

PREHISTORIC FAUNA OF KAUSAMBI, NEAR ALLAHABAD, U. P., INDIA.

By

S. BANERJEE AND M. GHOSH

Zoological Survey of India, Calcutta

(With two Plates)

Kausambi is situated 32 miles south-west of the holy city of Prayaga (modern Allahabad) on the left bank of the river Yamuna. It is surrounded by the villages now known as Kosam-Khiraj, Garhwa, Kosam-Inam and Anwar-Kunwan, and to the south is the Vindhya range.

Cunningham was the first archaeologist to visit the ruins of Kausambi in 1861. Later, in 1949-50, the Archaeological Survey of India, in collaboration with the University of Allahabad, excavated this site.

Kausambi was the capital of Vatsas or the Vamsas, a branch of Indo-Aryan family. According to Fa-hein, who visited India in early fifth century A. D., Kausambi was situated 13 yojanas north-west of Saranath. He mentioned the monastery called the Garden of Gosira, where Lord Buddha once dwelt. Hiuen Tsang has left detailed and valuable account of Kausambi as he saw it during his travels in India in 630-646 A. D. From Prayaga the pilgrims went south-west through a forest infested with elephants and other fierce animals.

The animal remains excavated at Kausambi were sent to the Zoological Survey of India for study by the Archaeological Survey of India, New Delhi. They belong to four different phases as follows :—

KSB — I, c 1165 B. C. to c 885 B. C.; KSB —II, c 885 B. C. to c 605 B. C.; KSB — III, c 605 B. C. to c 45 B. C.; KSB — IV, c 45 B. C. to c 550 A. D. An account of these remains are given in this report. A number of remains are very fragmentary and some without any identifiable characters. The organic material has largely disappeared and they are impregnated with inorganic material, much as in the bone remains from Mohenjo-daro, Harappa, Maski, Nagda, Burzahom, etc.

573 fragments of bony remains including a few molluscan shells, have been identified. The remains of *Bos indicus* Linnaeus (Domestic humped cattle) is quite abundant (about 54%); *Sus scrofa* Linnaeus

(Domestic pig) forms about 10% of the total collection. Next to these are the remains of the domestic buffalo, *Bubalus bubalis* (Linnaeus); Indian elephant, *Elephas maximus* Linnaeus; the goat, *Capra hircus* Linnaeus; sheep, *Ovis orientalis vignei* Blyth, etc., with a good number of examples of each. Other species are represented by only a few fragments of bones.

The species and varieties represented are:

(a) INVERTEBRATES

Phylum MOLLUSCA

Class Order BIVALVIA EULAMELLIBRANCHIATA

Lamellidens marginalis (Lamarck) .. 3 ex.

Class Order GASTROPODA MESOGASTROPODA

Viviparus crassus (Hutton) .. 2 ex.

(b) VERTEBRATES

Phylum CHORDATA

Class PISCES

Teleostean fish (Undeterminable) .. 11 ex.

Class REPTILIA

Order CHELONIA

Chitra indica (Gray) .. 3 ex.

Class MAMMALIA

Order PRIMATES

Homo sapiens Linnaeus .. 2 ex.

Macaca sp. .. 2 ex.

Order CARNIVORA

Canis lupus Linnaeus .. 4 ex.

Canis familiaris Linnaeus .. 10 ex.

Felis chaus Guldenstaedt .. 3 ex.

Order PERISSODACTYLA

Tapirus indicus Desmarest .. 2 ex.

Equus caballus Linnaeus 5 ex.

Order PROBOSCIDAE

Elephas maximus Linnaeus 63 ex.

Order ARTIODACTYLA

Bos indicus Linnaeus 358 ex.

Bos gaurus H. Smith 14 ex.

Boselaphus trogoamelus Pallas .. 3 ex.

Bubalus bubalis (Linnaeus) .. 65 ex.

Ovis orientalis vignei Blyth .. 22 ex.

Capra hircus Linnaeus .. 25 ex.

| | | |
|------------------------------------|----|--------|
| <i>Sus scrofa cristatus</i> Wagner | .. | 67 ex. |
| <i>Axis axis</i> Erxleben | .. | 1 ex. |
| <i>Camelus bactrianus</i> Linnaeus | .. | 4 ex. |
| Order RODENTIA | | |
| <i>Hystrix indica</i> Kerr | | 2 ex. |
| <i>Rattus</i> sp. | . | 2 ex. |

SYSTEMATIC ACCOUNT

Lamellidens marginalis (Lamarck)

Freshwater Mussel

This species is represented by a few shells from site XIII. The mussel lives in freshwater ponds and is very common even now in that locality.

Viviparus crassus (Hutton)

Pond Snail

This snail is represented by two shells from site XIII. It also inhabits the freshwater ponds.

Teleostean Fishes

The carps (Pl. VII, Figs. 1 & 2)

Carp remains are found as a number of vertebrae from site XIII. This is a very common group of freshwater fishes in this locality.

Chitra indica (Gray)

River Turtle (Pl. VII, Fig. 3)

This turtle is represented by a few fragments of hypoplastron from site XIII. The habitat of this turtle is rivers like Ganga, Yamuna, etc.

Homo sapiens Linnaeus

Man

Human remains obtained were a fragment of skull and a portion of scapula, probably derived from damaged burial ground in the site XIII

Macaca sp.

Macaque

The macaque is represented by few teeth from site XIII. This animal is arboreal in habit, lives in the forests and orchards.

Canis lupus Linnaeus**Wolf**

The wolf is represented by some teeth, mainly canine, and a portion of the maxilla from site XIII. It lives upon the flesh of small mammals and livestock. As such, it is occasionally found near the human habitations.

Canis familiaris Linnaeus (Pl. VII, Fig. 6)**Domestic dog**

The dog, commonly called Indian pariah dog, is represented by fragments of mandibles, metatarsals and teeth from site XIII.

Felis chaus (Guldenstaedt)**Jungle cat**

The jungle cat is represented by a few teeth from site XIII. It lives in tropical forests and feeds upon birds and small mammals. Occasionally, it comes in the vicinity of human dwellings in search of food and is killed by the people.

Tapirus indicus Desmarest**Tapir**

Tapir is represented by a few skull fragments from site XIII. It is a very shy animal and lives in thick tropical forests with heavy rains.

Equus caballus Linnaeus (Pl. VII, Fig. 7)**Horse**

The horse is represented by a number of teeth from sites IV, XIII and XIV. All the remains probably belong to the domestic stock.

Elephas maximus Linnaeus (Pl. VIII, Fig. 5)**Indian Elephant**

The elephant is represented by 63 skeletal fragments from site XIII and from layers 1 and 2. All the remains are of domestic adult stock. The presence of so many remains indicates that the Kausambi rulers maintained a large herd of this animal.

Bos indicus Linnaeus (Pl. VIII, Fig. 3)**Humped Cattle**

The domestic cattle is represented by 358 fragments of skeletal remains from sites IV, XIII and XIV. These remains show little difference, except

in a few, when compared with recent humped cattle skeletons. The majority of the bony remains belong to adult and fully developed animals. In a few limb bones, extremities like the condyles and the articulating facets are much broadened. This may probably be due to the selection in breeding by the people of those days.

***Bos gaurus* H. Smith**

Gaur

The gaur, a distant and wild relative of the cattle, is represented by 14 fragments of skeletons from site XIII. They were caught and kept in captivity probably for domestication. This animal now lives in the grassy plains and jungles in different parts of India.

***Boselaphus tragocamelus* Pallas**

Nilgai

The nilgai is represented by a few teeth and a jaw bone from site XIII. It is rarely met with in thick forest, though it may often be found on cultivated plains, where it does much damage to crops.

***Bubalus bubalis* (Linnaeus)**

Buffalo

Excepting a few very large bones, probably of the wild specimens, the majority of the remains belong to domestic stock. 65 fragments of skeletal remains were recovered from site XIII.

***Ovis orientalis vignei* Blyth (Pl. VIII, Fig. 4)**

Sheep

The domestic sheep is represented by 22 fragments of skeletal remains from site XIII. A number of bones belong to young animals. A few bones bear cut marks, which suggests that the flesh was consumed as food.

***Capra hircus* Linnaeus**

Goat

The domestic goat is represented by 25 skeletal fragments from Kausambi site XIII. No peculiarities were found when compared with the recent domestic goat bones in collection of the Zoological Survey of India.

***Axis axis* Erxleben**

Chital

Only one limb bone was found from site XIV. The chital or spotted deer is found almost everywhere in India.

Sus scrofa cristatus* Wagner (Pl. VIII, Fig. 2)*Domestic Pig**

The pig is represented by 67 fragments of limb bones and skull from site IV and XIII. A number of bones are of young specimens and with chopping marks on them.

Camelus bactrianus* Linnaeus (Pl. VIII, Fig. 1)*Asiatic Two-humped Camel**

The two-humped camel is represented by few fragments of limb bones and maxillary portion of the skull with three teeth from site XIII. It is not a common inhabitant of this region and was probably introduced there by the people of Kausambi (Ghosh 1976). Its original homeland is in Central Asia. It is also found in the desert region of Mongolia.

Hystrix indica* Kerr (Pl. VII, Fig. 4)*Indian Porcupine**

The porcupine is represented by only few teeth from site XIII. The animal is very common in different parts of North India.

Rattus* sp. (Pl. VII, Fig. 5)*Rat**

The rat is represented by two fragments from sites XIII and XIV. The size and other characters show that it was as large as the recent house rat, *Rattus rattus* Linnaeus, which is a pest of agricultural products.

DISCUSSION

All the remains were collected from the Kausambi settlement areas. Analysing the entire collection (list 1), we find that the cattle (*Bos indicus* Linnaeus) stands first among the species in frequency of occurrence. The majority of cattle belong to adult animals. There are some fragments of skull with well-developed horn cores. The remains of calf bones are few, about 6.5% , and with no cut or chopping marks, tends to prove that probably the people of Kausambi in general did not prefer beef. The presence of remains of wild buffalo associated with the ordinary domestic varieties of the same species tend to prove that for the development of livestock efforts were probably made to cross-breed the domestic varieties with the wild forms. Animal protein for the general consumption was mainly obtained from the goat, sheep and pigs. Remains of about 55% of goats, 30% of sheep, and 40% of pigs were of young animals and the cut marks and sign of mastication in some were also noticed. A number of fish remains (specially vertebrae) recovered from the

settlement areas, tentatively identified as carp remains indicate that the people of Kausambi used these as food fishes.

The presence of the remains of wolf, cat, monkey and porcupine suggests that the settlement was surrounded by light forest and bushes from where they used to come close to the vicinity of human habitat. A humid and tropical climate was prevalent in those days; this is suggested by the dominating number of elephant remains.

The two imported species, the tapir and the two-humped Camel were probably either purposefully brought or were received from foreign travellers or rulers as gifts.

SUMMARY

The ancient city of Kausambi was situated near Allahabad in U. P. About 3000 years ago it was surrounded by forests and had a humid and tropical climate. The ancient city was inhabited by civilized people and had many domesticated animals, which includes cattle and buffalo for milk; pig, sheep and goat for flesh; elephant and horse for transport. The presence of tapir and the bactrian camel indicates that the people had contact with the neighbouring countries like Mongolia, China and Malaya.

ACKNOWLEDGEMENTS

Thanks are due to Director, Zoological Survey of India for the facilities provided; to the Director-General, Archaeological Survey of India, Delhi, for giving the collection for study and Dr. B. Biswas, Deputy Director, Z.S.I., for critically going through the manuscript.

REFERENCES

- GHOSH, M. 1976. Record of the prehistoric remains of two-humped asiatic camel, (*Camelus bactrianus* L.) from Kausambi, U. P., India. *Sci. Cult.*, Calcutta, **42** : 161-162.