

## **115. Fossil Mammals and Human Artefacts excavated near Harbin, Manchukuo.**

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In June, 1933, the authors unearthed numerous fossil remains of mammals in a tract of low land along the Wen Chuan Ho,<sup>1)</sup> 2 kilometers south-west of Harbin, Manchukuo.

The presence of fossils in the said district has been known through a brief report issued by Mr. T. H. Yin and some others.<sup>2)</sup>

Our excavation lasted for a fortnight and was carried out on a big scale, as many as one hundred and sixty labourers in the number of day's work being employed. While working we came across mammalian remains imbedded in a stratum of mud and fine sand, 2-3 meters thick and containing fresh water shells.

The number of teeth obtained in this excavation amounts to several hundreds; the chief ones are:

- Carnivora ..... *Felis, Canis, Hyaena.*
- Rodentia ..... *Microtus, Siphneus, Ochotonoides.*
- Ungulata..... *Rhinoceras tichorhinus* Cuv., *R. sp., Equus, Cervus, ? Rangifer tarandus* L., *Megaceros, Capreolus, Sus, Bison, Bubalus, Bos.*
- Proboscidea..... *Elephas* *cf. primigenius* Blum.

In addition to these, we discovered a number of other remains which are now under study.

Of particular interest is the unexpected discovery of several articles obviously used by ancient man in association with these mammalian remains; in this connection it must be expressly stated that there is absolutely no sign throughout the stratum from the lower part to the upper of its having been once disturbed by human hands. Moreover, a depth of one more meter still showed mud and sand only, with no pieces of hard rocks in it. The material cautiously dug out

1) 温泉河

2) T. H. Yin: Sur la découverte d'une Faune de Mammifères Quaternaire aux environs de Kharbine. (Bull. Geol. Soc. China, Vol. XI, No. 3, 1931). E. Licent and P. Teilhard de Chardin: Geological observations in northern Manchuria (Bull. Geol. Soc. China, Vol. IX, No. 1, 1930).

in a fortnight's labour was thoroughly examined using sieves and we obtained seven stone pieces of which five exhibit unmistakable signs of human hand-work, as can be seen from the accompanying figures 1-5 (in natural size). Of these figured specimens, 1 and 2 are of basalt, 3 and 4 of siliceous rocks and 5 of liparitic (?) rock. Furthermore, there is a piece of an antler notched by ancient man as is shown in figure 6 (half natural size), in addition to a large number of fragments of mammalian bones, which appear to have been crushed by human hands.

The age of the man who used the above mentioned stone implements and the antler is now thought to be the younger part of the Middle Pleistocene epoch, probably corresponding to the Mousterian of the European old stone age; the reasons for this correlation are as follows :

1. These stone implements were excavated from the same spot and stratum with the remains of mammoth, *Rhinoceros* and other animals.

2. The said implements were discovered in a spot previously quite untouched by anybody.

3. The stratum with these implements and mammalian remains is underlaid by mud and loose fine sand only, with no pieces of hard rocks.

4. The spot where the present excavation was undertaken is situated amid the vast plain bordering the Sungari river; outcrops of any hard rocks are not found within at least 60 kilometers distance.

