

**ANIMAL REMAINS EXCAVATED FROM BAHIRI
DISTRICT BIRBHUM, WEST BENGAL, INDIA**

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INTRODUCTION

The Archaeology and Museum Unit of the Department of History, Delhi University, Delhi, carried out excavation at Bahiri in Birbhum District, West Bengal in the year 1981 and collected some archaeological material and some animal remains. The animal remains were given to the Zoological Survey of India for study and report. This report deals with the animal remains.

The excavation reveals a cultural sequence from the Chalcolithic to Iron Age. The Radio-Carbon data obtained from the analysis of charcoal samples attest a chronology between 610 B.C. to 900 B.C. (Indian Archaeology - A Review 1982-83, p. 145 & 1984-85, p. 159). Seven trenches were dug from BHR-I to BHR-VII. In trench BHR-I no remains of animal were found. Trench BHR-IV, yielded maximum number of animal remains. Altogether 22 fragments of animal remains were identified. They belong to *Canis familiaris* Linnaeus, *Sus scrofa* Linnaeus, *Cervus duvauceli* Cuvier, *Axis axis* Erxleben, *Bos gaurus* H. Smith, *Bos indicus* Linnaeus and *Bubalus bubalis* (Linnaeus). Maximum of the remains are of course of *Bubalus bubalis* (Linnaeus). The skeletal remains are fragmentary and not suitable for measurements. Except the remains of *Cervus duvauceli*, *Axis axis* and *Bos gaurus*, all the other remains are of domesticated animals.

SYSTEMATIC DESCRIPTION

| | |
|--------|-----------|
| Phylum | CHORDATA |
| Class | MAMMALIA |
| Order | CARNIVORA |
| Family | CANIDAE |

***Canis familiaris* Linnaeus**

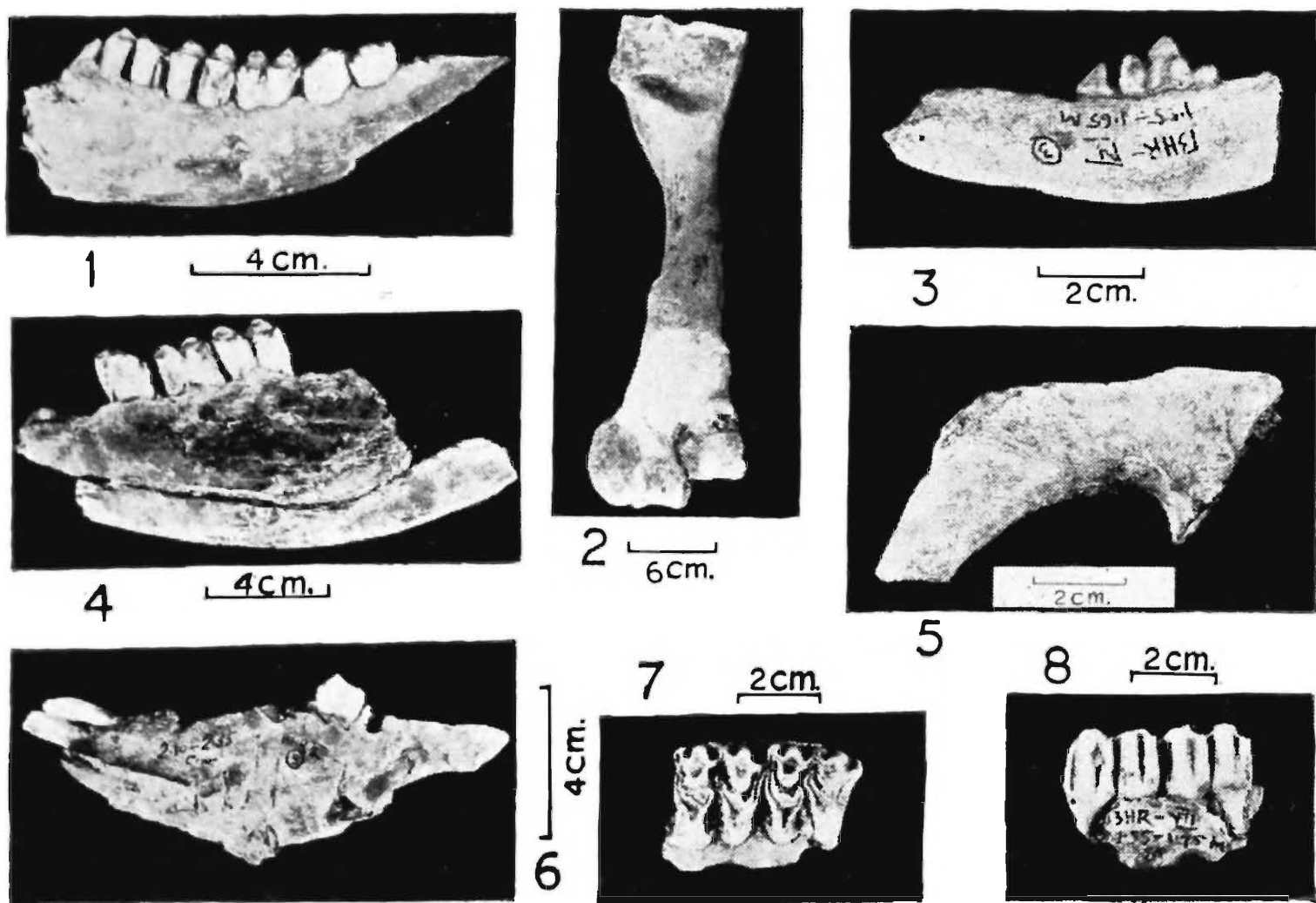
BHR-III ; depth-1.55-1.65 m ; layer (3) ; dt. 15.3.81

Right ramus of mandible with 3rd premolar and carnassial teeth.

The short, slightly twisted ramus, without diastema ; laterally flattened and pointed 4th premolar ; medially raised carnassial (1st molar) with shearing cusps, etc. indicate that the mandible belongs to canids. Measurements and number of alveoli in the mandible confirm it as *Canis familiaris* Linnaeus, the Domestic Dog.

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PLATE I



Animal Remains from Bahiri, District Birbhum, West Bengal

- Fig. 1. Fragment of right mandible with P_3 — m_3 teeth of *Axis axis* Erexleben.
 Fig. 2. Left humerus of *Bubalus bubalis* (Linnaeus).
 Fig. 3. Right ramus of mandible with 3rd premolar and carnassial teeth of *Canis familiaris* Linnaeus.
 Fig. 4. Left ramus of mandible with 3rd and 4th premolar and 1st molar teeth of *Bubalus bubalis* (Linnaeus).
 Fig. 5. Fragment of left pubis of *Bos indicus* Linnaeus.
 Fig. 6. Left symphyseal portion of mandible with 2nd, 3rd incisor and 3rd premolar teeth of *Sus scrofa* Linnaeus.
 Fig. 7. Upper left 1st and 2nd molar teeth of *Cervus duvauceli* Cuvier (buccal view).
 Fig. 8. Upper left 1st and 2nd molar teeth of *Cervus duvauceli* Cuvier.

Order **ARTIODACTYLA**
 Family **SUIDAE**
Sus scrofa Linnaeus

BHR-II ; depth-0.80-1.30 m ; layer (3)

Broken left femur without condylar ends (young specimen).

BHR-II ; depth-2.10-2.35 m ; layer (5) ; dt. 14.3.81

Portion of right ramus of mandible with 2nd and 3rd incisors and 3rd premolar teeth.

BHR-IV ; depth-2.05-2.25 m ; layer (4) ; dt. 14.3.81

Portion of left mandible with 3rd molar tooth.

The strongly curved head of the femur, distinct neck, absence of supra condyloid fossa, situation of the trochanteric major within the level of head ; the horizontal, convergent and deeply implanted lower incisors having the lingual surface slightly concave, the sectorial 3rd premolar, the bunodont 3rd molar with tuberculated cusps, etc. confirm that the remains belong to the Indian Pig. *Sus scrofa* Linnaeus.

Family **CERVIDAE**
Cervus duvauceli Cuvier

BHR-VII ; depth-1.55-1.75 m ; layer (4) ; dt. 14.3.81

1st and 2nd molar teeth of left upper jaw.

BHR-II ; depth-.50-.55 m ; layer (4) ; dt. 15.3.81

1st molar tooth of right upper jaw.

The cheek teeth with transversely thicker inner crescentic subdivisions in each lobe, wide crescentic islands, absence of internal accessory column, etc. indicate that the specimens belong to the Cervids and the size and measurements confirm it to be the Barasingha, *Cervus duvauceli* Cuvier.

Axis axis Erexleben

BHR-IV ; depth-1.10-1.25 m ; layer (2) ; dt. 19.3.81

Fragment of right mandible with 3rd and 4th premolar and 1st, 2nd and 3rd molar teeth (subadult).

The very hypsodont cheek teeth with narrow crescentic islands, small accessory column in the outer inter spaces ; the sharp edged upper margin of diastema and scimitar-shaped horizontal ramus confirm that the mandible belongs to the Chital, *Axis axis* Erexleben.

Family **BOVIDAE**
Bos gaurus H. Smith

BHR-IV ; depth-1.85-1.95 m ; layer (3)

Left humerus (broken)

BHR-IV ; depth-2.05-2.35 m ; layer (4)

Fragment of atlas vertebra (left portion) with alar foramen.

BHR-IV ; depth-1.65-1.85 m ; layer (3)

Fragment of the head of left femur.

The broader inter tuberal groove, more rounded and convex head, elevated external tuberosity, deeply notched olecranon fossa and condyles in the humerus ; the larger aperture of alar foramen (than that of cattle), its situation more towards the dorsal tubercle in the atlas ; the larger head (diameter 64 mm) and broader depression of the fovea capitis in the femur etc. confirm that the remains belong to the species of Indian Bison, *Bos gaurus* H. Smith., etc.

***Bos indicus* Linnaeus**

BHR-I ; depth 5.0-5.5 m ; layer (4)

Right astragalus.

BHR-IV ; depth-2.05-2.25 m ; layer (4)

Distal end of right scapula.

BHR-V ; depth-1.45-1.75 m ; layer (4)

Proximal end of left metatarsal.

BHR-VII ; depth-2.40-2.60 m ; layer (7)

Fragment of left pubis.

The more circular glenoid cavity, absence of the notch in the scapula ; the four-sided shaft of metatarsal, its deep and wide vascular groove ; the relatively long, narrow and somewhat flattened astragalus from before backwards, having trochlea on both the ends and large oval facets on planter surface ; the presence of one transverse groove on the anterior border, the narrow acetabular branch and the wide but thin symphyseal branch of the pubis etc. confirm that the remains belong to the species of Humped Cattle, *Bos indicus* Linnaeus.

***Bubalus bubalis* (Linnaeus)**

BHR-III ; depth-1.12 m ; layer (3) ; dt. 15.3.81

Left lower mandible with 3rd premolar, 1st and 2nd molar teeth ; Right upper 2nd premolar tooth.

BHR-IV ; depth-2.05-2.35 m ; layer (4)

Apical portion of left and right mandibles.

BHR-V ; depth-1.65-1.80 m ; layer (5)

Distal end portion of the shaft of right humerus.

BHR-IV ; depth-1.28-1.35 m ; layer (5)

First phalanx.

BHR-IV ; depth-1.85-1.95 m ; layer (3)

Fragment of the blade of left scapula.

BHR-IV ; depth-1.55-1.65 m ; layer (3)

Proximal fragment of left ulna with olecranon process.

BHR-VII ; depth-1.90-2.20 m ; layer (7)

Left metacarpal without distal condyle.

The smooth and high horizontal portion of the ramus ; the comparatively thick-walled molar, having adequate cementum in the inter-spaces of the lobes and less wide but compressed crescentic islands ; the short and broad metacarpal, etc. confirm that the remains belong to the species of Domestic Buffalo, *Bubalus bubalis* (Linnaeus).

DISCUSSION

The excavation at Bahiri in the District of Birbhum, West Bengal, undertaken by the Archaeology Department of Delhi University reveals a cultural sequence from Chalcolithic to Iron Age Culture. Similar cultural sequence was found at Mahisdal on the bank of river Kopai; at Hatikra near Santiniketan both in the Birbhum District, and also at Bharatpur in Burdwan District of West Bengal (Banerjee, S. 1981)

The animal remains collected from Bahiri are of *Canis familiaris* Linnaeus, *Sus scrofa* Linnaeus, *Cervus duvauceli* Cuvier, *Axis axis* Erxleben, *Bos gaurus* H. Smith, *Bos indicus* Linnaeus and *Bubalus bubalis* (Linnaeus). Almost similar animal remains were found at Mahisdal, Hatikra, Bharatpur as well as Tamruk in Midnapur District, West Bengal, which belong to Premauriyan and Mauriyan culture. Only exception is that the remains of *B. gaurus* are not reported from any of those cultural sites except Bahiri.

The above mentioned species reported from Bahiri, were also represented by many other collections from prehistoric sites of India. The occurrence of *Cervus duvauceli*, *Axis axis* and *Bos gaurus* further strengthens the idea that the area of Birbhum had thick forest in those days. The other species are of domestic animals which inhabitants eventually used to maintain for food and milk. The remains of only one specimen of the oldest domesticated animal *Canis familiaris*, proves that dog was also a common pet in the area.

The fragments are not fossilised ; only in some samples the organic material is partially replaced by silica.

The occurrence of important domestic stock like the pig, cattle and buffalo evinces that the Chalcolithic and Iron Age periods in the district played a great economic role in the life of the people.

SUMMARY

The study of animal remains unearthed by the Archaeological Department of the University of Delhi from Bahiri, a Chalcolithic *cum* Iron Age site in Birbhum

District of West Bengal, revealed the presence of three wild mammalian species, viz., *Cervus duvauceli*, *Axis axis*, *Bos quaurus* and four domesticated, mammalian species, viz., *Canis familiaris*, *Sus scrofa*, *Bos indicus* and *Bubalus bubalis*. However, the occurrence of the wild animals suggests that there persisted the natural forest in the vicinity. On the other hand, the remains of the domesticated stock like those of pig, cattle and buffalo testify that an agricultural — based animal husbandry had already ensued to promote the socio-economy of the people since about 900 years B.C.

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