

ADVANCES IN THE STUDY OF PREHISTORIC AND ANCIENT ANIMAL REMAINS IN INDIA : A REVIEW

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(With 3 Tables ; and 4 Plates)

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I—INTRODUCTION

The work done on the prehistoric and ancient zoological remains obtained from the excavation sites of India is of comparatively recent origin and commenced from about 1930 onwards.

The importance of the study is three fold : First, it gives an idea of the domestication of animals by the prehistoric people. Secondly, it helps us to know the geographical, topographical and climatic conditions

(1)

(C) Proboscidea—

7. Elephantidae (Indian elephant).

(D) Primates—

8. Colobidae (langurs).

(E) Carnivora—

9. Canidae (dog, wolf, jackal).

10. Felidae (cat).

11. Viverridae (mongoose).

(F) Lagomorpha—

12. Leporidae (hares and rabbits).

(G) Rodentia—

13. Muridae (rats, gerbilles, porcupines).

(H) Insectivora—

14. Soricidae (shrews).

Among the reptiles are found remains of the monitor lizards (*Varanus* spp.), the Gharial, the Muggar and several species of turtles and tortoises.

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II—ANIMAL REMAINS FROM VARIOUS EXCAVATION SITES

(Tables 2 and 3)

A brief account of the animal remains of the various excavation sites, both prehistoric (Table 2) and historic (Table 3), in India and West Pakistan is now given below, only the more important points being mentioned.

1. Mohenjodaro (2500—1500 B.C.)

(Table 2)

The first report on the remains of the Indus civilization was from Mohenjodaro (Larkana District, Sind, now in W. Pakistan) and was

studied by Sewell & Guha (1931). It represented about 37 species of animals which may be classified into five categories as follows :—

- (a) Animals which were probably maintained in a state of domestication were : *Bos indicus* L. (Indian Humped Cattle); *Bubalus bubalis* (L.) (Indian Buffalo); *Ovis* sp. (sheep); *Canis familiaris* L. (domestic dog); *Sus scrofa cristatus* Wagner (Indian Pig); *Camelus dromedarius* L. (One-humped Camel); *Elephas maximus* L. (Indian Elephant); and *Gallus* sp. (fowl); and at a later period, *Equus caballus* L. (horse).
- (b) Animals that were not actually domesticated but which frequently lived in the vicinity of human habitation were : *Herpestes auropunctatus* (Hodg.) (Small Indian Mongoose); *Suncus stoliczkanus* (And.) (Anderson's Shrew); *Rattus rattus* L. (Common Rat).
- (c) Animals that were caught and utilised as food were : *Gavialis gangeticus* (Gmelin) (Gharial); several turtles and tortoises, viz., *Trionyx gangeticus* Cuv. ; *Geoclemys hamiltoni* (Gray), *Chitra indica* (Gray) and *Batagur baska* (Gray); *Lissemys punctata* (Bonn.); and the fishes *Rita rita* (Ham.-Buch.); *Wallago* sp. and *Arius* sp. (an estuarine cat fish).
- (d) The remains of shells imported for use as ornaments and other purposes were those of : *Lamellidens marginalis* Lamk. (a freshwater mussel), *Arca granosa* L. (Marine Ark Shell), *Erosaria ocillata* (L.), *Arabica arabica* (L.) (a cowry), *Babylonia spirata* (L.) (a marine Gastropod), *Fasciolaria trapezium* L. (a marine Gastropod); *Xancus pyrum* var. *acuta* Hornell and var. *fuscus* Sowerby (the Chank Shell); *Viviparus bengalensis* (Lamk.) (Banded Pond-Snail); *Indoplanorbis exustus* (Desh.); *Parreyssia favidens* (Benson) (a bivalve).
- (e) The following deer species were imported for medicinal purposes according to Sewell & Guha (1931, p. 672) : *Cervus hanglu* (Wag.) (Kashmir Stag), *Cervus unicolor* Kerr. (Sambar), *Axis axis* (Erxl.) (Chital) and *Axis (Hyelaphus) porcinus* (Zimm.) (Hog Deer).

Thus, it appears that the inhabitants of the Indus civilization from Mohenjodaro practised a high grade of domestication of animals, and also utilized them for food, medicine and ornamentation.

2. Harappa (2500—1500 B.C.)

(Table 2)

The next site of importance is that of Harappa (Montgomery District, Punjab, now in W. Pakistan) which was studied by Prashad (1936). He listed 30 species of animals and also traced the probable ancestries and the areas of domestication of some of them.

In general, the bony remains from Harappa resemble those described by Sewell & Guha (1931) from Mohenjodaro. Several species are identical, while some like the shrew, *Suncus stoliczkanus* (And.), and a number of stags and deer are not represented in Harappa. On the other hand, the Monitor Lizard (*Varanus* sp.), the cat (*Felis ochreata* Gm. race *domestica*), the Jackal (*Canis aureus* L.), the wolf (*Canis lupus* L.) the rhinoceros (*Rhinoceros unicornis* L.), the goat (*Capra hircus aegagrus* Erxl.), found at Harappa were not represented in Mohenjodaro.

The presence of the remains of rhinoceros (*Rhinoceros unicornis* L.) and water buffalo (*Bubalus bubalis* L.) which live in marshy land mixed with forests, indicates that the climatic conditions of Punjab at that time were different from those found today. The occurrence of the rhinoceros is particularly interesting as this animal is no longer found in that region. The other animal remains, except those of the invertebrates and the reptiles, all belong to those of domestic animals. As in Mohenjodaro, there is a large number of bones which seem to have belonged to young animals which had apparently been killed for food.

Prashad (1936, p. 22) also described a new dog from Harappa, *Canis tenggeranus* race *harappensis* Prashad, resembling the original ancestral type of dog found in the orient in diluvial times and which was of the greyhound type (with an elongated snout having distinct affinities to the Indian wolf, *Canis lupus* L.). It is interesting to note the occurrence of dog from the early days of the Harappan culture. Prashad (1936, p. 37) also noted that the cattle remains from Harappa belong to two distinct types : (i) a large, massive form probably of the type of long-horned humped cattle; and (ii) a smaller form with short horns.

Recently, Nath (1962) has reported on the remains of the horse (*Equus caballus* L.) and the Indian Elephant (*Elephas maximus* L.) from the prehistoric site of Harappa, found in the unworked collections with the Zoological Survey of India. This is the first record of the true horse and the Indian Elephant from the region. The horse remains were obtained from Area G (Harappa) at the end of the Harappa civilization when alien invaders overran this prehistoric city and destroyed it (Piggot, 1950, p. 230). On the other hand, the elephant remains occur in the Harappan period (2500—1500 B.C.).

3. Rupar (2000—900 B.C.)

(Table 2)

Another site of Harappan culture recently excavated is that of Rupar (Ambala district, East Punjab), Nath (in press) has found 18 species, all of which are identical with those of Harappa and Mohenjodaro, with the exception of two, viz., *Francolinus francolinus* (L.) (Black Partridge) and *Bandicota bengalensis* Gray & Hardw. (Bandicoot Rat). A few cut marks on the bones, particularly those of *Bos indicus*, *Bubalus bubalis*, *Ovis vignei*, *Capra hircus aegagrus* and *Sus scrofa cristatus*, indicates the probable use of these animals as food.

The Rupar remains are mostly those of the domestic animals which resemble in their species those of the Harappan culture. Both domestic ass (*Equus asinus* L.) and the true horse (*Equus caballus* L.) are found in the late period of Harappan culture of Rupar.

4. Rangpur (2000—800 B.C.)

(Table 2)

Recently, the excavations at Rangpur (Ahmadabad district, Gujarat) by the Archaeological Survey of India, has brought to light the large extension of the Harappan culture to Gujarat, south of Sind. Nath (in press) has studied these remains and found 10 species. All the remains are of domestic animals which resemble, in their species, those of the Harappan culture. The presence of the domestic ass, *Equus asinus* L. but not of the horse, is noteworthy. The remains of the dog, *Canis familiaris* L., have been found from the earliest times of Harappan culture at Rangpur. The other remains of domestic animals, e.g., cattle, goat, sheep and pig, are akin to those of Harappa, Mohenjodaro and Rugar.

5. Lothal (2000—1200 B.C.)

(Table 2)

Nath (unpublished) has worked out the animal remains from excavations at Lothal (Ahmadabad district, Gujarat), the most notable Harappan cultural site in Gujarat excavated recently by the Archaeological Survey of India. The number of species represented is 23. The majority of remains are of domestic animals, those *Bos indicus* being by far the most common. The remains of other domestic animals, e.g., the buffalo, goat, sheep, and pig are akin to those of Harappa, Mohenjodaro, Rugar and Rangpur. The dog, *Canis familiaris*, is found from the earliest times of Harappan culture at Lothal. The presence of the remains of the rhinoceros, *Rhinoceros unicornis* L., and the Indian elephant, *Elephas maximus* L., which live in marshy land mixed with forest, indicates that the climatic conditions of Gujarat at that time were different from those found today. Among wild species two species of deer, *Axis axis* (Erxl.) (Chital) and *Cervus unicolor* Kerr. (Sambar) are represented. The remains of the Nilgai (*Boselaphus tragocamelus*), the common house rat (*Rattus rattus* L.), and the Indian Black-naped Hare (*Lepus nigricollis* Cuv.) are also found. The remains of the small Indian Mongoose (*Herpestes auropunctatus* Hodg.) and the Jackal (*Canis aureus* L.) are akin to those of Harappa and Mohenjodaro. The presence of the true horse, *Equus caballus* L., from the late period of Harappan culture at Lothal is noteworthy. The remains of the fowl (*Gallus* sp.) are akin to those of Harappa and Rugar. The reptilian remains are those of the river turtle, *Chitra indica*. The molluscan shell remains are mainly of the chank shell (*Xancus pyrum*), the Banded Pond-snail (*Viviparus bengalensis* Lamk.), and other marine Gastropod shells such as *Telescopium telescopium* (L.), *Olivancillaria subulata* (Lamk.), and *Conus* (*Rhizoconus*) *rattus* Brug.

6. Nevasa (1500—1000 B.C.)

(Table 2)

Eapen (1960, pp. 531-536) has studied the remains of the Nevasa excavations (Ahmadnagar district, Maharashtra) and found 13 species

of which *Bos indicus* L. is the most common. The remains of the goat, *Capra hircus aegagrus* Erxl., are numerous. Among wild animals, two species of deer, *Axis axis* (Erxl.) and *Cervus duvauceli* Cuv., are comparatively well represented. The remains of fish and a bird (*Gallus* sp.) are also found. The reptilian remains are mainly of the turtle, *Chitra indica* (Gray).

The bony remains of the Chalcolithic period in Nevasa are mainly those of domestic cattle (*Bos indicus* L.) and wild Barasinga (*Cervus duvauceli* Cuv.). Remains of the goat (*Capra hircus aegagrus* Erxl.) and turtles are less common. The absence of pig is rather surprising.

7. Nasik (1500—500 B.C.)

(Table 2)

The animal remains at Nasik (Maharashtra), were studied by Georg (1955, pp. 142-143) who reported 13 species. The remains are mostly those of domesticated animals, viz., *Bos indicus* L., *Bubalus bubalis* (L.) *Ovis* sp., *Capra* sp. and *Sus cristatus* Wag. Among wild species three species of deer, *Cervus unicolor* Kerr., *Axis axis* (Erxl.) and *Tetraceros quadricornis* Blainv., the Nilgai (*Boselaphus tragocamelus* Pall.) and the rat (*Rattus rattus* L.) are reported. The occurrence of a Primate (*Semnopithecus* sp., the langur) is noteworthy, as Primates have not been recorded from any other prehistoric sites in India.

8. Nagda (1500—200 B.C.)

(Table 2)

Recently, Nath (in press) has studied the remains from Nagda (Chambal Valley, Madhya Pradesh) and has recorded 16 species. The majority of remains are of domestic animals, those of *Bos indicus* L., being by far the most common. The remains of the goat (*Capra hircus aegagrus* Erxl.) and the sheep (*Ovis vignei* Blyth) are fairly numerous and that of *Bubalus bubalis* (L.) fewer. Among the wild species, two species of deer, *Cervus unicolor* Kerr. (Sambar) and *Cervus duvauceli* Cuv. (Barasingha) are present. The occurrence of the Muggar or Great Indian Crocodile, *Crocodylus palustris* Lesson, is noteworthy as this animal has so far not been reported from any other prehistoric site of India. The other reptilian remains are mainly those of the turtles *Lissemys punctata* (Bonn.), *Chitra indica* (Gray) and *Trionyx gangeticus* Cuvier.

9. Hastinapura (1100 B.C.—3rd Century A.D.)

(Table 2)

Hastinapura, (Meerut district, Uttar Pradesh) is a site which is also mentioned in the oldest Indian epic, the *Mahabharata*. The remains have been studied by Nath (1955) who found 13 species. As in Mohenjodaro and Harappa, there is a large number of bones which belong to young animals. A number of bones of *Bos indicus* L., *Bubalus bubalis* (L.), *Ovis vignei* Bly., and *Sus scrofa cristatus* Wag. have definite cut

marks by sharp instruments, suggesting that the inhabitants used these animals for food.

The majority of the remains are those of the domestic animals, those of *Bos indicus* L., being by far the most common. The remains of the goat (*Capra hircus aegagrus*) and the sheep (*Ovis vignei* race *domesticus*) are fairly numerous. The remains of *Bubalus bubalis* (L.) are fewer, but *Sus scrofa cristatus* Wag. is well represented. The Indian Elephant, *Elephas maximus* L., the *Cervus duvauceli* Cuv., are also represented. The presence of the horse, *Equus caballus* L., during the painted greyware period of Hastinapura is significant, as this animal played an important part in the everyday life of the people. Besides, in this period people seemed to have been fond of hunting deer the bones of which were used for style and other decorative objects. The remains of a carp is the only record of fish from this site.

10. Brahmagiri (1000 B.C.—200 A.D.)

(Table 2)

Nath (1968) has studied the collection from Brahmagiri (Chitradurga district, Mysore State). The remains belong to three cultures : (i) *Brahmagiri Stone Age Culture* (1000 B.C.) divided into two sub-cultures : (A) Early Stone Age Culture and (B) Late Stone Age Culture. (ii) *Megalithic Culture* (200 B.C.—mid-1st century A.D.); and (iii) *Andhra Culture* (mid-1st century—3rd century A.D.). The species represented in these cultures are as follows :—

(i) *Brahmagiri Stone Age Culture*—

(A) Earlier Stone Age : *Equus* sp., *Bos indicus* L., *Ovis vignei* Bly. race *domesticus* and *Lepus nigricollis* Cuv.

(B) Late Stone Age : *Canis familiaris* L., *Bos indicus* L., *Bubalus bubalis* (L.), *Ovis vignei* Bly. race *domesticus*; *Capra hircus aegagrus* Erxl., *Sus scrofa cristatus* Wag. and *Axis axis* (Erxl.).

(ii) *Brahmagiri Megalithic Culture*—

Bos indicus L., *Bubalus bubalis* (L.), *Ovis vignei* Bly. race *domesticus*; *Capra hircus aegagrus* Erxl., *Axis axis* (Erxl.) and *Gallus* sp. (fowl).

(iii) *Brahmagiri Andhra Culture*—

Bos indicus L., *Bubalus bubalis* (L.), *Ovis vignei* Bly. race *domesticus*; *Capra hircus aegagrus* Erxl., *Lepus nigricollis* Cuv. and *Pila globosa* (Swani.).

Except for the Chital (*Axis axis* Erxl.), the other mammal remains are those of domesticated animals.

11. *Maski* (1000 B.C.—100 A.D.)

(Table 2)

Nath (1957, pp. 121-129) has studied the remains from Maski (Raichur district, Mysore State) and found 8 species. The excavation mainly comprises chalcolithic and megalithic cultures. The animal remains closely resemble those of Harappa and Hastinapura, and the following were found :—

(a) *Chalcolithic* : Invertebrates (Mollusca) : Freshwater mussel (*Parreyssia* sp.) and the Banded Pond-snail (*Viviparus bengalensis* (Lamk.)). Vertebrates : The common Rat (*Rattus rattus* L.), the short-horned humped cattle (*Bos indicus* L.), the buffalo (*Bubalus bubalis* (L.)), the sheep (*Ovis vignei* Bly. race *domesticus*), and the goat (*Capra hircus aegagrus* Erxl.). Of the latter, a large number of short-horned cattle and sheep occur, and apparently herds of these were maintained. The domestication of these animals indicates a pastoral economy tending towards food growing.

(b) *Megalithic* : Only the sheep (*Ovis vignei* Bly. race *domesticus*) has been found but in large numbers.

12. *Nagarjunakonda* (Neolithic—1200 A.D.)

(Tables 2 and 3)

The animal remains from the excavations at Nagarjunakonda (Guntur district, Andhra Pradesh) have been recently studied by Nath (unpublished). They belong to three cultures, viz., (i) Neolithic (date not yet assigned); (ii) Megalithic (200 B.C.—mid-1st century A. D.); and (iii) historical period (2nd century—1200 A.D.). The following species are represented :—

(i) *Neolithic culture* : Eleven species were found. The remains are mostly of domesticated animals, viz., *Bos indicus* L., *Bubalus bubalis* (L.), *Ovis vignei* Blyth race *domesticus* and *Capra hircus aegagrus* Erxl. The absence of the pig, *Sus scrofa cristatus* Wag., is rather surprising. Among wild animals, three species of deer, *Cervus unicolor* Kerr., *Cervus duvauceli* Cuv., and *Axis axis* (Erxl.), occur. The presence of the black buck, *Antelope cervicapra* (L.), is noteworthy as this animal has not so far been reported from any of the other prehistoric sites of India. The remains of the Nilgai (*Boselaphus tragocamelus* Pall.) also occur. The presence of all these animals in the neolithic site suggests that the habitational sites at that time were situated amidst jungles and undulating grassy land, and the settlers were practising pastoral economy tending towards food growing.

(ii) *Megalithic culture* : Five species have been found, all being domestic animals, viz., *Bos indicus* L., *Bubalus bubalis* (L.), *Ovis vignei* Blyth race *domesticus*, *Capra hircus aegagrus* Erxl., and *Sus scrofa cristatus* Wag. These remains were obtained from the megalithic human burials.

(iii) *Historical period* : Thirty species occur. The majority of the remains are of domestic animals, that of *Bos indicus* L. being by far the most common. The other domestic animals, viz., *Bubalus bubalis* (L.) (domestic buffalo), *Capra hircus aegagrus* Erxl. (goat), *Ovis vignei* Blyth race *domesticus* (domestic sheep) and *Sus scrofa cristatus* Wag. (pig) are fairly common. Among wild cattle, the remains of the wild buffalo, *Bubalus bubalis*, the gaur, *Bos gaurus*, and the Nilgai, *Boselaphus tragocamelus*, are noteworthy. Of these, *Bos gaurus* was hitherto not found in any of the prehistoric sites. Remains of both the true horse and the smaller breed or pony (both *Equus caballus* L.) as well as the domestic ass (*Equus asinus* L.) have been found. The remains of a sacrificed pony from the *aswamedh* site of Nagarjunakonda is of especial significance as it throws light on the ritual and cultural practices of the descendants of the Ikshuvaku kings who ruled there at that time. The remains of the Indian Elephant, *Elephas maximus* L., are found in considerable numbers. Among other mammalian remains are those of the following :—The domestic dog (*Canis familiaris* L.); three rodents, viz., the common rat (*Rattus rattus* L.), the Indian Mole Rat (*Bandicota bengalensis* Gr. & Hardw.), and the Large Bandicoot (*Bandicota indica indica* Kerr), and the Indian Crested Porcupine (*Hystrix indica* Kerr). Of these, the occurrence of the porcupine is noteworthy as this animal has not previously been found in any of the prehistoric sites in India. The Indian Black-naped Hare (*Lepus nigricollis* Cuv.), and three species of deer, viz., the Sambhar (*Cervus unicolor*), the Chital (*Axis axis*) and the Barking Deer (*Muntiacus muntjak*) have also been found.

Other vertebrate remains are those of the fowl (*Gallus* sp.), several reptiles, viz., the turtles (*Chitra indica* Gray and *Trinonyx* sp.) and the Muntior lizard (*Varanus griseus* Daud.), and a teleostean fish (*Rita rita* Ham-Buch.).

Among the invertebrates are the molluscan shell remains of the chank shells, *Xancus pyrum* L., and *X. rapa* (Lamk.) and other marine shells such as *Tonna maculata* (Lamk.), *Arca granosa* L., *Meretrix meretrix* (L.) and the Money Cowry, *Monetaria monata* (L.).

13. Ujjain (750 B.C.—1400 A.D.)

(Table 2)

Nath (unpublished) has recently identified the animal remains from the excavations at Ujjain (Madhya Pradesh) and 12 species have been recorded. The remains are mostly of domesticated animals, viz., *Bos indicus*, *Bubalus bubalis*, *Ovis vignei* race *domesticus*, *Capra hircus aegagrus* and *Sus scrofa cristatus*. The domestic ass, *Equus asinus*, and the horse, *Equus caballus*, are both found. The remains of the small Indian Mongoose, *Herpestes auropunctatus* Hodg. and the Indian Elephant *Elephas maximus* L., found at Ujjain are akin to those of Harappa and Mohenjodaro. Among deer only two species occur, viz., the Chital *Axis axis*, and the Black buck, *Antelope cervicapra*. The molluscs are represented by a single species, the chank shell *Xancus pyrum* L.

14. *Jaugada* (400 B.C.—200 A.D.)

(Table 2)

Nath (unpublished) has studied the remains from the excavations at Jaugada (Ganjam district, Orissa), and found ten species. The remains are mostly those of domesticated animals, viz., *Bos indicus*, *Bubalus bubalis*, *Ovis vignei* race *domesticus*, *Capra hircus aegagrus* and *Sus scrofa cristatus*. The occurrence of the dog, *Canis familiaris*, and the domestic ass, *Equus asinus*, from this earliest iron age period is noteworthy. Of wild mammals only a species of deer, the Chital (*Axis axis*) is found. The reptilian remains are mainly those of the turtles, *Chitra indica* (Gray) and *Lissemys punctata* (Bonn.).

15. *Taxilla* (mid-1st century B.C.—2nd century A.D.)

(Table 2)

The remains from the prehistoric site of Taxilla, 22 miles north of Rawalpindi (W. Pakistan) have been studied by Nath (1959), and 5 species found as follows :—*Equus asinus* L., *Equus caballus* L., *Bos indicus* L., *Bubalus bubalis* (L.), and *Sus scrofa cristatus*. All the remains are those of domesticated animals. Of *Bos indicus*, two distinct forms of humped cattle have been found at Taxilla as at Harappa (Prashad, 1936), viz., (i) a large massive form, probably of the type of long-horned humped cattle; and (ii) a small form with short horns as is found in India today.

16. *Arikamedu* (20—50 A.D.)

(Table 3)

The remains from Arikamedu (near Pondicherry, southern India) were studied by Chatterjee & Bose (1946, pp. 114-116) and 4 species were found as follows :—The humped cattle (*Bos indicus* L.), the pig (*Sus scrofa cristatus* Wag.), the turtle *Lissemys punctata* (Bonn.) and the fowl *Gallus* sp.

17. *Sarnath* (12th century A.D.)

(Table 3)

Nath (1958, pp. 165-185) has studied the remains from a drain in Monastery No. 4 at Sarnath (near Varanasi, Uttar Pradesh), and found the remains of the following 12 species :—Mollusca : *Monetaria monata* (Linn.); *Cypraea pallida* Gray; *Parreyssia* sp.: Reptilia (turtles): *Lissemys punctata* (Bonn.) f. *typica*; *Chitra indica* (Gray); *Batagur baska* (Gray). Mammalia: *Bos indicus* L., *Bubalus bubalis* (L.), *Ovis vignei* Bly. race *domesticus*, *Capra hircus aegagrus* Erxl., *Elephas maximus* L. and *Lepus ruficaudatus* Geof. With the exception of the remains of mollusc shells and reptiles, all others are those of domestic animals. The single

find of the charred remains of the hare, *Lepus ruficaudatus*, is noteworthy as the species has not been found in Harappa, Mohenjodaro and Hastinapur.

III—SUMMARY

1. This paper reviews the prehistoric and ancient (*ca.* 2500 B.C. to 12th century A.D.) animal remains obtained from the various prehistoric and historic sites of India such as Mohenjodaro and Harappa (2500 B.C.—1500 B.C.), Rupar (2000—900 B.C.), Rangpur (2000—800 B.C.), Maski (1000 B.C.—1st century A.D.), Taxilla (mid-1st century B.C.—2nd century A.D.), Brahmagiri (1000 B.C.—200 A.D.), Nasik (1500 B.C.—500 B.C.), Arikamedu (20 A.D.—50 A.D.), Nagda (1500—200 B.C.) and Sarnath (12th century A.D.), and Nevasa (1500—1000 B.C.), and others.

2. Remains, mostly bones and shells of 92 different species (60 vertebrates and 32 invertebrates), have been found from the various sites, thus :—*Vertebrates* : Mammalia (41); Aves (2); Reptilia (12); Pisces (5). *Invertebrates* : Mollusca (31); Coelenterata (Corals, 1). The bulk of the mammal remains in all cases are those of the domesticated animals.

3. The significant role played by various species of animals in the cultural life of the people is discussed.

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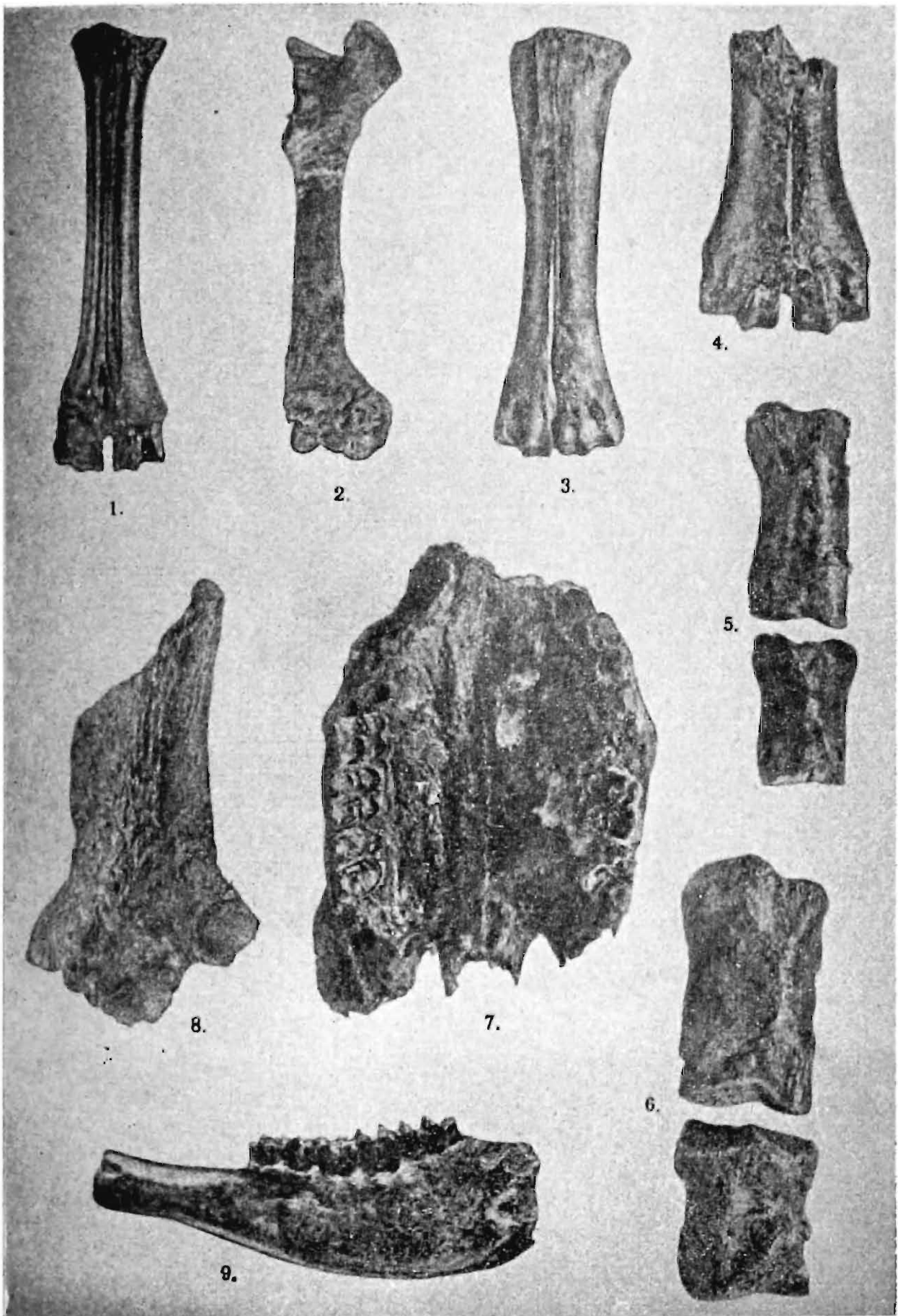


PLATE 1

Skeletal remains of some animals from Harappa Excavation (ca. 2500 B.C.—1500 B.C.) in the collection of the Zoological Survey of India. (After B. Prasad 1936, *Mem. Archaeol. Surv. India*, No. 51.)

(Figs. 1-6).—*Bos indicus* Linn.

FIG. 1.—Left 3rd & 4th metacarpal of an animal of the short-horned race. No. H/C. Cemetery site, Harappa.

FIG. 2.—Right femur of an animal of the long-horned race. No. 10212. Harappa.

FIGS. 3 and 4.—Complete and distal fragment of 3rd-4th metatarsal of short and long-horned races. No. 10212 and from Mound F, Trench VI, respectively, Harappa.

FIGS. 5 and 6.—1st and 2nd phalanges of the short and long-horned races. No. 10212 and from Mound F, Trench VI, respectively, Harappa.

(Figs. 7-9).—*Bubalus bubalis* (Linn.)

FIG. 7.—Palatal part of a specimen No. G 11/27. Harappa.

FIG. 8.—Fragment of a right horn from Mound G; Trench II; square AM 40/21. Harappa.

FIG. 9.—Fragment of left ramus of lower jaw. No. 5440 a, b, c. Harappa.

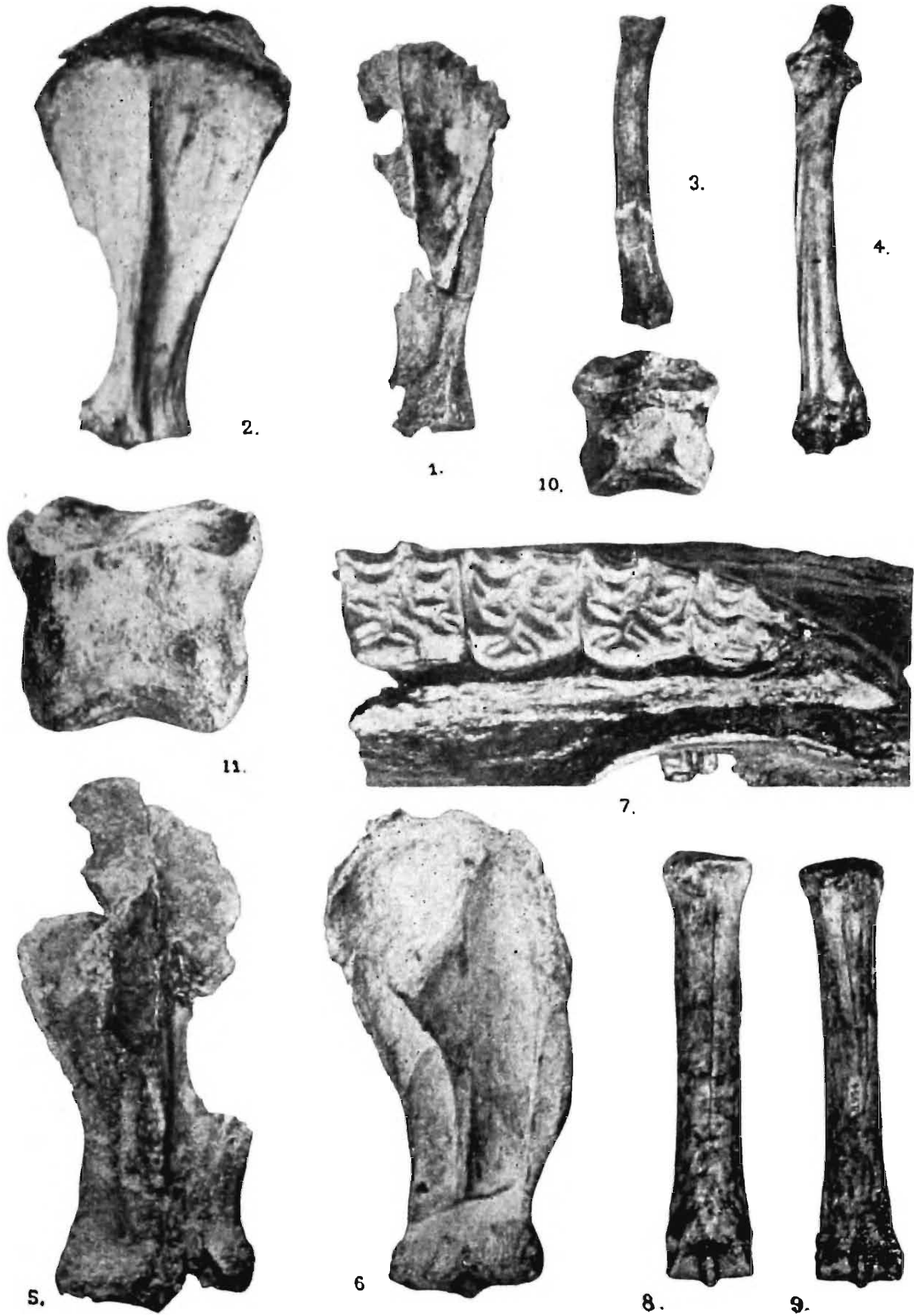


PLATE 2

Skeletal remains of some animals from Harappa excavation (ca. 2500 B.C.—1500 B.C.) together with skeletons of recent forms in the collection of the Zoological Survey of India. (After B. Prashad 1936, *Mem. Archaeol. Surv. India*, No. 51.)

(Figs. 1-4).—*Camelus dromedarius* Linn.

FIG. 1.—Left scapula. No. 954 fragmentary. Harappa.

FIG. 2.—Left scapula of a recent specimen in the Zoological Survey of India.

FIG. 3.—Left radio-ulnar shaft from Mound A B, excavated from a depth of 5'9" Harappa.

FIG. 4.—Left radio-ulna of a recent specimen in the Zoological Survey of India.

(Figs. 5-6).—*Rhinoceros unicornis* Linn.

FIG. 5.—Fragmentary right scapula from Mound F, excavated from a depth of 8'7"—11'10". Harappa.

FIG. 6.—Right scapula of a specimen in the Zoological Survey of India.

(Figs. 7-11).—*Equus asinus* Linn.

FIG. 7.—Maxillary portion of palate with 4th premolar and 1-3 molars; No. 954. Harappa.

FIGS. 8 and 9.—Two 3rd right metacarpals.

FIGS. 10 and 11.—Two specimens of 2nd phalanx of right hind-leg and right fore-leg of different sizes (D.R.S. coll.) No. D.S. 40 and 29.

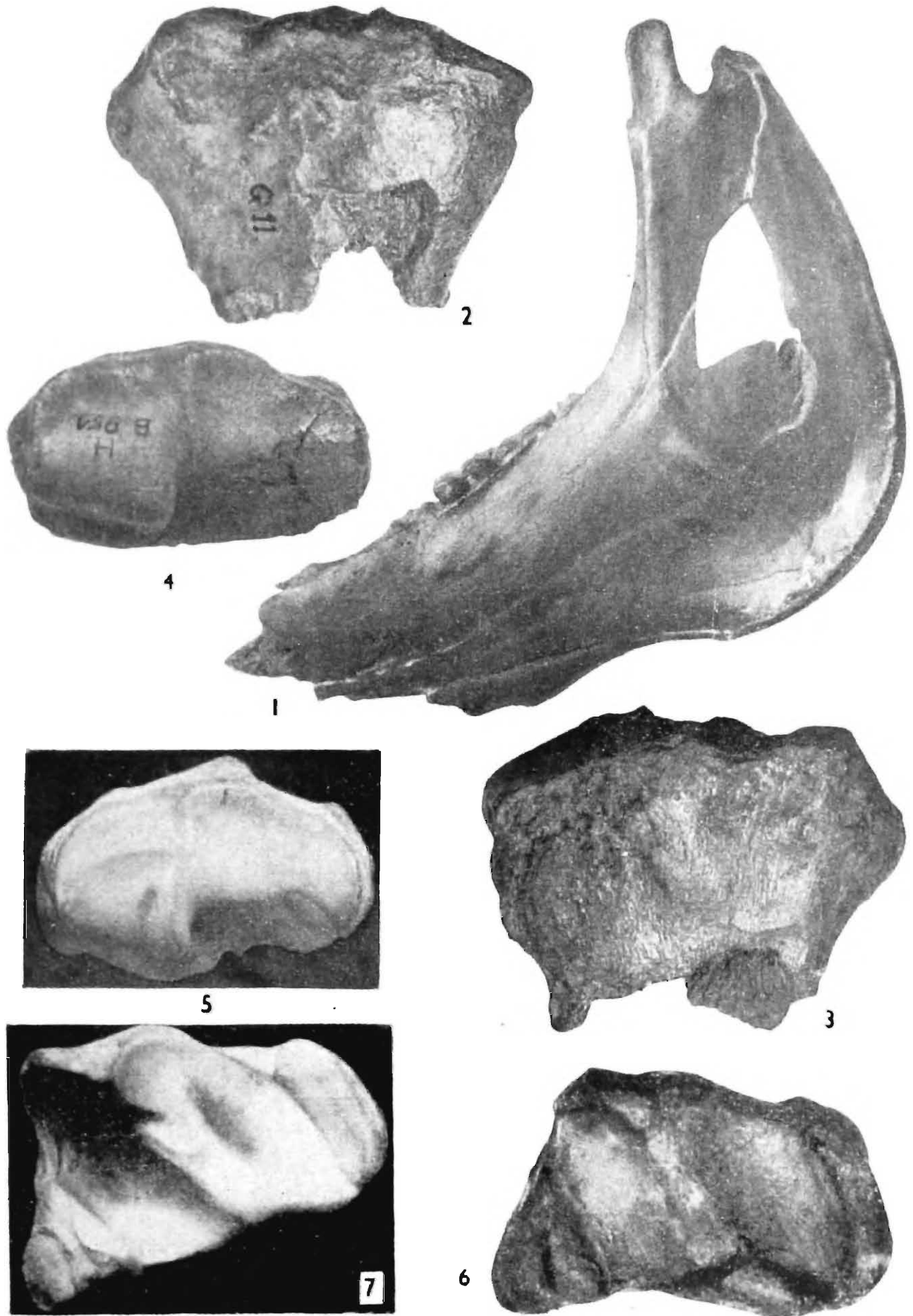


PLATE 3

Skeletal remains of horse from Harappa Excavation (ca. 1500 B.C.—1200 B.C.) together with skeletons of recent forms in the collection of the Zoological Survey of India. (After B. Nath, 1962, *Proc. 1st All India Congress of Zoology, 1959, Part 2. Scientific Papers, Plate 1.*)

(Figs. 1-7).—*Equus caballus* Linn.

FIG. 1.—Left ramus of mandible without body. No. G 289. Harappa.

FIG. 2.—Dorsal view of left proximal extremity of radius. No. G 11. Harappa.

FIG. 3.—Volar view of left proximal extremity of radius. No. G 11. Harappa.

FIG. 4.—Distal articular extremity of left radius. No. G 11. Harappa.

FIG. 5.—Distal articular extremity of left radius of a modern horse in the Zoological Survey of India.

FIG. 6.—Distal articular extremity of right tibia. No. G 11. Harappa.

FIG. 7.—Distal articular extremity of right tibia of a modern horse in the Zoological Survey of India.]



PLATE 4

Skeletal remains of some animals from ancient site of Sarnath excavation (1200 A.D.) together with skeletons of recent forms in the collection of the Zoological Survey of India. (After B. Nath, 1958,) *J. zool. Soc. India*, Vol. 10 (No. 2.) pp. 165-175.

(Fig. 1).—*Monetaria monata* Linn.

(The Money Cowry)

FIG. 1.—One shell of cowry. No. 215. Excavated at Sarnath.

(Fig. 2).—*Cypraea ? pallida* Gray

FIG. 2.—One shell of a cowry. No. 215. Excavated at Sarnath.

(Figs. 3 and 4).—*Parreyssia* sp.

FIG. 3.—Fragment of a valve. No. 215. Excavated at Sarnath.

FIG. 4.—Right valve of *Parreyssia favidens* (Benson). No. 3689. Excavated at Harappa.

(Figs. 5 and 6).—*Lissemys punctata* (Bonn.) forma *typica*.

FIG. 5.—Fragment of a epiplastron. No. 11/1943. Excavated at Sarnath.

FIG. 6.—Left complete and intact epiplastron from Harappa. No. 5556.

(Fig. 7).—*Chitra indica* (Gray).

FIG. 7.—Fragment of hypoplastron. Area of antiquity No. 49. Excavated at Sarnath.

(Fig. 8).—*Batagur baska* (Gray).

FIG. 8.—Dorsal view of the fragment of a plastron *Batagur baska* Gray. Area of Antiquity No. 49. Excavated at Sarnath.

(Figs. 9 and 10).—*Bos indicus* Linn.

FIG. 9.—Fragment of the left distal humerus. No. 13/1943. Excavated at Sarnath.

FIG. 10.—Left astragalus of a young one. No. 116. Excavated at Sarnath.

(Figs. 11 and 14).—*Bubalus bubalis* (Linn.)

FIG. 11.—Fragment of the left scapula. No. 719/28. Excavated at Sarnath.

FIG. 12.—Left scapula of a modern specimen in the Zoological Survey of India.

FIG. 13.—Proximal fragment of the left radius. No. 166/28. Excavated at Sarnath.

FIG. 14.—Left radius of a modern specimen in the Zoological Survey of India.

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TABLE 1.—List of prehistoric and ancient sites in India and West Pakistan from where animal remains have been studied up to the end of 1962.

Serial No.	Name of site	Location	Age	Excavated by	Studied by	Remarks
1	2	3	4	5	6	7
1.	Mohenjodaro . . .	Dist. Larkana, Sind, (W. Pakistan).	2500—1500 B.C.	Archaeological Survey of India.	Sewell & Guha (1931)	Published.
2.	(a) Harappa . . .	Dist. Montgomery, Punjab (W. Pakistan).	..	..	Prashad (1936) . . .	Published.
	(b) Harappa . . .	Dist. Montgomery, Punjab (W. Pakistan).	..	..	Nath (1962) . . .	Published.
3.	Rupar	Dist. Ambala, Punjab (India).	2500—900 B.C. .	..	Nath (in press) . . .	Unpublished.
4.	Rangpur	Dist. Ahmadabad, Gujarat (India).	2000—800 B.C. .	..	Nath (in press) . . .	Unpublished.
5.	Lothal	Dist. Ahmadabad, Gujarat (India).	2000 B.C.—1200 B.C.	..	Nath	Unpublished.
6.	Nevasa	Dist. Ahmadnagar, Maharashtra (India).	1500—1000 B.C.	Dept. of Archaeology & Ancient History, Deccan College, Poona.	Eapen (1960); Ray (1960) (Mollusca only).	Published.
7.	Nasik	Dist. Nasik, Maharashtra (India).	1500—500 B.C. .	..	George (1955) . . .	Published.
8.	Nagda	Chambal Valley, Madhya Pradesh (India). .	1500—200 B.C. .	Archaeological Survey of India.	Nath (in press) . . .	Unpublished.

9. Hastinapura	. . .	Dist. Meerut, Uttar Pradesh (India).	1100 B.C. to 3rd century A.D.	3rd Archaeological Survey of India	Nath (1955)	. . .	Published
10. Brahmagiri	. . .	Dist. Chitradurga, Mysore (India).	1000 B.C.—200 A.D.	„	Nath (1968)	. . .	Published.
11. Maski	. . .	Dist. Raichur, Mysore (India).	1000 B.C. to 1st century A.D.	„	Nath (1959)	. . .	Published.
12. Nagarjunakonda	. . .	Dist. Guntur, Pradesh (India).	Neolithic to 1200 A.D.	„	Nath	. . .	Remains identified (report unpublished).
13. Ujjain	. . .	Chambal Valley, Pradesh (India).	750 B.C.—1400 A.D.	„	Nath	. . .	
14. Jaugada	. . .	Dist. Ganjam, Orissa (India).	400 B.C.—200 A.D.	„	Nath	. . .	Unpublished.
15. Taxilla	. . .	Dist. Rawalpindi, (W. Pakistan).	Mid-1st century B.C. to 2nd century A.D.	„	Nath (1959)	. . .	Published.
16. Arikamodu	. . .	Pondicherry, Madras State.	20—50 A.D.	„	Chatterjee & Bose (1946).	. . .	Published.
17. Sarnath	. . .	Dist. Banaras, Uttar Pradesh (India).	12th century A.D.	„	Nath (1958)	. . .	Published.

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.
 II.—Aves.
 III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State Country
	Scientific	Common			
1		3	4	5	6
I.—MAM-					
1.	<i>Equus caballus</i> Linn.	The Horse	Perissodactyla	Equida	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
		"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	3. Rugar Dist. Ambala, E. Punjab, (India)
	"	"	"	"	4. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	5. Hastinapura, Dist. Meerut, U.P. (India)
	"	"	"	"	6. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	7. Taxilla, Dist. Rawalpindi, (W. Pakistan)
2.	<i>Equus asinus</i> Linn.	The Domestic Ass	Perissodactyla	Equidae	1. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	2. Rugar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	3. Rangpur, Gujarat (India)
	"	"	"	"	4. Maski, Dist. Raichur, Mysore (India)
	"	"	"	"	5. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	6. Jaugada, Dist. Ganjam, Orissa (India)
	"	"	"	"	7. Taxilla, Dist. Rawalpindi, (W. Pakistan)
3.	<i>Equus sp.</i>	The wild Ass	,	"	1. Brahmagiri, Dist. Chitradurga, Mysore State (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA				
Harappan . . .	2500 B.C. to 1500 B.C.	Sewell & Guha (1931).	Fragments of mandible with teeth	Archaeological Survey of India.
..	..	Prashad (1936); Nath (1962).	Fragmentary mandible with teeth; and limb bones	..
..	2500—900 B.C.	Nath (in press)	Fragmentary limb bones	..
..	2000 B.C. to 1200 B.C.	Nath (unpublished)	Teeth . . . .	..
Northern Black Polished Ware; grey ware cultures.	1100 B.C. to 300 A.D.	Nath (1955) . . .	..	..
Chalcolithic . .	750 B.C. . .	Nath (unpublished)	Limb bones and teeth	..
Sirkap (Taxilla)	Mid-1st century B.C. to 2nd century A.D.	Nath (1959)	An astragalus .	..
Harappan . . .	2500—1500 B.C.	Prashad (1936); Nath (1962).	Teeth, fragments of lower jaw; skull and limb bones	..
..	2500—900 B.C.	Nath (in press)	Teeth & limb bones	..
..	2000—800 B.C.	..	Fragments of vertebrae	..
Chalcolithic . .	1000 B.C. to 1st century A.D.	Nath (1957) Ancient India No. 13	3rd & 4th metatarsals	..
..	750 B.C. . .	Nath (unpublished)	Limb bones and teeth	..
Iron Age . . .	400 B.C. to 200 A.D.	Nath (unpublished)	Calcaneum & metacarpal bones	..
Sirkap (Taxilla)	Mid-1st century B.C. to 2nd century A.D.	Nath (1959)	Premaxilla & teeth	..
Stone age; Megalithic (Andhra)	1000 B.C. to 200 A.D.	Nath (1967)	Fragmentary cervical vertebrae	..

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
I.—Mammalia					
II.—Aves.					
III.—Reptilia.					
I.—MAM-					
4.	<i>Rhinoceros unicornis</i> Linn.	The Indian one-horned Rhinoceros	Perissodactyla	Rhinocerotidae	1. Harappa, Dist. Montgomery (W. Pakistan) 2. Lothal, Dist. Ahmadabad, Gujarat (India)
5.	<i>Bos indicus</i> Linn.	The Zebu or Domestic humped cattle of India	Artiodactyla	Bovidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan) 2. Harappa Dist. Montgomery, (W. Pakistan) 3. Rupar, Dist. Ambala, Punjab (India) 4. Rangpur, Gujarat (India) 5. Lothal, Dist. Ahmadabad, Gujarat (India). 6. Nevasa, Dist. Ahmadnagar, Maharashtra (India) 7. Nasik, Dist. Nasik, Maharashtra (India) 8. Nagda, Chambal Valley, Madhya Pradesh (India) 9. Hastinapura, Dist. Meerut, Uttar Pradesh (India) 10. Brahmagiri, Dist. Chitradurga, Mysore State (India) 11. Maski, Dist. Raichur, Mysore (India)

from prehistoric sites in India and West Pakistan up to the see Table 3)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11

MALIA—*contd.*

Harappan	2500 B.C.— 1500 B.C.	Prashad (1936) ; Nath (1962).	Fragments of right scapula	Archaeological Survey of India.
"	2000 B.C.— 1200 B.C.	Nath (unpublished)	Right ramus of mandible without body	"
"	2500 B.C. to 1500 B.C.	Sewell & Guha (1931);	Teeth & fragments of mandible	"
"	"	Prashad (1936) ; Nath (1962).	Teeth, fragments of mandible ; limb bones ; scapulae ; pelvic girdle & ribs	"
"	2500 B.C.—900 B.C.	Nath (in press)	Skull ; mandibles appendicular and axial skeleton	"
"	2000 B.C.—800 B.C.	Nath (in press)	Skull, mandibles appendicular and axial skeleton	"
"	2000 B.C. to 1200 B.C.	Nath (unpublished)	Axial and appendicular bones and skull parts	"
"	1500 B.C. to 1000 B.C.	Eapen (1960)	Limb and jaw bones	Dept. of Archaeology and Ancient History, Deccan College, Poona.
Chalcolithic	1500 B.C.—500 B.C.	George (1955)	Limb and jaw bones	"
"	1500 B.C.—200 B.C.	Nath (in press)	Pelvis, scapula, ribs, mandibles and teeth	Archaeological Survey of India.
Northern Black Polished ware ; and greyware cultures	1100 B.C. to 3rd Century A.D.	Nath (1955)	Ribs, vertebrae, limb bones, mandible and teeth	
Stone age, Megalithic (Andhra)	1000 B.C.—200 B.C.	Nath (1967)	Ribs, vertebrae, limb bones and teeth	
Chalcolithic	1000 B.C. to 1st century A.D.	Nath (1959)	Vertebrae teeth, scapula and limb bones	

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites.)

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
I.—Mammalia.					
II.—Aves.					
III.—Reptilia.					
5.—contd.					
	<i>Bos indicus</i> Linn.	The zebu or Domestic humped cattle of India.	Artiodactyla	Bovidae	12. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
	"	"	"	"	"
	"	"	"	"	13. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	14. Jaugada, Dist. Ganjam, Orissa (India)
	"	"	"	"	15. Taxilla, Dist. Rawalpindi, (W. Pakistan)
6.	<i>Bubalus bubalis</i> (Linn.)	Indian Domestic Buffalo	"	"	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery (W. Pakistan)
	"	"	"	"	3. Rupar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	4. Rangpur, Gujarat (India)
	"	"	"	"	5. Lothal, Ahmadabad, Gujarat (India)
	"	"	"	"	6. Nasik, Dist. Nasik, Maharashtra (India)
	"	"	"	"	7. Nagda, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	8. Hastinapura, Dist. Meerut, Uttar Pradesh (India)

from prehistoric sites in India and West Pakistan up to the see Table 3)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA—<i>contd.</i>				
Neolithic	1200 B.C. to 600 B.C.	Nath (unpublished)	Axial area appendicular bones and skull parts	Archaeological Survey of India.
Megalithic	200 B.C. to Mid 1st century A.D.	"	"	"
Chalcolithic	750 B.C.	"	"	"
Iron age	400 B.C. to 200 A.D.	Nath (unpublished)	Ribs, limb bones, skull, teeth and mandible	"
Sirkap (Taxilla)	Mid-1st century B.C. to 2nd century A.D.	Nath (1959)	Limb bones, teeth and vertebrae	"
Harappan	2500 B.C.—1500 B.C.	Sewell & Guha (1931)	Teeth, remains of mandibles and humerus	"
"	"	Prashad (1936) Nath (1962).	Teeth, lower jaw, vertebrae and limb bones	"
"	2500 B.C.—900 B.C.	Nath (in press)	"	"
"	2000 B.C.—800 B.C.	Nath (in press)	Teeth, vertebrae and limb bones	"
"	2000 B.C. to 1200 B.C.	Nath (unpublished)	Appendicular and axial bones and skull	"
Chalcolithic	1500 B.C. to 500 B.C.	George (1955)	Limb bones and jaw bones	Dept. of Archaeology and Ancient History, Deccan College, Poona.
"	1500 B.C. to 200 B.C.	Nath (in press)	Lower jaw and limb bones	Archaeological Survey of India.
Northern Black Polished Ware culture : and grey ; alt. re. ware culture.	1100 B.C. to 3rd century A.D.	Nath (1955)	Teeth and limb bones	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6

6 -contd.

I.—MAM-

	<i>Bubalus bubalis</i> Linn.	Indian Domestic Buffalo	Artiodactyla	Bovidae	9. Brahmagiri, Dist. Chitradurga, Mysore State (India)
	"	"	"	"	10. Maski, Dist. Raichur, Mysore (India)
	"	"	"	"	11. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
	"	"	"	"	"
	"	"	"	"	12. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	13. Taxilla, Dist. Rawalpindi (W. Pakistan)
	"	"	"	"	14. Jaugada, Dist. Ganjam, Orissa (India)
7.	<i>Eos gaurus</i> H. Smith.	The 'Gaur' or Indian' Bison.	"	"	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
8.	<i>Beiselaphus trago-</i> <i>camelus</i> Pall.	Nilgai or Blue Bx	"	"	1. Lothal Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	2. Nasik, Dist. Nasik, Maharashtra (India)
	"	"	"	"	3. Nagarjunakonda Dist. Guntur Andhra Pradesh (India)
9	<i>Ovis orientalis</i> <i>vignei</i> Blyth race <i>domesticus</i>	The Domestic sheep	"	"	1. Harappa Dist. Montgo- mery (W. Pakistan)

from prehistoric sites in India and West Pakistan up to the see Table 3)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA—<i>contd.</i>				
Stone age and megalithic (Andhra)	1000 B.C. to 200 A.D.	Nath (1967)	Mandible, limb bones and scapulae	Archaeological Survey of India.
Chalcolithic	1000 B.C. to 1st century A.D.	Nath (1959)	Vertebrae, teeth, scapula and limb bones	"
Neolithic	1200 B.C. to 600 B.C.	Nath (unpublished)	"	"
Megalithic	200 B.C. to Mid 1st century A.D.		"	"
Chalcolithic	750 B.C.		Appendicular and axial bones and skull	"
Sirkap (Taxilla)	Mid-1st century B. C. to 2nd century A.D.	Nath (1959)	Scapula, tibia and vertebrae	"
Iron age	400 B.C. to 200 A.D.	Nath (unpublished)	Cheek teeth and cannon bone	"
Neolithic	1200 B. C. to 600 B.C.	Nath (unpublished)	Jawe bones and teeth	"
Harappan	2000 B. C. to 1200 B. C.	"	"	"
Chalcolithic	1500-500 B.C.	George (1955)	Horn remains	Dept. of Archaeology and Ancient History, Deccan College, Poona.
Neolithic	1200 B. C. to 600 B.C	Nath (unpublished)	"	Archaeological Survey of India.
Harappan	2500-1500 B.C.	Prashad (1936) ; Nath (1962).	Skull, limb bones and horn-core	

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
9.—contd.					
	<i>Ovis vignei</i> race <i>domesticus</i>	<i>orientalis</i> Blyth The Domestic sheep	Artiodactyla	Bovidae	2. Rupa, Dist. Ambala Punjab (India)
	"	"	"	"	3. Rangpur, Gujarat State, (India)
	"	"	"	"	4. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	5. Nagda Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	6. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	7. Brahmagiri, Dist. Chitraldurga Mysore State, (India)
		"	"	"	8. Maski, Dist. Raichur Mysore (India)
		"	"	"	9. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
		"	"	"	
		"	"	"	10. Ujjain Chambal Valley, Madhya Pradesh (India)
		"	"	"	11. Jaugada Dist. Ganjam Orissa (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA—<i>contd.</i>				
Harappan	2500,900 B. C.	Nath (in press)	Ribs, scapulae and limb bones	Archaeological Survey of India
„	2000,800 B. C.	„	Mandible limb bone, scapulae and teeth	„
„	2000 B. C. to 1200 B.C.	Nath (unpublished)	Axial appendicular and skull bones	„
Chalcolithic	1500,200 B. C.	Nath (in press)	Remains of pelvis, scapulae, mandibles and limb bones	„
Northern Black Polished ware culture and grey-ware cultures	1100 B. C. to 3rd century A. D.	Nath (1955)	Limb bones vertebrae and pelvis	„
Stone age and megalithic (Andhra)	1000,200 A. D.	Nath (1967)	Ribs, vertebrae mandibles and limb bones	„
Chalcolithic	1000 B. C. to 1st century A. D.	Nath (1959)	Vertebrae, limb bones and ribs	„
Neolithic	1200 B. C. to 600 B. C.	Nath (unpublished)	Axial and appendicular bones	„
Megalithic	200 B. C. to Mid-1st century A.D.	„	„	„
Chalcolithic	750 B. C.	„	Limb bones	„
Iron age	400 B. C. to 200 A. D.	„	Limb bones and pelvis	„

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
I.—MAM-					
10.	<i>Ovis</i> sp.		Artiodactyla	Bovidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan) 2. Nasik, Dist. Nasik, Maharashtra (India)
11.	<i>Tetraceros quadricornus</i> Blainville	4 horned Antelope	"	"	1. Ditto
12.	<i>Capra hircus aegugrus</i> Brxleben	The Indian Domestic Goat	"	"	1. Harappa, Dist. Montgomery (W. Pakistan)
	"	"	"	"	2. Rupar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	3. Rangpur, Gujarat (India)
	"	"	"	"	4. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	5. Nevasa, Dist. Ahmadnagar Maharashtra (India)
	"	"	"	"	6. Nagda, Chambal valley, Madhya Pradesh (India)
	"	"	"	"	7. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	8. Brahmagiri, Dist. Chitradurga, Mysore State (India)
	"	"	"	"	9. Maski, Dist. Raichur, Mysore (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA—<i>contd.</i>				
Harappan	2200-1200 B.C.	Sewell & Guha (1931)	Mandible and teeth	Archaeological Survey of India
Chalcolithic	1500-200 B.C.	George (1952)	Limb bones	Dept. of Archaeology and Ancient History, Deccan College, Poona
"	"	"	Portion of lower jaw	"
Harappan	2500-1500 B.C.	Prashad (1936); Nath (1962)	Mandibles and limb bones	Archaeological Survey of India
"	2500-900 B.C.	Nath (in press)	Fragments of lower and upper jaws, and limb bones	"
"	2000-800 B.C.	"	Limb bones, teeth, ribs and horn cores	"
"	2000 B.C. to 1200 B.C.	Nath (unpublished)	Axial and appendicular bones and teeth	"
Chalcolithic	1500-1000 B.C.	Eapen (1960)	Lower jaw fragments	Dept. of Archaeology and Ancient History, Deccan College, Poona
"	1500-200 B.C.	Nath (in press)	Mandibles, teeth and limb bones	Archaeological Survey of India
Northern Black Polished ware and grey ware cultures	1100 B.C. to 3rd century A.D.	Nath (1955)	Lower jaw and horn	"
Stone Age and megalithic (Andhra)	1000-200 B.C.	Nath (1967)	Fragments of mandibles and humerus	Archaeological Survey of India
Chalcolithic	000 B.C. to 1st century A.D.	Nath (1959)	Fragments of lower jaw, upper jaw, teeth and vertebrae	"

TABLE 2.—List of animal species whose remains have been found
end of 1962. (For historic sites.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
I.—Mammalia .					
II.—Aves.					
III.—Reptilia.					
12	<i>contd.</i>				I.—MAM
	<i>Capra hircus</i> <i>megagrus</i> Erxleben	The Indian Domes- tic Goat	Artiodactyla	Bovidae	10. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
	"	"	"	"	11. Dipto
	"	"	"	"	12. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	13. Jaugada, Dist. Ganjam, Orissa (India)
13.	<i>Capra</i> sp.	"	"	"	1. Nasik, Dist. Nasik, Maharashtra, (India)
14.	<i>Anstulope cervicapra</i> Lins	The Black buck	"	"	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
	"	"	"	"	2. Ujjain, Chambal Valley, Madhya Pradesh (India)
15.	<i>Axis axis</i> Erxleben	The Spotted Deer	"	Cervidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	"	"	"	"	2. Rupar, Dist. Ambala, E. Punjab, (India)
	"	"	"	"	3. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	4. Nevasa, Dist. Ahmadnagar Maharashtra (India)
	"	"	"	"	5. Nasik, Dist. Nasik, Maharashtra (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—*contd.*

IV. Pisces.

V. Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA—concl.				
Neolithic	1200 B.C. to 600 B.C.	Nath (unpublished)	Axial and appendicular bones and teeth	Archaeological Survey of India,
Megalithic	200 B.C. to Mid-1st century A.D.	„	Limb bones and teeth	„
Chalcolithic	750 B.C.	„	Limb bones and teeth	„
Iron age	400 B.C. to 200 A.D.	„	Scapula, ribs and limb bones	„
Chalcolithic	1500-500 B.C.	George (1955)	Limb bones	Dept. of Archaeology and Ancient History, Deccan College, Poona
Neolithic	1200-600 B.C.	Nath (unpublished)	Teeth and jaw fragments	Archaeological Survey of India
Chalcolithic	750 B.C.	„	Fragments of antlers & jaws	„
Harappan	2500-1500 B.C.	Sewell & Guha (1931)	Base of antler shed	„
„	2500—900 B.C.	Nath (in press)	Antler fragments	„
„	2000-1200 B.C.	Nath (unpublished)	Antler fragments and cannon bones	„
Chalcolithic	1500 1000 B.C.	Eapen (1960)	Antler fragments	Dept. of Archaeology & Ancient History, Deccan College, Poona
„	1500-500 B.C.	George (1955)		„

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6

15.—contd.

	<i>Axis axis</i> Braleben	The spotted Deer	Artiodactyla	Cervidae	6. Brahmagiri, Dist. Chitradurga, Mysore State (India)
	"	"	"	"	7. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
	"	"	"	"	8. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	9. Jaugada, Dist. Ganjam, Orissa (India)
16.	<i>Cervus elaphus</i> <i>hanglu</i> , Wagner (= <i>cervus cash-</i> <i>merianus</i>)	The Kashmir Stag or Han- gul or Red Deer	"	"	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
17.	<i>Cervus unicolor</i> Kerr.	The Sambar	"	"	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	3. Nasik, Dist. Nasik, Maharashtra (India)
	"	"	"	"	4. Nagda, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	5. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
18.	<i>Cervus persicus</i> Zimmermann	The Hog Deer	"	"	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavate	by
Culture	Age				
7	8	9	10	11	
Stone Age, and megalithic (Andhra)	1000-200 A.D	Nath (in press)	Antler fragments	Archæological	Sur-
Neolithic	1200-600 B.C.	Nath (unpublished)	Antler fragments and cannon bone	"	
Chalcolithic	750 B.C.	"	"	"	
Iron Age	400 B.C. to 200 A.D.	Nath (unpublished)	Antler fragments	"	
Harappan	2500-1500 B.C.	Sewell & Guha (1931)	Parts of antlers	"	
"	2500-1500 B.C.	"	"	"	
"	2000-1200 B.C.	Nath (unpublished)	Antler fragments	"	
Chalcolithic	1500-500 B.C.	George (1955)	Molar teeth and incisor teeth of lower jaw	Dept. of Archæology and Ancient History, Deccan College, Poona	
"	1500-200 B.C.	Nath (in press)	Parts of patella, antlers and phalanx	Archæological	Sur-
Neolithic	1200-600 B.C.	Nath (unpublished)	Antler fragments	"	
Harappan	2500-1500 B.C.	Sewell & Guha (1931)	"	"	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavations Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
19.	<i>Cervus duvauceli</i> Cuv	The Barasingha	Artiodactyla	Cervidae	1. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	2. Rangpur, Gujarat (India)
	"	"	"	"	3. Nevasa, Dist. Ahmadnagar, Maharashtra (India)
	"	"	"	"	4. Nagda, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	5. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	6. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
20.	<i>Sus scrofa cristatus</i> Wagner	The Indian Boar	"	Suidae	1. Mohenjodaro Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	3. Rupar, Dist. Ambala, E. Pun- jab (India)
	"	"	"	"	4. Rangpur, Guja- rat (India)
	"	"	"	"	5. Lothal. Dist. Ahmad abad, Gujarat (India)
	"	"	"	"	6. Nasik, Dist. Nasik, Maharastra (India)
	"	"	"	"	7. Nagda, Chambal Valley, Madhya Pradesh (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—contd.

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Harappan	2500-1500 B.C.	Prashad (1936) ; Nath (1962)	Antler fragments	Archaeological Survey of India
"	2000-800 B.C.	Nath (in press)	"	"
Chalcolithic	1500-1000 B.C.	Eapen (1960)	"	Dept. of Archaeo- logy and Ancient History, Deccan College, Poona
"	1500-200 B.C.	Nath (in press)	"	Archaeological Sur- vey of India
Northern Black Polished ware and grey ware culture	1100 B.C. to 3rd century A.D.	Nath (1955)	"	"
Neolithic	1200—600 B.C.	Nath (unpublished)	"	"
Harappan	2500-1500 B.C.	Sewell & Guha (1931)	Tusk, mandible and teeth	"
"	"	Prashad (1936) ; Nath (1962)	Teeth, mandible and limb bones	"
"	2500-900 B.C.	Nath (in press)	"	"
"	2000-800 B.C.	"	Mandibles, teeth, upper jaw and limb bones	"
"	2000-1200 B.C.	Nath (unpublished)	Limb bones jaw and teeth	"
Chalcolithic	1500-500 B.C.	George (1955)	Upper jaw and teeth	Dept. of Archaeo- logy and Ancient History, Deccan College, Poona
"	1500-200 B.C.	Nath (in press)	Scapula	Archaeological Survey of India

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6

20.—contd.

	<i>Sus scrofa cristatus</i> Wagner	The Indian Boar	Artiodactyla	Suidae	8. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	9. Brahmagari Dist. Chitradurga, Mysore State (India)
	"	"	"	"	10. Nagarjunakonda, Dist. Guntur, Andhra Pradesh (India)
	"	"	"	"	11. Ujjain, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	12. Jaugada, Dist. Ganjam, Orissa (India)
	"	"	"	"	13. Taxilla, Dist. Rawalpindi (W. Pakistan)
21.	<i>Camelus ? dromedarius ?</i> Linn.	The one humped camel	"	Camelidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)
22.	<i>Elephas maximus</i> Linn.	The Indian Elephant	Proboscidea	Elephantidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	3. Rupar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	4. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	5. Nagda, Chambal Valley, Madhya Pradesh (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—contd.

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Northern Black Polished Ware ; and greyware cultures	1100 B.C. to 3rd century A.D.	Nath (1955)	Upper jaw, teeth, scapulae and limb bones	Archaeological Survey of Ind
Stone Age, and megalithic (Andhra)	1000-200 A.D.	Nath (1967)	Upper jaw and 3rd metatarsal	..
Megalithic	200 B.C. to Mid 1st century A.D.	Nath (unpublished)	Limb bones and teeth	..
Chalcolithic	750 B.C.	..	Limb bones	..
Iron Age	400 B.C. to 200 A.D.	..	Limb bones and teeth	..
Sirkap (Taxilla)	Mid-1st century B.C. to 2nd century A.D.	Nath (1959)	Lower jaw and teeth	..
Harappan	2500-1500 B.C.	Sewell & Guha (1931)	Scapula	..
..	..	Prashad (1936) ; Nath (1962)	Scapula radioulna Cannon bone	..
..	..	Sewell & Guha (1931)	Caput of femur and tips of small tusks	..
..	..	Prashad (1936) ; Nath (1962)	Radius, femur and tibia	..
..	2500-900 B.C.	Nath (in press)	Pelvis and teeth	..
..	2000-1200 B.C.	Nath (unpublished)	Limb bones	..
Chalcolithic	1500-200 B.C.	Nath (in press)	Fragments of tusks	..

TABLE 2.—List of animal species whose remains have been found
end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
22.—contd.					
	<i>Elephas maximus</i> Linn.	The Indian Elephant	Proboscidea	Elephantidae	6. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	7. Ujiain, Chambal Valley, Madhya Pradesh (India)
23.	<i>Semnopithecus</i> sp.	The common Langur	Primates	Colobidae	1. Nasik, Dist. Nasik, Maharash- tra (India)
24.	<i>Canis familiaris</i> Linn.	The Domestic Dog	Carnivora	Canidae	1. Mohenjodaro, Dist. Larkana, Sind (W. Pakistan)
	"	"	"	"	2. Rupar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	3. Rangpur, Gujarat (India)
	"	"	"	"	4. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	5. Brahmagiri, Dist. Chitradurga, Mysore State (India)
	"	"	"	"	6. Jaugada, Dist. Ganjam, Orissa (India)
25.	<i>Canis aureus</i> <i>indicus</i> Hodgson	The Indian Jackal	"	"	1. Harappa, Dist. Montgomery, (W. Pakistan)
26s	<i>Canis tenggeranus</i> Kohlbrugge race. <i>harappensis</i> Prashad	The Harappa Dog	"	"	1. "
27.	<i>Canis lupus</i> <i>pallipes</i> Sykes	The Indian Wolf	"	"	1. "

from prehistoric sites in India and West Pakistan up to the see Table 3.)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Northern Black Polished ware, and Grey-ware cultures	1100 B.C. to 3rd century A.D.	Nath (1955)	Tips of tusks and pisiform bone	Archaeological Survey of India
Chalcolithic	750 B.C.	Nath (unpublished)	Limb bones & teeth	"
"	1500-500 B.C.	George (1955)	Left upper jaw	Dept. of Archaeology and Ancient History, Deccan College, Poona
Harappan	2500-1500 B.C.	Sewell & Guha (1931)	Parts of skull and mandible	Archaeological Survey of India
"	2500-900 B.C.	Nath (in press)	Parts of mandibles, limb bones, pelvis, scapula and vertebrae	"
"	2000-800 B.C.	"	Parts of mandibles	"
"	2000-1200 B.C.	"	Limb bones	"
Stone Age, and megalithic (Andhra)	1000-200 B.C.	Nath (1967)	Mandible with teeth	"
Iron Age	400 B.C. to 200 A.D.	"	Parts of mandibles, teeth and metacarpals	"
Harappan	2500-1500 B.C.	Prashad (1936) ; Nath (1962)	Parts of mandible and humerus	"
"	"	"	Skull and mandible	"
"	"	"	Skull, mandible, vertebrae teeth and limb bones	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
28.	<i>Canis aureus</i> Linn.	The Asiatic Jackal	Carnivora	Canidae	1. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	2. Lothal, Dist. Ahmadabad, Gujarat (India)
29.	<i>Felis ochreata</i> Gmelin <i>domestica</i> Brisson	The Domestic Cat	"	Felidae	1. Harappa, Dist. Montgomery (W. Pakistan)
	"	"	"	"	2. Nagda, Chambal Valley, Madhya Pradesh (India)
30.	<i>Herpestes auro-punctatus</i> , Hodgson	The Small Indian Mon-goose	"	Viverridae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	3. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	4. Ujjain, Chambal Valley, Madhya Pradesh (India)
31.	<i>Rattus</i> Linn.	The common Indian Rat	Rodentia	Muridae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)
	"	"	"	"	3. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	4. Nasik, Dist. Maharashtra (India)
	"	"	"	"	5. Nevasa, Dist. Ahmadnagar, Maharashtra (India)

from prehistoric sites in India and West Pakistan up to the see Table 3.)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Harappan	2500-1500 B.C.	Prashad (1936); Nath (1932)	Limb bones, teeth mandible and pelvis	Archaeological Sur- vey of India
"	2000 B.C. to 1200 B.C.	Nath (unpublished)	Limb bones	"
Harappan	2500-1500 B.C.	Prashad (1936); Nath (1962)	Parts of skull	"
Chalcolithic	1500-200 B.C.	Nath (in press)	Right complete hu- merus	"
Harappan	2500-1500 B.C.	Sewell and Guha (1931)	Almost complete skull (complete- ly burnt)	"
"	"	Prashad (1936); Nath (1962)	Skull, mandibles, pelvic and pecto- ral girdles verte- brae, tibia and humerus	"
"	2000—1,200 B.C.	Nath (unpublished)	Lower jaw	"
Chalcolithic	750 B.C.	"	Skull and mandible	"
Harappan	2000- 1500 B.C.	Sewell and Guha (1931)	Mandible with teeth	"
"	"	Prashad (1936); Nath (1962)	Femur, tibia, man- dible and verte- brae	"
"	2000-1200 B.C.	Nath (unpublished)	Limb bones	"
Chalcolithic	1500-500 B.C.	George (1955)	Limb bones	Dept. of Archaeolo- gy and Ancient History, Deccan College, Poon
"	1500-1000 B.C.	Eapen (1960)	Left lower jaw and limb bones	"

TABLE 2.—List of animal species whose remains have been found
end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
31.— <i>contd.</i>					
	<i>Rattus</i> Linn.	<i>rattus</i> The common Indian Rat	Rodentia	Muridae	6. Maski, Dist. Raichur, Andhra Pradesh (India)
32.	<i>Tatera</i> Hardwicke	<i>indica</i> , The Indian Ger- bille or Ante- lope Rat	"	"	1. Harappa, Dist. Montgomery, (W. Pakistan)
33.	<i>Bandicota</i> <i>bengalensis</i> , Gray and Hardwicke	Lesser Bandi- coot Rat (Indian Mole rat)	"	"	1. Rupar, Dist. Ambala, E. Pun- jab (India)
34.	<i>Crocidura</i> <i>bidi- ana</i> Anderson = <i>Suncus</i> <i>sto- lickanus</i> , An- derson	The shrew	Insectivora	Soricidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
35.	<i>Lepus</i> <i>nigricollis</i> <i>dayanus</i> Blan- ford	The Indian Hare	Lagomorpha	Leporidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
36.	<i>Lepus</i> <i>nigricollis</i> <i>ruficaudatus</i> F. Cuv.	The Rabbit	"	"	1. Brahmagiri, Dist. - Chitradurga, My- sore State (India)
	"	"	"	"	2. Lothal, Dist.] Ahmadabad, Gujarat (India)

from prehistoric sites in India and West Pakistan up to the see Table 3).—contd.

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Chalcolithic	1000 B.C. to 1st century A.D.	Nath (1959)	Pelvis and femur	Archaeological Survey of India
Harappan	2500—1500 B.C.	Prashad (1936); Nath (1962)	A complete skull and remains of mandible and femur	"
"	2500—900 B.C.	Nath (in press)	Upper jaw, lower jaw teeth and femur	"
"	2500—1500 B.C.	Sewell and Guha (1931)	A complete skull (except tympanic bullae)	"
"	"	"	Skull, mandible limb bones vertebrae, pelvis and pectoral girdles	"
Stone Age and megalithic (Andhra)	1000—200 A.D.	Nath (1967)	Tibia, humerus and mandible with teeth	"
Harappan	2000 B.C. to 1200 B.C.	Nath (unpublished)	Limb bones	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation	
	Scientific	Common			Name, State, Country	
1	2	3	4	5	6	
II—						
1.	<i>Gallus</i> sp.	The Domestic fowl	Galliformes	Phasianidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)	
	<i>Gallus</i> sp.	"	"	"	2. Harappa, Dist. Montgomery (W. Pakistan)	
	"	"	"	"	3. Rupa, Dist. Ambala, E. Punjab (India)	
	"	"	"	"	4. Lothal, Ahmadabad, Gujarat (India)	
	"	"	"	"	5. Brahmagiri, Dist. Chitradurga, Mysore State (India)	
	"	"	"	"	6. Jaugada, Dist. Ganjam, Orissa (India)	
2.	<i>Francolinus francolinus</i> (Linn.)	The Black Partridge	"	"	1. Rupa, Dist. Ambala, E. Punjab (India)	
III.—REP—						
1.	<i>Varanus</i> sp.	Monitor Lizard	Squamata	Varanidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)	
2.	<i>Varanus griseus</i> (Daudin)	The Desert Monitor	"	"	1. Rupa, Dist. Ambala, E. Punjab (India)	
3.	<i>Gavialis gangeticus</i> (Gmelin)	"The Gharial" Fish eating crocodile	Loricata	Crocodylidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)	
			"	"	2. Harappa, Dist. Montgomery (W. Pakistan)	
4.	<i>Crocodylus palustris</i> Lesson	The Muggar or Great Indian Crocodile	Crocodylia	"	1. Nagda, Chambal Valley, Madhya Pradesh (India)	
5.	<i>Geoclemys hamil</i>	The fresh water	Chelonia	Emydidae	1. Harappa, Dist. Montgomery (W. Pakistan)	

from prehistoric sites in India and West Pakistan up to the see Table 3)—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
AVES				
Harappan	2500—1500 B.C.	Sewell and Guha (1931)	Humerus, femur, skull and tarsometatarsus	Archaeological Survey of India
"	"	Prashad (1936); Nath (1962)	Humerus and femur	"
"	2500—900 B.C.	Nath (in press)	Right humerus complete left ulna and incomplete left radius	"
"	2000—1200 B.C.	Nath (unpublished)	Limb bones	"
Stone Age, and megalithic (Andhra)	1000—200 A.D.	Nath (1967)	Tarsometatarsus fragments	"
Iron Age	400 B.C. to 200 A.D.	Nath (unpublished)	Right metatarsus	"
Harappan	2500—900 B.C.	Nath (in press)	Left tarsometatarsus	"
TILIA				
Harappan	2500—1500 B.C.	Sewell and Guha (1931)	A caudal vertebra	Archaeological Survey of India
"	2500—900 B.C.	Nath (in press)	Skull fragments, mandible fragments and vertebrae	"
"	2500—1500 B.C.	Sewell and Guha (1931)	Skull vertebrae and tooth	"
"	"	Prashad (1936); Nath (1962)	Scute	"
Chalcolithic	1500—200 B.C.	Nath (in press)	A fragmentary piece of lower jaw	"
Harappan	500—1500 B.C.	Prashad (1936); Nath (1962)	Parts of plastron	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of Species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
6.	<i>Kachuga Gray tectum</i> forma typica.	The fresh water Tortoise	Chelonia	Emydidae	1. Harappa, Dist. Montgomery (W. Pakistan)
	<i>Trionyx gangeticus</i> Cuv.	The fresh water Turtle	"	Trionychidae	1. "
	"	"	"	"	2. "
	"	"	"	"	3. Rugar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	4. Nagda, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	5. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	6. Jaugada, Dist. Ganjam, Orissa (India)
6.	<i>Trionyx</i>	"	"	"	1. Nasik, Dist. Maharashtra (India)
9.	<i>Chitra indica</i> (Gray).	The Soft shelled River Turtle	Chelonia	Trionychidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery (W. Pakistan)
	"	"	"	"	3. Rugar, Dist. Ambala, E. Punjab (India)
	"	"	"	"	4. Rangpur, Gujarat (India)
	"	"	"	"	5. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	6. Hastinapura, Dist. Meerut, Uttar Pradesh (India)

from prehistoric sites in India and West Pakistan up to the see Table 3).—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

	where found		Reference	Kind of remains found	Excavated by
	Culture	Age			
	7	8	9	10	11
Harappan		2500—1500 B.C.	Prashad (1936); Nath (1962)	Fragments of car- pace and plastron	Archaeological Survey of India
"	"	"	"	Remains of femur and Hypo and xiphiplastron	"
"	"	"	"	Remains of Xiph and hypoplastron	"
"		2500—900 B.C.	Nath (in press)	Fragments of plas- tron	"
Chalcolithic		1500—200 B.C.	"	"	"
Northern Black Polished ware; and greyware cultures		1100 B.C. to 3rd century A.D.	Nath (1955)	Fragments of hypo- plastron	"
Iron Age		400 B.C. to 200 A.D.	Nath (Unpublished)	Fragments of plas- tron	"
Chalcolithic		1500—500 B.C.	George (1955)	"	Dept. of Archaeo- logy and Ancien History, Decca College, Poona
Harappan		2500—1500 B.C.	Sewell and Guha (1931)	Ribs and parts of hypoplastron	Archaeological Sur- vey of India.
"	"	"	Prashad (1936); Nath (1962)	"	"
"		2500—900 B.C.	Nath (in press)	Fragments of carapace	"
"		2000—800 B.C.	"	Fragments of Epi- plastron	"
"		2000—1200 B.C.	Nath (Unpublished)	"	"
Northern Black Polished ware; and greyware cultures		1100 B.C. to 3rd century A.D.	Nath (1955)	Fragments of hypo- plastron and car- pace	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
9.— <i>contd.</i>					
	<i>Chitra indica</i> (Gray)	The Soft shelled River Turtle	Chelonia	Trionychidae	7. Nagda, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	8. Nevasa, Dist. Ahmadnagar, Maharashtra (India)
10.	<i>Elsemyis punctata</i> (Bonnaterre)	Pond Turtle	Chelonia	Trionychidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery (W. Pakistan)
	"	"	"	"	3. Nagda, Chambal Valley, Madhya Pradesh (India)
	"	"	"	"	4. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
	"	"	"	"	5. Jaugada, Dist. Ganjam, Orissa (India)
11.	<i>Testudo elegans</i> Schreppf	The common Land tortoise	"	Testudinidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery (W. Pakistan)
12.	<i>Batagur buska</i> (Gray)	A River turtle	Chelonia	Testudinidae	1. Mohenjodaro, Dist. Larkana, (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Montgomery, (W. Pakistan)

IV—PI-

1. Teleostean fish	A bony River fish	Teleostei			1. Harappa, Dist. Montgomery (W. Pakistan)
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from prehistoric sites in India and West Pakistan up to the see Table 3).—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Chalcolithic	1500—200 B.C.	Nath (in press)	A fragment of hypoplastron	Archaeological Survey of India
"	1500—1000 B.C.	Eapen (1960)	Fragments of hypoplastron	Dept. of Archaeology and Ancient History, Deccan College, Poona
Harappan	2500—1500 B.C.	Sewell and Guha (1931)	Fragments of Xiphi and epiplastron	Archaeological Survey of India
"	"	Prashad (1936); Nath (1962)	Left epiplastron	"
Chalcolithic	1500—200 B.C.	"	Fragments of epiplastron	"
Northern Black Polished ware : and greywares.	1100 B.C. to 3rd century A.D.	Nath (1955)	Fragments of epiplastron	"
Iron Age	400 B.C. to 200 A.D	Nath (unpublished)	Fragments of left epiplastron and carapace	"
Harappan	2500—1500 B.C.	Sewell and Guha (1931)	Plastron and part of carapace	"
"	"	Prashad (1936); Nath (1962)	Fragments of carapace and plastron	"
Harappan	2500—1500 B.C.	Sewell and Guha (1931)	Part of plastron	"
"	"	Prashad (1936); Nath (1962)	Fragment of plastron	"
SCES				
Harappan	"	"	Vertebral and dorsal spine	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
1.—contd.					
	Teleostei fish	A bony River fish	Teleostei	—	2. Hastinapura, Dist. Meerut, Uttar Pradesh (India)
2.	<i>Rita ? rita</i> (Ham.-Buch.)	River fish	"	Bagridae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	<i>Rita rita</i> (Ham.-Buch.)	"	"	"	2. Harappa, Dist. Montgomery (W. Pakistan)
3.	<i>Waliago</i> sp.	"	"	Siluridae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
4.	<i>Arius</i> sp.	Estuarine fish	"	Ariidae	1. "
5.	Carp fish	"	"	"	1. "

V—MOL-

1.	<i>Lamellidens marginalis</i> Lamarck	The Fresh water mussel	Bivalvia	Unionidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	"	"	"	"	2. Harappa Dist. Montgomery (W. Pakistan)
	<i>Indoyata</i>	"	"	"	3. Nevasa, Dist. Ahmadnagar, Maharashtra (India)
	"	"	"	"	4. Nagda, Chambal Valley, Madhya Pradesh (India)
2.	<i>Inc'onania caerulea</i> Lea	"	"	"	1. Nevasa, Dist. Ahmadnagar, Maharashtra (India)
3.	<i>Potomid corrugata</i> Mullet	"	"	"	"

from prehistoric sites in India and West Pakistan up to the see Table 3).—contd.

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Northern Black Polished ware; and greyware cultures	1100 B.C. to 3rd century A.D.	Nath (1955)	One vertebra	Archaeological Survey of India
Harappan	2500—1500 B.C.	Sewell and Guha (1931)	Portions of pectoral spine and cubito humeral process	"
"	"	Prashad (1936); Nath (1962)	Dorsal spine and pectoral spine	"
"	"	Sewell and Guha (1931)	Portions of supra clavicle	"
"	2500—1500 B. C.	Sewell and Guha (1931)	Pectoral spine	"
"	"	"	Basioccipital bone	"
LUSCA				
Harappan	"	"	Several shells (including a pair)	"
"	"	Prashad (1936); Nath (1962)	Fragment of right and left valve and shells	"
Chalcolithic	1500 — 1000 B. C.	Ray (1960)	Shell fragments	Dept. of Archaeology and Ancient History, Deccan College, Poona
"	1500 — 200 B. C.	Nath (in press)	A shell fragment	Archaeological Survey of India
Chalcolithic	1500 — 1000 B. C.	Ray (1960)	Shell fragments	Dept. of Archaeology and Ancient History, Deccan College, Poona.
"	"	"	"	"

TABLE 2.—List of animal species whose remains have been found
end of 1962. (For historic sites;

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. N o.	Name of Species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
4.	<i>Parreyssia favidens</i> (Benson)	—	Bivalvia	Viviparidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	"	—	"	"	2. Harappa, Dist. Mont- gomery (W. Pakistan)
	"	—	"	"	3. Nagda, Chambal Valley, Madhya Pradesh (India)
5.	<i>Zooteceus insularis</i> (Ehrenberg)	—	Pulmonata	Achantinidae	1. Harappa, Dist. Mont- gomery (W. Pakistan)
6.	<i>Viviparus bengalensis</i> (Lamarck)	The banded pond snail	Gastropoda	Viviparidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	"	"	"	"	2. Harappa, Dist. Mont- gomery (W. Pakistan)
	"	"	"	"	3. Lothal, Dist. Ahmadabad Gujarat (India)
	"	"	"	"	4. Nevasa, Dist. Ahmad- nagar, Maharashtra (India)
	"	"	"	"	5. Maski, Dist. Raichur, Mysore (India)
7.	<i>Cypraea arabica</i> Linn.	Marine gastropod	Gastropoda	Cypraeidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	— <i>Arabica arabica</i> (Linn.)				
8.	<i>Cypraea ocellata</i> Linn.	"	"	"	1. "
	— <i>Erosaria ocellata</i> (Linn.)				

from prehistoric sites in India and West Pakistan up to the see Table 3).—contd.

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Harappan	2500 —1500 B. C.	Sewell & Guha (1931)	Valves	Archaeological Survey of India
"	"	Prashad (1936) ; Nath (1962)	Right valve	"
Chalcolithic	1500 —200 B. C.	Nath (in press)	One valve (eroded)	"
Harappan	2500 —1500 B. C.	Prashad (1936) ; Nath (1962)	Fragment of a shell	"
"	"	Sewell & Guha (1931)	"	"
"	"	Prashad (1936) ; Nath (1962)	Shells	"
"	2000 —1200 B.C.	Nath (unpublished)	"	"
Chalcolithic	1500 —1000 B. C.	Ray (1960)	"	Dept. of Archaeology and Ancient History, Deccan College, Poona
"	1000 B. C. to 1st century A. D.	Nath (1959)	"	Archaeological Survey of India
Harappan	2500 —1500 B. C.	Sewell & Guha (1931)	A shell (bored presumably for ornamentation)	Archaeological Survey of India
"	"	"	A single shell	"

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation Name, State, Country
	Scientific	Common			
1	2	3	4	5	6
9.	<i>Monetaria monata</i> (Linn.)	—	Gastropoda	Cypræidae	1. Nevasa, Dist. Ahmadnagar, Maharashtra (India)
10.	<i>Monetaria (ornamentaria) annulus</i> Schilder and Schilder	—	"	"	1. "
11.	<i>Gratirodusta pallida</i> (Gray)	—	"	"	1. "
12.	<i>Engina mendicaria</i> Linn.	—	"	Buccinidae	1. "
13.	<i>Cantharus spiralis</i> Gray	—	"	"	1. "
14.	<i>Eburna spirata</i> Lamarck — <i>Babylonia spirata</i> (Linn.)	—	"	"	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
15.	<i>Nerita (Theliostyla) chamaeleon</i> Linn.	—	"	Neritidae	1. Nevasa, Dist. Ahmadnagar, Maharashtra, (India)
16.	<i>Nerita (Dostia) crepidularia</i> Lamarck	—	"	"	1. "
17.	<i>Olivancillaria (Agaronia) nebulosa</i> Lamarck	—	"	Olividae	1. "
18.	<i>Olivancillaria subulata</i> (Lamk.)	—	"	"	1. Lothal, Dist. Ahmadabad, Gujarat, (India)
19.	<i>Xesto semiruga</i> Beck	—	"	Ariophantidae	1. Nevasa, Dist. Ahmadnagar, Maharashtra (India)

from prehistoric sites in India and West Pakistan up to the see Table 3).— contd.

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

Culture	where found		Reference	Kind of remains found	Excavated by
	Age				
7	8		9	10	11
Chalcolithic	1500 — 1000 B. C.		Ray (1960)	Shell remains	Dept. of Archaeology and Ancient History, Deccan College, Poona
"	"		"	"	"
"	"		"	"	"
"	"		"	"	"
"	"		"	"	"
Harappan	2500 — 1500 B. C.		Sewell & Guha (1931)	A single shell	Archaeological Survey of India
Chalcolithic	1500 — 1000 B. C.		Ray (1960)	Shells	Dept. of Archaeology and Ancient History, Deccan College, Poona
"	"		"	"	"
"	"		"	"	"
Harappan	2000 B. C. to 1200 B. C.		Nath (unpublished)	A shell	Archaeological Survey of India
Chalcolithic	1500 — 1000 B. C.		Ray (1960)	Shells	Dept. of Archaeology and Ancient History, Deccan College, Poona

TABLE 2.—List of animal species whose remains have been found end of 1962. (For historic sites,

I.—Mammalia.

II.—Aves.

III.—Reptilia.

Sl. No.	Name of species		Order	Family	Excavation
	Scientific	Common			Name, State, Country
1	2	3	4	5	6
20.	<i>Xancus pyriformis</i> Linn.	The chank shell	Gastropoda	Xancidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
	"	"	"	"	2. Lothal, Dist. Ahmadabad, Gujarat (India)
	"	"	"	"	3. Nevasa, Dist. Ahmadabad, Maharashtra (India)
	"	"	"	"	4. Ujjain, Chambal Valley, Madhya Pradesh (India)
21.	<i>Fasciolaria (Pleuroploca) trapezium</i> (Linn.)	Marine gastropod	"	Fasciolariidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
22.	<i>Indoplanorbis exustus</i> (Deshayes)	—	"	Planorbidae	1. "
23.	<i>Pila globosa</i> (Swainson)	The Land snail	"	Pilidae	1. Brahmagiri, Dist. Chitradurga, Mysore State (India)
24.	<i>Telescopium telescopium</i> (Linn.)	Marine gastropod shell	"	Potamididae	1. Lothal, Dist. Ahmadabad, Gujarat (India)
25.	<i>Conus (Rhizoconus) rattus</i> Brug.	" "	"	Conidae	1. "
26.	<i>Arca granosa</i> Linn.	Marine mollusc	Pelecypoda	Arcidae	1. Mohenjodaro, Dist. Larkana (W. Pakistan)
					VI—COELEN-
	<i>Favosites fabus</i> (Forsk.)	Coral	Madreporaria	Astraliidae	"

from prehistoric sites in India and West Pakistan up to the see Table 3).—*contd.*

IV.—Pisces.

V.—Mollusca.

VI.—Coelenterata.

Culture	where found		Reference	Kind of remains found	Excavated by
	Age				
7	8		9	10	11
Harappan	2500 — 1500 B. C.		Sewell & Guha (1931)	A single shell	Archaeological Survey of India
"	2000 — 1200 B. C.		Nath (unpublished)	Shell fragments	"
Chalcolithic	1500 — 1000 B. C.		Ray (1960)	Shells	Dept. of Archaeo- logy and Ancient History, De can College, Poona.
"	750 B. C.		Nath (unpublished)	"	Archaeological Survey of India
Harappan	2500—1500 B.C.		Sewell & Guha (1931)	Two shells	"
"	"		"	A single shell	"
Stone Age and megalithic (Andhra)	1000—200 A. D.		Nath (1967)	Shell remains	"
Harappan	2000—1200 B.C.		Nath (unpublished)	Shell fragments	"
"	"		"	"	"
"	2500—1500 B.C.		Sewell & Guha (1931)	A single shell	"
TERATA					
"	"		"	A single rounded colony	"

TABLE 3.—List of animal species whose remains have been

Sl. No.	Name of species		Order	Family	Excavation
	Scientific	Common			Name, State, Country
1	2	3	4	5	6
I.—Mammalia.					
II.—Aves.					
III.—Reptilia.					
I—MAM.					
1.	<i>Equus caballus</i> Linn.	The Horse	Perissodactyla	Equidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pra- desh
2.	<i>Equus asinus</i> Linn.	The Domestic Ass	"	"	1. "
3.	<i>Bos indicus</i> Linn.	The Zebu or Domestic humped cat- tle of India	Artiodactyla	Bovidae	1. Arikamedu, Pon- dicherry, Madras
	"	"	"	"	2. Nagarjunakonda, Dist. Guntur, Andhra Pradesh
	"	"	"	"	3. Sarnath, Dist. Varanasi, Uttar Pradesh
4.	<i>Bubalus bubalis</i> (Linn.)	Indian Domes- tic Buffalo	Artiodactyla	Bovidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pra- desh
	"	"	"	"	2. Sarnath, Dist. Varanasi, Uttar Pradesh
5.	<i>Boselaphus trago- camelus</i> Pall.	The Nilgai	"	"	1. Nagarjunakonda, Dist. Guntur, Andhra Pra- desh
6.	<i>Bos gaurus</i> Smith	The Indian Bison	Artiodactyla	"	1. "
7.	<i>Ovis vignei</i> Blyth	The Domestic sheep	"	"	1. "
	"	"	"	"	2. Sarnath, Dist. Varanasi, Uttar Pradesh
8.	<i>Capra hircus</i> <i>aegagrus</i> Erxl.	The Indian Domestic goat	"	"	1. Nagarjunakonda, Dist. Guntur, Andhra Pra- desh
	"	"	"	"	2. Sarnath, Dist. Varanasi, Uttar Pradesh.

found from historic sites in India. (For prehistoric sites, see Table 2.)

IV.—Pisces.

V.—Mollusca.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
MALIA				
Historic	a. 200 A. D. to 1200 A. D.	Nath (unpublished)	Appendicular, axial bones and skull	Archaeological Survey of India
"	"	"	Limb bones and teeth	"
"	20 A.D.—50 A.D.	Chatterji, B. K. and Bose, H. K. (1946)	Limb bones	"
"	Ca. 200 A. D. —1200 A. D.	Nath (unpublished)	Axial, appendicular } bones and skull parts	"
"	—1200 A. D.	Nath (1958)	Limb bones and teeth	"
"	Ca. 200 A. D. —1200 A. D.	Nath (unpublished)	Axial and appendicular bones teeth and skull parts	"
"	1200 A. D.	Nath (1958)	Limb bones & scapula	"
"	Ca. 200 A. D. —1200 A.D.	Nath (unpublished)	Teeth and jaw bones	"
"	Ca. 200—1200 A. D.	"	Limb bones	"
"	"	"	Limb bones & jaw lower jaw & teeth	"
"	1200 A. D.	Nath (1958)	Limb bones and lower jaw	"
"	Ca. 200—1200 A. D.	Nath (unpublished)	Limb bones teeth and mandible	"
"	1200 A.D.	Nath (1958)	Teeth and Lower Jaw	"

TABLE 3.—List of animal species whose remains have been

Sl. No.	Name of species		Order	Family	I.—Mammalia
	Scientific	Common			Excavation
1	2	3	4	5	6
					Name, State, Country
9.	<i>Axis axis</i> (Exrl.)	The Spotted Deer	Artiodactyla	Cervidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh
10.	<i>Cervus unicolor</i> Kerr.	The Sambhar	"	"	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh
11.	<i>Muntiacus muntjak</i> Zimm.	The Muntjak or The Barking Deer	"	"	1. "
12.	<i>Sus scrofa cristatus</i> Wagner	The Indian Boar	"	Suidae	1. Arikamedu, Pondicherry, Madras State
	"	"	"	"	2. Nagarjunakonda, Dist. Guntur, Andhra Pradesh
13.	<i>Elephas maximus</i> Linn.	The Indian Elephant	Proboscidea	Elephantidae	1. "
	"	"	"	"	2. Sarnath, Varanasi, Dist. Uttar Pradesh
14.	<i>Canis familiaris</i> Linn.	The Domestic Dog	Carnivora	Canidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh
15.	<i>Felis ochreata</i> Gmelin race <i>domestica</i> Brisson	The Domestic cat	"	Felidae	1. "
16.	<i>Rattus rattus</i> Linn.	The Common Indian Rat	Rodentia	Muridae	1. "
17.	<i>Bandicota bengalensis</i> Gray & Hardwicke	Lesser Bandicoot Rat ("Indian Mole Rat")	"	"	1. "
18.	<i>Bandicota indica</i> Bechstein	The Large Bandicoot Rat	"	Muridae	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh
19.	<i>Hystrix indica</i> Kerr	The Indian Crested Porcupine	"	Hystriidae	1. " "

found from historic sites in India. (For prehistoric sites, see Table 2.)—contd.

IV.—Pisces.

V.—Mollusca.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Historic	Ca. 200—1200 A. D.	Nath (unpublished)	Molar tooth	Archaeological Survey of India
"	Ca. 200—1200 A. D.	Nath (unpublished)	Limb bones	"
"	"	"	Molar tooth	"
"	20 A. D.—50 A. D.	Chatterji, B. K. & Bose, H. K. (1946)	Limb bones	"
"	Ca. 200—1200 A. D.	Nath (unpublished)	Limb bones, jaw and teeth	"
"	"	"	Limb bones, jaw and teeth	"
"	1200 A. D.	Nath (1958)	Upper molar tooth	"
"	Ca. 200—1200 A. D.	Nath (unpublished)	Limb bones	"
"	"	"	Fragment of humerus	"
"	"	"	Limb bones, vertebrae and ribs	"
"	"	"	Fragment of humerus	"
"	Ca. 200—1200 A. D.	Nath (unpublished)	Fragments of femur	"
"	"	"	Lower jaw	"

TABLE 3.—List of animal species whose remains have been

Sl. No.	Name of species		Order	Family	Excavation	
	Scientific	Common			Name, State, Country	
1	2	3	4	5	6	
I.—Mammalia.						
II.—Aves.						
III.—Reptilia.						
20.	<i>Lepus nigricollis</i> Cuv.	The Indian Hare	Lagomorpha	Leporidae	1. Nagarjunakonda, Dist. Guntur, An- dhra Pradesh	
21.	<i>Lepus sylvaticus</i> Geoffroy	The Common Indian Hare	"	"	1. Sarnath, Dist. Varanasi, Uttar Pradesh	
II.—						
1.	<i>Gallus</i> sp.	The Domestic fowl	Galliformes	Phasianidae	1. Arikamedu, Pon- dicherry, Mad- ras State	
	"	"	"	"	2. Nagarjunakonda, Dist. Guntur, Andhra Pra- desh	
III.—RE-						
1	<i>Varanus griseus</i> Daudin	The Desert Monitor	Squamata	Varanidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pra- desh	
2.	<i>Trionyx</i> sp.	"	Chelonia	Trionychidae	1. "	
3.	<i>Chitra indica</i> (Gray)	The Soft shelled River Turtle	"	"	"	
	"	"	"	"	2. Sarnath, Dist. Varanasi, Uttar Pradesh	
4.	<i>Lisemys punctata</i> (Bonn.)	Pond Turtle	"	"	1. Arikamedu, Pon- dicherry, Madras State	
	"	"	"	"	2. Sarnath, Dist. Varanasi, Uttar Pradesh	
5.	<i>Batagur baska</i> (Gray.)	River Turtle	"	Testudinidae	1. "	

found from historic sites in India (For prehistoric sites, see Table 2.)—contd.

IV.—Pisces.

V.—Mollusca.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
Historic	Ca. 200—1200 A. D.	Nath (unpublished)	Limb, bones, pelvic and pectoral bones	Archaeological Survey of India
..	1200 A. D.	Nath (1958)	Lower jaw with tooth	..]
AVES				
Historic	20 A. D.—50 A. D.	Chatterji, B. K. & Bose, H. K. (1946)	Limb bones	..
..	Ca. 200—1200 A. D.	Nath (unpublished)	..	..
PTILIA				
Historic	Ca. 200—1200 A. D.	Nath (unpublished)	Abdominal vertebra	..
..	..	..	Epiplastron	..
..	Ca. 200—1200 A. D.	..	Epiplastron & hypoplastron	..
..	1200 A. D.	Nath (1958)	Fragment of hypoplastron	..
..	20 A. D.—50 A. D.	Chatterji, B.K. & Bose, H.K. (1946)		..
..	1200 A. D.	Nath (1958)	Fragment of epiplastron	..
..	..	..	Fragment of plastron	..

TABLE 3.—List of animal species whose remains have been

Sl. No.	Name of species		Order	Family	Excavation	
	Scientific	Common			Name, State, Country	
1	2	3	4	5	6	
I.—Mammalia.						
II.—Aves.						
III.—Reptilia.						
IV.—PI.						
1.	<i>Teleostean fish</i>	River fish	Teleostei		1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh	
2.	<i>Rita rita</i> (Ham. & Buch.)	"		Bagridae	1. "	
V.—MOL.						
1.	<i>Parreysia favidens</i> (Benson)	A. Fresh-water Mussel	Bivalvia	Unionidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh	
2.	<i>Parreysia</i> sp.	"	"	"	1. Sarnath, Dist. Varanasi, Uttar Pradesh	
3.	<i>Viviparus bengalensis</i> Lamarck	The banded Pond Snail	Gastropoda	Viviparidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh	
4.	<i>Cypraea pallida</i> Gray	The Cowry	"	Cypraeidae	1. Sarnath, Dist. Varanasi, Uttar Pradesh	
5.	<i>Monetaria monata</i> (Linn.)	The Money Cowry	"	"	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh	
	"	"	"	"	2. Sarnath, Dist. Varanasi, Uttar Pradesh	
6.	<i>Xancus pyrum</i> Linn.	The Chank Shell	"	Xancidae	1. Nagarjunakonda, Dist. Guntur, Andhra Pradesh	
7.	<i>Fasciolaria (Pleuroploca) trapezium</i> Linn	Marine gastropod	"	"	1. "	
8.	<i>Xancus vava</i> (Lamk.)	Chank Shell	"	"	1. "	
9.	<i>Tonna maculata</i> (Lamk.)	Marine Shell	"	Tonnidae	1. "	
10.	<i>Arca granosa</i> Linn.	"	Bivalvia	Arcidae	1. "	
11.	<i>Meretrix meretrix</i> (Linn.)	"	"	Veneridae	1. "	

found from historic sites in India. (For prehistoric sites, see Table 2.)—concl'd.

IV.—Pisces.

V.—Mollusca.

where found		Reference	Kind of remains found	Excavated by
Culture	Age			
7	8	9	10	11
SCES				
Historic	Ca. 200—1200 A.D.	Nath (unpublish)	Abdominal vertebra	Archaeological Survey of India
"	"	"	Spine fragment	"
LUSCA				
"	Ca. 200—1200 A.D.	Nath (unpublished)	Fragments of valves	"
"	1200 A.D.	Nath (1958)	Fragment of a valve	"
"	Ca. 200—1200 A.D.	Nath (unpublished)	Shells	"
"	1200 A.D.	Nath (1958)	One Shell	"
"	Ca. 200—1200 A.D.	Nath (unpublished)	Shells	"
"	1200 A.D.	Nath (1958)	"	"
"	Ca. 200—1200 A.D.	Nath (unpublished)	"	"
"	"	"	"	"
"	Ca. 200—1200 A.D.	"	A Shell	"
"	"	"	"	"
"	"	"	"	"
"	"	"	"	"