

Faunal remains from early houses in KHINGA

District of Mustang/Nepal

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Introduction

In the frame of an interdisciplinary historical project sponsored by the German Research Foundation (Deutsche Forschungsgemeinschaft) a series of animal bones excavated in the ruins of several old houses in KHINGA was analysed. The excavations were carried out by members of the KAVA/Germany under the direction of Dr. H. G. Hüttel in July and August 1991. Although the exact dating of the archaeological deposits is not yet known, it is assumed, on the basis of several archaeological records, that the houses in question were inhabited during the 12th and 15th century A. D.

8689 fragments of bone, of which 7065 could be identified to species or genus level (table 1) were counted.

Animal species represented in the material

Table 1 presents the total number of fragments per species without regarding stratigraphy. The faunal assemblage consists primarily of domesticated animals which amount 98.7 per cent of the total material. Evidence for hunting activities is very scarce, all the more, considering that some of the wild animals, e.g., mice and rats do not belong to the cultural context. They were either brought in dead by dogs and cats or were later intrusives. One must also reckon with regurgitated bones (by owls) which may be true, for example, for the bones of the pika, *Ochotona roylie*.

Domestic species present include sheep, *Ovis aries*, goat, *Capra hircus*, cattle, *Bos taurus*, yak-cattle-hybrids, *Bos taurus* X *Bos mutus grunies*, horse, *Equus caballus*, mule,

donkey, *Equus asinus*, pig, *Sus domesticus*, dog, *Canis familiaris*, cat, *Felis catus*, and chicken, *Gallus domesticus*. Most of the remainders of these species were accumulated through human intervention and can therefore be considered as kitchen refuse. For some exception of the equid remains and not regarding the bones of small animals mentioned above, all bones (including cattle!) show cut and chop marks. This and the fact that almost no bones are complete and along with the numerous unidentifiable bone splinters show clearly that the animals were slaughtered and their carcasses dismembered afterwards for the meat consumption. The majority of the material derives from sheep and goat (table 1). Thus small livestock appears to have had a major importance in the time of the houses existence. The same occurs today in the villages situated in the Dzong Khola valley. Goat bones made up more than double than sheep bones, but due to the high fragmentation, the great bulk of sheep/goat bones could not be identified to species level.

Another fairly impressive group of the sample is that of "large bovids". The smaller bones of this group can easily be recognized as belonging to cattle. Cattle was almost as small as the animals usually kept in the present villages of the valley. Today, the cows measure between 80 and 90 cm shoulder height. In the earlier times they might have grown up to 5 cm higher. The bigger bones of this "large bovid" group (table 1) seem to derive from yak-cattle-hybrids. There is no clear evidence for the presence of the yak in the assemblage (see below). Among equid bones those of domestic donkey could be separated by their smallness and relative slenderness. Horse bones are larger and heavier built. But, as mules, *Equus asinus male* X *Equus caballus female*, are as tall as horses. it is difficult to differentiate between

postcranial skeletal remains of horse and mule, especially when dealing with broken settlement refuse.

Of special interest are the bone finds of pig. At present no evidence for pig keeping could be stated in the villages of the Muktinath valley. In Nepal it is restricted to the lower cast of Newar and Hindu (Epstein 1977, 81). We saw pigs "grazing" at the border of the Kali Gandaki near Jomsom. The animals, an ameliorated European breed were searching for plants, roots and larvas of insects in the sand. They are kept for the stationed military troops in Jomsom. The presence of pig bones in the deposits of the early houses in Khinga clearly demonstrates that pig keeping is possible to an altitude of 3500m above sea level or even higher.

Chicken played an subordinate role in the economic life of the farmers as they do today. The cold climate does not allow permanent and regular breeding of eggs. Therefore, most of the chicken which live in the modern villages have been introduced from lower parts of the country. May be that this was done already in earlier times.

Dogs were abundant over cats (table 1). This fits best on observations of today. People do not like cats very much because they are regarded as rivals to human food (e.g. milk), whereas dogs, besides their use as shepherd and watching dogs, play an important role as scavengers of human food residues in the households and therefore are kept in great numbers.

As already mentioned the hunting of big game was of minor importance. The only species which contributes with a fairly great number to the faunal assemblage is the Blue sheep, *Pseudois nayaur* (table 1), a sheep-sized wild ruminant which populates already in our days over the high slopes of the mountains up to the snow border. The horns

of the animals are, like the horns of yak and dzos, appreciated by the people as apotropaic symbols and for this purpose put on the roofs of the houses (fig. 1). From the musk deer, *Moschus moschiferus*, the only small deer which can live in rather high altitudes only three postcranial bone fragments could have been identified.

The preservation state of these bones demonstrate that the meat was eaten, whereas the bobak, *Mannota bobak*, is only represented by one incisor of the lower jaw. This beautiful sable formed teeth with its russet coloured front side could have served as jewellery and do not necessarily come from an animal killed in the vicinity of the village. Today hunting is forbidden.

The importance of domestic animals as meat suppliers

Bone weight counts of the domestic stock are given in table 2. As bone weight correlates directly to body weight the percentages of the bone weights reflect the value of each animal group in the human diet. More than 50 p.c. of the meat consumed derived from large bovids - cattle and yak-cattle-hybrids. The plentiful small ruminants (table 1) provided only less than 40 p.c. of the animal protein (table 2). Equids - horse, mule and donkey - and pigs can be considered a small but welcome addition to the diet. Game animals contributed only very occasionally.

The role of the yak

As already said there is no clear proof for the presence of yak bones in the faunal material. Admittedly yak, cattle and their hybrids have a similar osteology. But there are some skeletal parts in the yak, e.g., the foot bones, that distinguish well in size and shape

from those of cattle and hybrids. On the other hand the quantity of the bovid material from the houses in Khinga is big enough that one would expect some of the characteristic yak bones if the species were present. It is certainly not logical to deduce from this, that the keeping of yaks was still unknown to the people of the Muktinath valley during early medieval times. A possible reason for the total lacking of yak bones in the faunal material can be found in the special slaughtering and dissection techniques which are already practiced today. At present, the procedure of slaughtering involves the following steps : first, the animal is thrown down and put on its back (fig 2). The butcher is then sitting besides the animal's head and sticking a long knife into the arch of the aorta or the left ventricle of the heart from the front side of the chest. The yak, which was not dazed by a blow on the head before, dies very slowly as blood enters into the thoracic cavity. About 15 to 20 minutes later, a man pours water from a small vessel into the yak's mouth (and occasionally into the ears) (fig. 3). This serves as a symbolic act which is supposed to close all openings of the body in order that the soul of the animal can leave the body through the head. The body is then dissected. After having opened the chest, the men involved with the butchering will drink some blood and eat a bit of the meat, because in the imagination of these people, this will give them strongness and will help to withstand diseases. This butchering ritual reflects reminiscences of very old sacred practices in slaughtering animals (von den Driesch 1992).

All parts of the carcass are divided equally amongst the families who have bought the animal. Even the bones are distributed. They are smashed in small pieces and boiled and then given to the dogs. At the end, nothing remains from the former skeleton,

except the horncores and the teeth. During my many stays in the Muktinath valley I was not able to find a single bone left from a slaughtered yak. This is in sharp contrast to the regularly slaughtering of these animals in the villages. To sum up: a specific cultural behaviour towards a domestic animal can cause its complete disappearance, creating a biased situation on account of which its bones do not enter in any archaeological deposits. If this behaviour was already known in earlier times, the lacking of bone finds of the yak can be explained in this way.

Conclusions

The food debris of the early houses in Khinga reflect similarities and differences in animal keeping and meat consumption in past and modern days. In contrast to the present situation, cattle and cattle hybrids were slaughtered and their meat consumed by the people in the past. The same is true for pigs. The percentages of bone finds from the other livestock such as horse, mule, donkey, sheep, goat, dog, cat and chicken fits neatly into the patterns of modern times except from meat of equids. The role of yak as meat supplier in earlier times is doubtful, because no yak remains have been identified. The absence of yak bones in the archaeological material can be related back to special butchering techniques described above.

References

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List of Figures:

Fig. 1 Skulls and skull caps of Blue sheep on a podest on a house's roof in Samar.

Fig. 2 Slaughtering of a yak in Jharkot. The butcher sticks a long knife into the heart from the front side of the chest.

Fig. 3 A person is going to pour water from a small vessel into the yak's mouth.

Table 1. Distribution of bones by species from the early houses in Khinga/Muktinath-Valley (Excavation July/August 1991)

Domestic:	no.	p.c.
Sheep, <i>Ovis aries</i>	179	
Sheep/Goat	4.489	71.8
Goat, <i>Capra hircus</i>	403	
Cattle, <i>Bos taurus</i>	367	24.1
Yak-cattle-hybrid	1.336	
Donkey, <i>Equus asinus</i>	44	1.1
Horse, <i>Equus caballus</i> , and mule	34	
Pig, <i>Sus domesticus</i>	79	1.1
Dog, <i>Canis familiaris</i>	23	0.3
Cat, <i>Felis catus</i>	2	
Chicken, <i>Gallus gallus domesticus</i>	18	0.25
Sum domestic	6.974	98.7
Wild:		
Blue sheep, <i>Pseudois nayaur</i>	12	
Musk deer,		

<i>Moschus moschiferus</i>	3	
Bobak, <i>Mannota bobak</i>	1	
Rat, <i>Rattus sp.</i>	34	
Tree mouse, <i>Apodemus flavicollis</i>	10	
Wooly hare, <i>Lepus oiostolus</i>	6	
Pika, <i>Ochotona roylei</i>	10	
Unidentified rodents	3	
Himalayan vulture, <i>Gyps himalayensis</i>	1	
Rock pigeon, <i>Columba rupestris</i>	4	
Chough, <i>Pyrrhocorax pyrrhocorax</i>	3	
Mountain sparrow, <i>Passer montanus</i>	2	
Snow trout, <i>Schizothorax sp.</i>	<u>2</u>	
Sum wild	91	1.3
Total of identified bones	7.065	100
Unidentified mammal bones	1.624	18.7

Table 2 Bone weights (in grams) of species which were the most important suppliers

Domestic	no.	p.c.
Sheep and goat	27.026	37.6
Large bovids	39.882	55.5
Equids	3.877	5.4
Pig	<u>890</u>	<u>1.2</u>
Sum	71.675	99.7
Hunted game		
Blue sheep	172	
Musk deer	30	0.3
Hares and pikas	<u>12</u>	
Sum	214	0.3
Total	71.889	100