A LOWER PALAEOLITHIC SETTLEMENT SITE AT PRÉZLETICE AND THE FINDING OF A DWELLING STRUCTURE

ABSTRACT — The locality is situated about 29 km NE of Prague at the foot of a phyllite morroccock. The finds come from a rather complicated strata group: lacustrine marls are situated at the base, the upper parts are affected by glacial soil. The strata group mentioned is covered with a layer of chert debris with re-deposited soil of the brownish type. The locality has been investigated by a multidisciplinary research: Quaternary geology — F. Králík, V. Šírava, E. Bělský; paleontology — L. Smolík; palaeomagnetic dating — V. Buďa, J. Horváth; palaeobotany — V. Vodička; ostracods — A. Abodov; mollusca — J. Kovařík; fishes — N. Oberholzer; frogs — J. Níhace; turtles — O. Fejfar; birds — D. Jovancová; P. Šere; mammals — O. Fejfar; bats — J. Horváth. The locality occupied the broad inundation of the early Pleistocene river Elbe at a freshwater lake which, with certain intervals, existed in the first half of the Cromerian interglacial period. An oval foundation bank built of stone and earth (4 x 3 m) of a dwelling structure was discovered in the A 3 horizon. Archaeological finds were accumulated mainly around a small fireplace situated in front of the entrance to the dwelling.

KEY WORDS: Lower Palaeolithic — Pliocene — Stone industry — Dwelling structures — Fireplaces

The locality is situated in a exploited small quarry on the N edge of the village of Prèzletice, about 23 km E of Prague, on the left bank of the Elbe River, at an elevation of 244 m above sea-level, i.e. in a relative altitude of 77 m. The locality was discovered as early as 1934 by V. Šíravka as a palaeontological locality (Šíravka 1938) but modern palaeontological investigations were not conducted there until between nineteen fifties and early seventies. The first archaeological finds in this locality were made by J. Prolek after World War II. Archaeological investigations were conducted there only since 1967 (Fridrich 1972), first as part of the palaeontological ones and later as part of a complex research or as independent investigations. The locality has yielded numerous palaeontological, palaeoecological, geomorphological, potthographic and lithocultural evidence which not only enables the dating of the locality but also a detailed ecological characteristic of its natural environment (Šírava et al. 1979).

DATING OF THE LOCALITY

The dating of the locality is based on several viewpoints, including the geomorphological position of the fluviolimnic sedimentation, the palaeontological importance of small rodents, and palaeoecological development. The fluviolimnic sedimentation of the small basin containing the locality (base 244 m n.s.l., i.e. 77 m relative altitude) was connected, in its development, with the then bed of the Elbe River or with the marginal parts of the inundation area of the

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river (despite considerable independence of its development), whose accumulation base was 235 m a.s.l., i.e. 68 m relative altitude (Rožňáková 1979, Králík 1979). Morphologically it belongs to the Vltava river Pankráč accumulation (measured in Prague as well as at the confluence near Veltrusy, i.e. accumulation Ia, denoted as Gilín 1). Of stratigraphic importance are remainds of small rodents (especially of the genera Microtus, Pitymys, Plioniys, Minomys), insectivores (Desmana magna), rhinoceros (Dicerosculus etruscus) and a beaver-like rodent (Trogontherium schmerlingi), according to which the sequence was classified in the so-called Tepelnice phase, i.e., in Upper Pleistocene (Fejfar 1979). Palaeopedological dating is based on the presence of sediments of the Brannholm type directly overlying the fresh water marls as the final products of the same Quaternary period, which documents the dating of the locality from Lower Pleistocene (Smolíkova 1979). The absolute age is based on the paleomagnetic dating method according to which the locality was placed in the period 590 000—660 000 years ago (Bacha—Hnětěck 1979).

Since the formation of marls has been evidenced several times to have taken place at the beginning of the interglacial, one may summarize that the locality can be dated from the beginning of the Cromer interglacial (or some of its oscillations) in the period about 700 000 years ago.

SITUATION AND ECOLOGY OF THE LOCALITY

The open-air site is situated on the top and foot of a rather small phaniteite monadnock protruding from a wider inundation area of the then Elbe River. A combination of natural sciences data, confirming or supplementing one another, characterises in considerable detail the relation of arthropathines to their environment. The basic prevalent feature of the micro-environment of a Lower Palaeolithic settlement was a small and rather shallow water basin with a clayey bottom covered with vegetation. Seasonal floods connected it with the nearby nightly stream of the then Elbe River in the inundation of which it was situated. In the middle (or near the shore) of the pool there was a phaniteite cliff which apparently formed an inlet at high water levels; at low water levels, on the contrary, it was accessible on dry land. Trees were growing on the shore of the pool (and possibly even on the inlet). The water level in the pool varied considerably due to natural evaporation as well as seasonal floods. When the water level dropped by 1 m or more the clayey bottom emerged at the foot of the cliff and dried; this place was a favourite settlement of early man. The environment of the settlement was a herbaceous steppe dominated by wormwood, and with distant small pine groves (Kneblivá—Voľňáková 1979).

ARCHAEOLOGICAL FINDS

Archaeological finds are divided into four horizons, A 1 to A 4. The A 1 horizon (the uppermost one) contains Lower Palaeolithic artifacts in a chert debris on the surface of lacustrine marls. This horizon represents the peak of the interglacial (evidenced by 77 artifacts). The A 2 horizon comes from the original glic cover, later heavily mixed by solifluxion (evidenced by a total of 46 artifacts). The A 3 horizon is the most completely documented archaeological horizon whose characteristics can be studied. It comes from the beginning of the interglacial and is deposited in lacustrine marls (it contained 358 artifacts). The A 4 horizon is the lowermost archaeological layer separated from A 3 by a thick sterile layer of marl (0.5 m), the investigations of which are still prospective (so far the horizon has yielded 147 artifacts).

The A 3 horizon contained 358 stone artifacts, i.e. 57.19 per cent of all artifacts found in the locality. Furthermore, the western part of the locality yielded a total of 981 fragments of animal bones. The investigations involved a total of 29 sectors (2 x 2 m in dimensions), i.e., about 110 m²; the total area uncovered was about 140 m². The habitation was situated among mighty blocks of phaniteite, around 5 m high, which closed it in the north, east and west. It was open towards the south and not far (about 10 m away) was the shore of a freshwater lake. The basic structure are the remains of a dwelling object, oval in ground plan, approximately 4 x 3 m in outer and 3 x 1.5—2 m in inner dimensions. The dwelling object was founded on level ground and was not sunk into it. Its circumference was formed by a rather mighty bank composed of phaniteite, clay, and animal bones. The minimum height of the bank was 30 cm and its average breadth at base was about 60 cm. The oval apparently opened towards the north-west by a rather narrow entrance. In the north of it, not quite 1 m away, there was a small fireplace (about 35 cm in diameter), again placed on bare ground, not sunk into it and probably without any further adaptations. The object was secondarily damaged on the south-eastern side where part of the loamy and stony bank was removed (by solifluxion?). Situated on the outer and inner slopes of the bank and essentially delimiting it were fragments of large bones (probably of an elephant). About three metres to the north of the object there was a vertical or slightly overhanging face of the phaniteite block, several (about 5) metres high. The fireplace was thus situated between the object and the rock face.

One may assume that the settlement was renewed several times after floods of a probably seasonal character. The A 3 horizon may have been inhabited only at low water levels in the lake. The seasonal character of the settlement might perhaps be proved by an analysis of the faunal remains. One may assume that it can be conditioned by spring floods.

The distribution of archaeological finds in the A 3 horizon was very interesting. As to the stone artifacts which were mostly of local phaniteite, we may see that the interior of the dwelling structure was free of any finds. Few animal bones were found inside the object. The stone artifacts were in a more or less continuous belt, with greatest accumulation in sector VII with the fireplace. The finds of animal bones show a similar accumulation. Another rather marked accumulation of stone artifacts was found about 3 m to the west and 5—6 m to the north-east of the object.
We may see that the amount of artifacts decreased rapidly down to zero in the south direction. Except for sector VII, the accumulation of stone tools often did not coincide with that of bone fragments; rather the neighbouring sectors were involved. The mean density of artifacts was 4.35 specimens/m², i.e. 17.4 specimens per sector. The highest density was in sector VII, 24.5 specimens/m², which is 5.6 times more than the mean.

Analysis of the frequency of bone fragments of the different animal species in the A B horizon is worth noting too. I am intentionally considering their numbers, regardless of the possible testing of the number of individuals. Most marked was the occurrence of Elephas sp. (Mammuthus trogontherii) — 261 fragments. On the other hand the rhinoceros was very infrequent; Dicerorhinus erucens — 1 specimen, Rhino- corus sp. — 1 specimen. The representation of horses was not very marked (Equus caballus moesbachensis, Equus hemionus — 8 specimens) — 21 specimens. Bovids (Bison schoecensaei) were represented similarly — 24 specimens. Much more abundant were birds — 68 specimens, and fishes (Tinca tinca, Esox lucius) — 75 specimens. The representation of woodland animals was also very low (Ursus sp. — 3 specimens, Cerbus elaphus — 2 specimens, Cervus sp. — 9 specimens, Capreolus — 6 specimens) — 20 specimens. The representation of small animals was also surprisingly low (Anura — 7 specimens, Desmana — 2 specimens, Mimomys — 18 specimens, Pitymys — 1 specimen). I am grateful to O. Pajfar for these identifications.

The present consideration is based on the assumption that so many species, in such a small area can only be the result of man’s activities (especially his hunting activity). Hence we assume that Homo erectus who, beyond doubt, inhabited this place, was essentially a perfect hunter capable of capturing practically all animals which lived in his period and which were suitable as a quarry.

In conclusion, I wish to underline that I have mentioned some of the investigation results in order to present, for non archaeologists a picture of the Lower Palaeolithic habitation at Předmostí. A detailed explanation of other results and problems of archaeological investigations will be presented in other papers which are under preparation. I also wish to emphasize the collective character of collaboration, as nearly 20 experts in various fields have participated in the research. As regards a general evaluation of the dwelling place at Předmostí, our team collaborates with K. Šiklinský, of the National Museum in Prague, whose paper can be considered a part of the present topic.

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