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The faunal spectrum of the Middle Palaeolithic in Bir Tarfawi, Western Desert of Egypt

The Combined Prehistoric Expedition explored lacustrine deposits and associated Middle Palaeolithic sites around Bir Sahara and Bir Tarfawi in the Western Desert in 1973 - 74 and 1985 - 87. The results of the first campaign concern both Bir Sahara and Bir Tarfawi and have been published by Wendorf and Schild (1980). Various investigators are still analyzing the finds of the second campaign which focussed on Bir Tarfawi, but some general reports are already available (Wendorf *et al.* 1990; 1991; Wendorf *et al.*, this volume; Close, this volume). The lacustrine deposits are thought to represent several humid phases during the Penultimate Glaciation and the Last Interglacial. The absolute dates, based on variety of new techniques, suggest a duration of lacustrine phases from about 160,000 to about 70,000 years ago. It would seem that the lakes were primarily fed by groundwater but the increase in available moisture resulted apparently from northward shifts of the monsoonal belt.

The first campaign yielded but a restricted faunal spectrum (Gautier 1980), but the new fossil harvest at Bir Tarfawi, both palaeontological and archaeozoological, has provided a vertebrate fauna which is impressive, especially when compared with the very restricted animal spectrum now found near Bir Tarfawi (some lizards, snakes, a few birds, gerbil and fox; see Kowalski 1988). Seven sites yielded evidence of animal life in the form of bone and tooth remains, but only the excavation of the thick deposits in site BT14 (Close, this volume) yielded a rich and diversified faunal assemblage. The palaeontological date result mainly from the watersieving of some two cubic meters of the peaty littoral deposits of the so called Grey Lake 2, near site BT14. This fauna of small vertebrates includes fish, amphibians, reptiles, birds and micromammals, of which remains occur also sporadically in some of the archaeological sites.

A general preliminary tabulation (Table 1) summarizes the results of the faunal analyses up to beginning of 1988, together with some comments and refe-

rences. In this table, the animals that have little to do, in a directly way, with Middle Palaeolithic man's presence near the Bir Tarfawi lakes have been listed with a capital I, *i.e.* intrusive. As we have explained elsewhere, animal remains found in connection with archaeological sites can be divided into several taphonomic groups (Gautier 1987). A basic division separates non-intrusives and intrusives. Non-intrusives are animal remains present in a site because of some intentional human activity directly connected with these remains. Intrusives are

Table 1

General spectrum of the vertebrates collected in the Middle Palaeolithic from Bir Tarfawi.

Freshwater fish, mainly catfish (<i>Clarias</i> sp.) and tilapia (<i>Tilapia</i>)*	I	-
Amphibians (frogs)**	I	-
Reptiles, including snakes, lizards**	I	-
Turtle (<i>Pelusios adansonii</i>)**	I	-
Crocodile (<i>Crocodylus niloticus</i>)**	I	-
Birds, including cormorant, herons and a small wader**	I	-
Insectivores**	I	-
Chiropteres (bats)**	I	-
Rodents, various small species**	I	-
Porcupine (<i>Hystrix cristata</i>)	-	RR
Cane rat (<i>Thryonomys swinderianus</i>)**	I	-
Jackal (<i>Canis aureus</i> and <i>C. adustus</i> ?)	-	RR
Hyaena (<i>Hyaena hyaena</i> and <i>Crocuta crocuta</i> ?)	-	RR
Equid (<i>Equus africanus</i> ?)	-	RR
Rhinoceros (<i>Ceratotherium simum</i> ?)	-	RR
Warthog (<i>Phacochoerus aethiopicus</i>)	-	RR
Wild camelid (<i>Camelus thomasi</i>)	-	RR
Giraffe (<i>Giraffa camelopardalis</i>)	-	R
Various medium and large antelopes	-	RR
Large bovid, probably buffalo (<i>Syncerus</i> / <i>Pelorovis</i>)***	-	RR
Small gazelle (<i>Gazella dorcas</i> and <i>G. rufifrons</i> ?)	-	FF
Dama gazelle (<i>Gazella dama</i>)	-	FF

Based on preliminary identifications.

I: intrusive with respect to the archaeological occurrences. RR, R, FF: (very) rare, very frequent, mostly as non-intrusives in the archaeological occurrences.

* Studied by Dr. W. van Neer.

** Studied by Dr. K. Kowalski and associates; see Kowalski (1987).

*** This buffalo should most likely be referred to *Syncerus caffer* or *Pelorovis antiquus*. In my view however these species may need to be combined.

derived from animals that arrived on (or near) an archaeological site by their own means; through the action of another animal, perhaps a predator; as a not intentional result of human behavior *etc.* In principle, they can be divided into what we have called reworked, penecontemporaneous and late intrusives. Geological intrusives are classical or archaeozoological fossils reworked in site deposits by various geological agents, such as fluvial erosion and transport, or pit digging hominids. Penecontemporaneous intrusives arrived in the site during the period of its occupation or shortly before or after such an occupation. Late intrusives ended their life in a site long after it was abandoned by people. The identification and separation of the various intrusives is generally based on

find context, the state of preservation of the remains, our knowledge of the fossil and archaeozoological record of the region under consideration, the life habits of the creatures involved, their possible cultural or economical value for people *etc.* In the Bir Tarfawi assemblage, we have little difficulty picking out the intrusives: they have generally not been found in direct association with artifact or sites. Moreover evidence for humid periods with diversified fauna other than the Middle Palaeolithic one are missing at Bir Tarfawi; our intrusives are therefore all penecontemporaneous.

The theoretical distinction between non-intrusives and intrusives poses no problem in later sites, but as we move back in the time, the concept of non-intrusives may need clarification. A band of hominids concentrating around a carcass left by predators, can "make" a site around the carcass. They did not bring the animal to their "site", but they moved, as it were, their "site" to the carcass. The presence of the latter is hence intentional from the viewpoint of our scavenging hominids. Also our definition of non-intrusives as animals, the presence of which in a site is determined by some intentional human behaviour dealing explicitly with them, does not specify anything about the relative movements of the non-intrusives with respect to the site or *vice versa*. The concept of non-intrusives can thus be applied even in the case of scavenging hominids, collecting around a carcass; the same applies for intrusives. Nevertheless, it is important that we should distinguish as separate taphonomic groups the non-intrusives resulting from scavenging and hunting.

Recently, it has become fashionable to deride the capabilities of people living during Middle Palaeolithic or MSA-times as big game hunters. The discussion was (re)kindled by the re-analysis by Binford (1984) of the faunal remains found in the Klasies River Mouth site in South Africa. Klein had reached, in our view, the quite acceptable conclusion that MSA-people practiced selective hunting near the site, concentrating on smaller and less dangerous animals, and the young of larger ones (see for example Klein 1975; 1976). Binford (1984) argues that people were hunting smaller animals and scavenging larger ones. In our opinion however, and despite the exercises in high power statistics published on the subject, little or no reliable evidence has yet been produced in favour of scavenging as an important activity of *Homo sapiens* in earlier Palaeolithic times. What is more, at the moment that we are writing this report, we have not yet found intrinsic data *i.e.* data connected with the faunal remains themselves, which may help to solve the problem. As can be seen in Table 1 the non-intrusive fauna is mainly composed of small gazelle and dama gazelle (FF and F!). All the other faunal elements are much less frequent (R and RR!). This situation can be interpreted in two ways. Middle Palaeolithic man at Bir Tarfawi may have been a hunter bagging mainly gazelles and including only now and then larger antelopes, buffalo, giraffe, camel, rhinoceros and equids in his hunters' bag. However, he may also have been a successful hunter but of gazelles and smaller creatures such as porcupine, occasionally scavenging on the carcasses of the bigger game already mentioned. In the latter case, the few finds of jackal and

hyena may be remnants of scavenging carnivores man had to kill when he stole the prey of these or other carnivores. However, we should also consider the possibility that the faunal assemblages contains some so-called background fauna *i.e.* remains of "natural" thanatocoenoses which were constituted at Bir Tarfawi in the course of time. What we know about Middle Palaeolithic and MSA-people makes the present writer believe that these archaic *Homo sapiens* were able to cope with large animals. Already *Homo erectus* may have killed primitive elephants with the use of the weapons available to him, stones and wooden spears (Adam 1951). Cooperative hunting of larger herbivores was practised by Middle Palaeolithic man, as for example in the site of Zwoleń located in Polish Central European plain, where apparently seasonal drives of horses were conducted for countless generations (Schild and Sulgostowska 1988; Gautier 1988). Several other archaeological observations suggest that these people and their African cousins had already acquired quite complex habits: the exploitation of various natural resources; burial and other rituals; use of pigment; long distance exchange of raw materials; mining (see Vermeersch, Paulissen this volume) *etc.* We have no doubt that they could go for large game but perhaps they did so only under special conditions, *i.e.* when specific hunting tactics could be applied. The foregoing does not exclude that they scavenged when the opportunity presented itself; on the contrary, it could be a proof of their flexibility.

As both as our non-intrusives and intrusives date from the same general period, they can be used to characterize the landscape in which Middle Palaeolithic man dwelt near Bir Tarfawi (and of course Bir Sahara). As explained elsewhere (Kowalski 1987), the small rodent fauna is Ethiopian. Moreover, it suggests that precipitation may have been reached about 500 mm during Middle Palaeolithic times. The non-intrusive and larger game animals are also basically African animals, which could perhaps do with less rain, since they are more mobile. There is no doubt however that the Middle Palaeolithic wet phases were more pronounced than the Holocene Neolithic ones at Nabta (Wendorf and Schild 1980) or at Bir Kiseiba (Wendorf, Schild and Close 1984), which were estimated to have received some 200 mm of rain. Indeed, during these latter phases very few herbivores larger than dama gazelle roamed the Western Desert (Gautier 1980; 1984). While the Neolithic landscape may have been something like a Sahelian steppe, that of the Middle Palaeolithic would have been a kind of dry savanna with more grazing, shrubs and trees. The changes in precipitation and landscape can generally be seen as northward shifts of climatic belts, with concomitant movements of African faunal elements; they corroborate the view that the climatic changes are essentially due to monsoonal shifts.

We hope that the detailed, quantitative analysis of the faunal changes throughout the sequence found in site BT14 may shed some light on the subsequent faunal communities at the disposal of Middle Palaeolithic people at Bir Tarfawi, and how exactly the latter made use of these.

References

- ADAM 1951. Der Waldelephant von Lehringen, eine Jagdbeute des diluvialen Menschen. *Quartär* 5: 79 - 82.
- BINFORD, L.R. 1984. *Faunal remains from Klasies River Mouth*. London: Academic Press.
- CLOSE, A.E. This volume. BT-14: a stratified Middle Palaeolithic site at Bir Tarfawi, Eastern Sahara.
- GAUTIER, A. 1980. Contributions to the archaeozoology of Egypt. In: F. Wendorf and R. Schild (eds.), *Prehistory of the Western Sahara*: 317 - 344. New York: Academic Press.
- 1987. Taphonomic groups: how and why? *Archaeozoologia* 1 (2): 45-52.
- 1988. Preliminary notes on the fauna of the Middle Palaeolithic site at Zwolęń (Poland). In: *L'Homme de Néandertal. Actes du Colloque International de Liège (4-7 décembre 1986)* 6: 69-73. *Etudes et Recherches Archéologiques de l'Université de Liège (ERAUL)* 33.
- KLEIN, R.G. 1975. Middle Stone Age man-animal relationships in Southern Africa: evidence from Die Kelders and Klasies River Mouth. *Science* 190: 265 - 267.
- 1976. The mammalian fauna of the Klasies River sites, Southern Cape Province, South Africa. *South African Archaeological Bulletin* 31: 75 - 98.
- KOWALSKI, K. 1987. Pleistocene rodents from the Nubian Desert in Egypt. *African Small Mammal Newsletter* 9: 16 - 17.
- 1988. The food of the sand fox *Vulpes rueppelli* Schinz, 1825 in the Egyptian Sahara. *Folia Biologica* 36 (1 - 2): 89 - 94.
- SCHILD, R. and Z. SULGOSTOWSKA. 1988. The Middle Palaeolithic of the North European Plain at Zwolęń: Preliminary results. In: M. Otte (ed.), *L'Homme de Néandertal. Actes du Colloque International de Liège (4 - 7 décembre 1986)* 8: 149 - 167. *Etudes et Recherches Archéologiques de l'Université de Liège (ERAUL)* 35.
- VERMEERSCH, P.M., E. PAULISSEN. This volume. Palaeolithic chert quarrying and mining in Egypt.
- WENDORF, F. This volume. Middle Palaeolithic occupations in the Eastern Sahara.
- WENDORF, F., A. CLOSE, R. SCHILD, A. GAUTIER, H.P. SCHWARCZ, G.H. MILLER, K. KOWALSKI, H. KRÖLIK, A. BLUSZCZ, D. ROBINS, R. GRÜN. 1990. Le dernier interglaciaire dans le Sahara oriental. *L'Anthropologie* 94 (2), 361 - 391.
- WENDORF, F., A. CLOSE, R. SCHILD, A. GAUTIER, H.P. SCHWARCZ, G.H. MILLER, K. KOWALSKI, H. KRÖLIK, A. BLUSZCZ, D. ROBINS, R. GRÜN and C. MCKINNEY. 1991. Chronology and stratigraphy of the Middle Palaeolithic at Bir Tarfawi, Egypt. In: J.D. Clark (ed.), *Cultural beginnings: approaches to understanding early hominid life-ways in the East African savannah*: 197 - 207. Bonn: Römisch-Germanisches Zentralmuseum Monographien 19.
- WENDORF, F. and R. SCHILD. 1980. *Prehistory of the Eastern Sahara*. New York: Academic Press.
- WENDORF, F., R. SCHILD, and A.E. CLOSE (eds.). 1984. *Cattle-keepers of the Eastern Sahara. The Neolithic of Bir Kiseiba*. Dallas: Southern Methodist University.