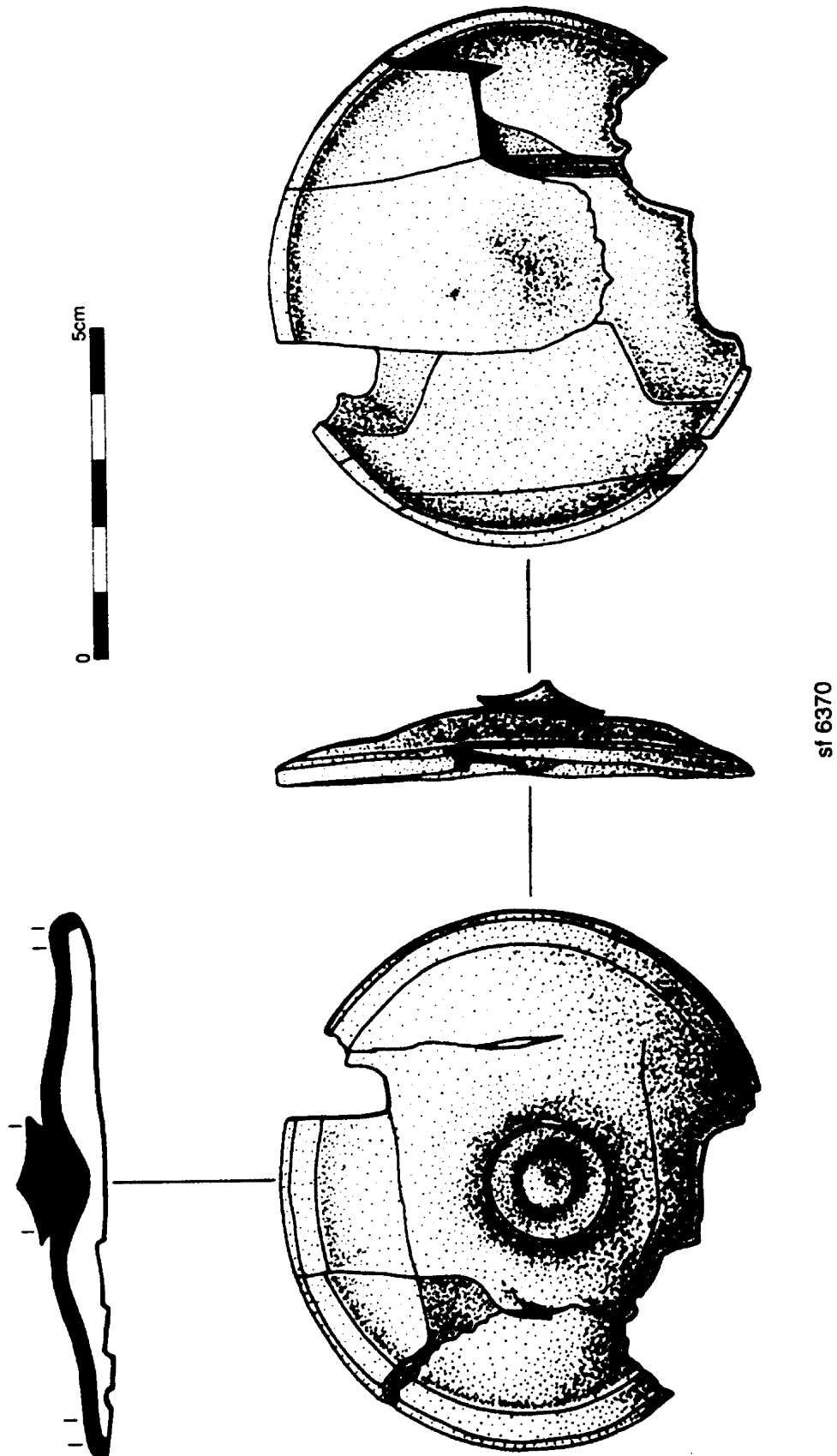


Figure 10.6 Ivory and Bone Objects

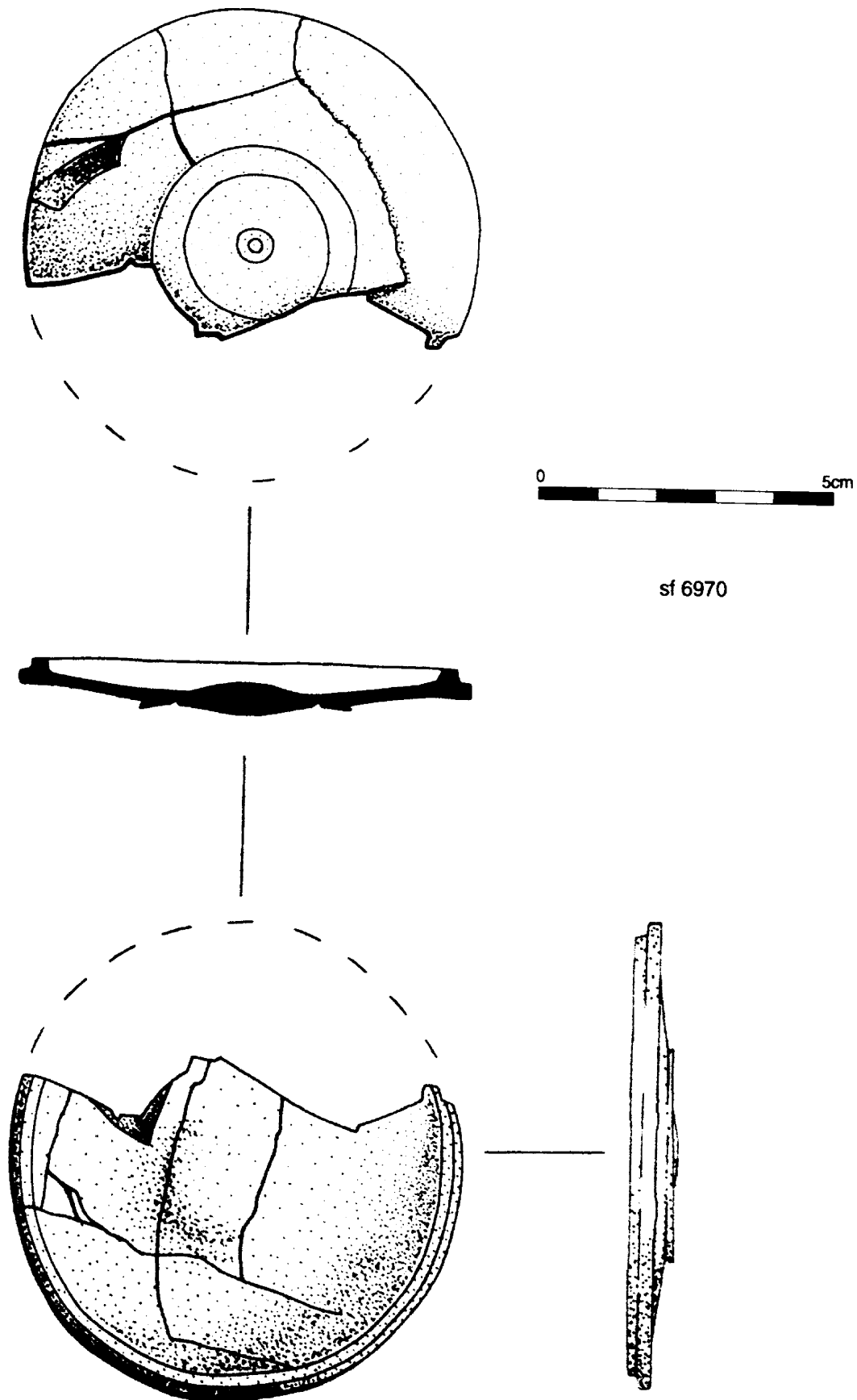


Figure 10.7 Ivory and Bone Objects

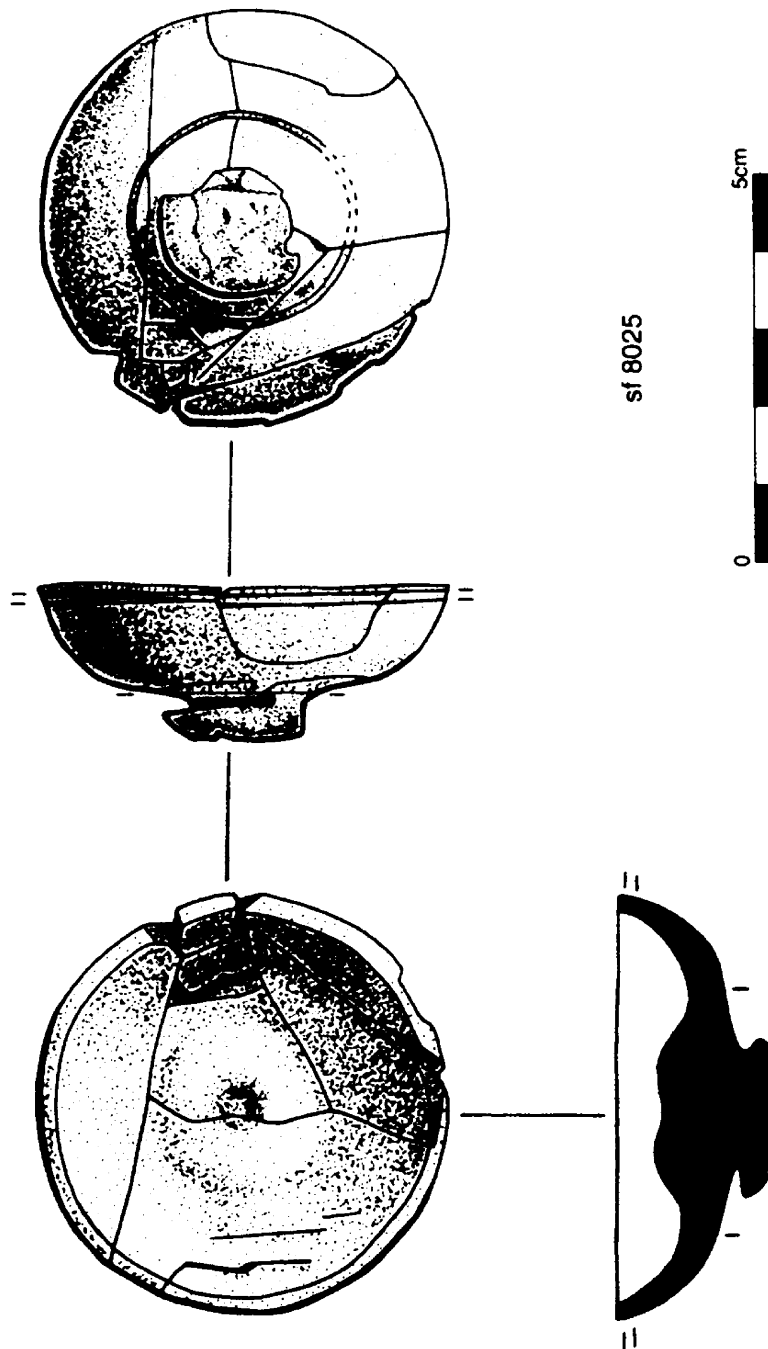


Figure 10.8 Ivory and Bone Objects