

Animal Bones from the Tombs of the Bang Site Settlement, Ban Kao

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This material was excavated by the Thai-Danish Prehistoric Expedition 1960–62 at a settlement situated in Western Central Thailand on the river Kwae Noi. It is dated to the Neolithic by the archaeological material, and to 1800–1500 B.C. by the C-14 test.

Judging from the highly developed earthenware, agriculture and domestication were to be expected, and undoubtedly the settlement was inhabited for a long period. The animal bones however show that hunting was carried on extensively, but it is possible that domestic animals were kept too.

The animal bones from the burials are divisible into two groups: Remains of animals interred together with the human bodies, and remains which accidentally got into the burials from the surrounding deposits. Since the dead were buried in the ground without any kind of coffin or other separation from the surrounding layers it is often impossible to distinguish bones related to the interments and those from the surroundings.

In several burials however (Nos. 6–10–11–24–35 and Lue Site II (contemporary settlement in the neighbourhood) Nos. 1–2), parts of the manus and pedes of young pigs were found as well as large parts of the skull of a pig. These bones may be considered as burial gifts. The antler of an eastern Sambar, fragments of some tortoise shells from burial No. 10 and a tortoise shell from burial No. 17 must also be related to the interments, as also may the pig bones from burial No. 16. Concerning the rest of the remains it is most unlikely that they have any connexion with the interments.

The animal bones were lying in such close association with the human bones that it was often impossible in the field to distinguish those of animal origin. These were therefore separated from the material of the settlements and are treated in the present paper.

Unfortunately the Zoological Museum in Copenhagen possesses only very little recent osteological material from South East Asia. Moreover, the subfossil material from the settlement in question is fragmentary, particularly that of the burials. Thus in most cases only a determination to genera is possible. It is to be hoped that the examination of the settlement, from where there is an abundant and better prepared bone material, will give more information on the fauna concerned. The question of domestic or wild animals will be taken up together with this material too.

List of animals of the tombs:

Siluridae
Testudinidae
Varanus sp.

Lepus siamensis
Petaurista sp.
Ratufa bicolor phaeopepla
Canis familiaris
Sus sp.
 Bovinae
Muntiacus sp.
Cervus unicolor equinus
Cervus sp.
 Rhinocerotidae

List of bones in the burials of Ban Kao.

- Burial BK.I, B.1. Found at the left foot:
Sus sp. Fragment of mandibula with molar.
 Bovinae. Tibia, fragment of metapodial.
Muntiacus sp. Proximal end of metacarpus.
 Rhinocerotidae. 2nd phalanx of side toe.
- Burial BK.I, B.3. Bovinae. 2nd phalanx.
Sus sp. Spinal process of vertebra thoracalis.
- Burial BK.I, B.4. *Sus* sp. Incisor, canine, fragment of premolar.
Lepus siamensis. Distal end of humerus.
Siluridae. Fin ray.
- Burial BK.I, B.6. *Sus* sp. Found with left arm of human body: Bones of right foreleg: Radiale, intermedium, ulnare, carpale III, carpale IV–V, metacarpus II minus epiphysis, metacarpus III–IV, metacarpus V minus epiphysis, 1st phalanx, 2 × 2nd phalanx, 2 × 3rd phalanx, all from main toe; from side toe: 2 × 1st phalanx, 2nd phalanx, 3rd phalanx. Found at right shoulder of human body: Bones of left foreleg: Fragment of radiale, intermedium, carpale III, carpale IV–V, metacarpus II–III, metacarpus IV minus epiphysis, 2 × 1st phalanx, 2 × 2nd phalanx, 3rd phalanx, all from main toe; from side toe: 1st phalanx, 2nd phalanx.
 Found at the left foot of the human body: Bones of a left hind leg: Astragalus, calcaneus.
- Burial BK.I, B.7. Bovinae. Fragments.
Muntiacus sp. Fragment of premolar.
Sus sp. Fragment of incisor.
Varanus sp. Fragment of vertebra.
Pisces. Fragments.
- Burial BK.I, B.8. Bovinae. Astragalus, pisiforme, 2 ossae sesamoides, head and other fragments of costae, 3 adjoining fragments of humerus, dog-gnawed distal articulation of humerus, fragment of metatarsus.

as a rug or the like the bones may be retained. The placing of these bones in tombs No. 6 og No. 1, where hind legs were found at the feet of the dead and the left foreleg at the right elbow, the right foreleg at the left elbow must be an indication of the validity of this theory.

The pig toes in tomb No. 10 lay at the head end beside some earthenware. The animal bones are of two individuals of different ages but both under two years old, judging from the fact that the distal epiphyses of the metapodials are not united with the diaphyses. The younger one was quite new-born and only parts of the right foreleg and the left hind leg are represented, while the other one, which is about one year old, is represented by the left foreleg and both hind legs.

If the above theory concerning the bones left in a skin is acceptable, it is natural to think that this group of bones which shows the same find picture, must originate from skin rugs too, perhap used as wrappings; any other explanation, as for example remains of burial gifts, seems unlikely.

In the schematic drawings (diagrams) of the pig toes the black sections show which bones were present in the finds. In those cases where the bones of more than one leg were found together there was no possibility of deciding the placing of the phalanges with certainty. The diagrams give the numerical sum of these bones and show only how large were the parts of the legs found, and not exactly which bones were found where.

Rhinoceros sp.

Burial BK.I, B.1. 2nd. phalanx.

Burial BK.I, B.17. Fragment of upper molar.

Of these big game animals two species live in Thailand: *Rhinoceros sondaicus* and *Rhinoceros sumatraensis*. In former days both had a much greater distribution and individual number than nowadays, when they are in danger of becoming extinct.

They may have been hunted in the neolithic period, since bone fragments are rather common in the material.

REFERENCES:

- DAHR, E., 1946. *Mammal remains. In Bylin-Althin, M. The Site of Thi-Thia-Ping. Bull. Mus. of far Eastern Antiquities.* 18.
- DUERST, J. U., 1926. *Vergleichende Untersuchungs-metoden am Skelet bei Säugern. Handbuch der biologischen Arbeitsmethoden.* Abt. VII, Heft 2. Berlin.
- ELLERMAN, J. R., 1940-41. *The Families and Genera of Living Rodents.* Vol. I-II. London.
- GYLDENSTOLPE, N., 1919. *A List of the Mammals at Present known to Inhabit Siam. J.N.H.S.S.* Vol. III. Bangkok.
- MOHR, E., 1960. *Wilde Schweine. Die neue Brehm-Bücherei.* Wittenberg.
- ROMER, A. S., 1956. *The Vertebrate Body. Sauners.* London.
- SUVATTI, C., 1950. *Fauna of Thailand.* Bangkok.
- SØRENSEN, P., 1963. *North-South Indications of a Pre-historic Migration into Thailand. East and West. New Series.* Vol. 14. Nos. 3-4. Rome.
- ZAHN, W., 1941. *Die Riesen-, Streifen-, und Spitznasenhörnschen der orientalischen Region. Z.f. Säugetierk.* 16.



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PART ONE: THE ARCHAEOLOGICAL MATERIAL FROM THE BURIALS

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