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Fascicle 3.

ON THE FOSSIL VERTEBRATE REMAINS FROM LOCALITIES 2, 7 AND 8 AT CHOUKOUTIEN

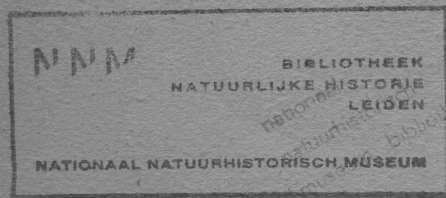
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WITH PLATE I AND TEXT-FIGURES 1-7.

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PART I: LOCALITY 2.

HISTORICAL AND GEOLOGICAL NOTES.

This locality represents one of the earliest discovered fossil sites in Choukoutien of which the rodent fauna has already been studied in 1927 (Young). In that paper I was able to distinguish seven forms of rodents, namely: *Tamias wimani*, *Cricetulus* cf. *songarus*, *Cric.* sp., *Mus plumbeus*, *Mus* sp., *Arvicola brandti* and *Lepus wongi*. The locality was there indicated as "No. 2, 1/2 li von Loc. 53".

While the excavations were being made at the *Sinanthropus* site (Zdansky's loc. 53 is equivalent to our Loc. 1), we had opportunity to make some additional collections from the place to the west of the latter site which we have designated as Loc. 2. The general appearance of this locality was reported on by Teilhard and by me in 1929 (Teilhard and Young) and I shall now give a general account of its palæontological contents. It involves not only some revisions of my early determinations but also the addition of some fossils not previously known from that region.

The bones were found in a kind of breccia, consisting of fragments of limestone cemented by red clays and sands. The matrix is especially hardened by lime-bearing water and stalagmites. The preservation of the fossils is consequently very fragmentary. Most of the materials are the limb-bones of Ungulata very badly broken and too poorly preserved for detailed study. The degree of fossilization is, on the contrary, very marked and the bones are yellowish-white in color. An isolated bone from this locality with its red matrix is sometimes hardly distinguishable in color and mineralization from fossils found in the true Hipparion beds of Northern China.

Order **UNGULATA**

Sub-Order **PERISSODACTYLA** Owen

Family **RHINOCEROTIDÆ**

Genus **RHINOCEROS** Gray

Rhinoceros sp.

The *Rhinoceros* is only indicated by a fragment of the humerus. Cat. C. L. G.

S. C. No. $\frac{C}{C. 304}$

PART II: LOCALITY 7.

GEOLOGICAL NOTES.

This locality was found by Mr. Pei in 1929. It lies about one kilometer S. of Locality 1, and close to the right side of the road from the railway station to Locality 6, Chikushan. The deposit is also found in a depression or fissure in the limestone, but more open and its surrounding parts have been almost entirely removed by quarrying. The sediments consist chiefly of red clay and sandy loam and differ from those of other localities in their more intensive red color and where unconsolidated in being very sticky, just like the *Hipparion* red clay of Shansi. The color of the sediments becomes lighter from below upwards, evidently as a result of the surface weathering. Up to the present, there is no indication of the presence of any deposit of gravel in this site and fragments of rocks are also very rare. The site may represent the rather open facies of the Choukoutien deposits, and may correspond to the lower part of Locality 1 (lower cave).

DESCRIPTION OF THE FOSSIL

Order **UNGULATA**

Sub-Order **PERISSODACTYLA** Owen

Family **RHINOCEROTIDÆ**

Rhinoceros sp.

Some molars and limb bones of *Rhinoceros* form a part of the fauna of Locality 7. Their fragmentary preservation does not, however, permit of making a specific determination, though probably they are referable to *R. sinensis*. Cat. C. L. G. S. C. No.

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GENERAL CONCLUSIONS

The faunal contents of the three localities above described in comparison with that of other known fossiliferous localities of Choukoutien may be summarized in the following table:

Fossils	Loc. 2	Loc. 7	Loc. 8	Loc. 1	Loc. 5 ⁽¹⁾	Loc. 6
<i>Erinaceus</i> indet.	+	-	-	+	-	-
<i>Chiroptera</i> indet.	+	-	-	+	-	-
<i>Meles</i> sp.	+	-	-	+	+	+
<i>Hyaena sinensis</i>	+	+	-	+	-	-
<i>Tamias wimani</i>	+	-	-	+	-	-
<i>Cricetinus varians</i>	+	-	-	+	+	-
<i>Cricetulus</i> sp.	+	-	-	+	+	-
<i>Apodemys sylvaticus</i>	+	-	-	+	?	-
<i>Mus</i> sp.	+	-	-	+	?	-
<i>Gerbillus</i> sp.	+	-	-	+	-	-
<i>Microtus brandti</i>	+	-	-	+	+	-
<i>Siphneus fontanieri</i>	+	-	-	+	-	-
<i>Lepus wongi</i>	+	-	-	+	-	-
<i>L. oiostulus</i>	-	-	-	?	-	+
<i>Ochotona</i> sp.	+	-	-	+	-	-
<i>Equus</i> sp.	-	-	+	+	-	-
<i>Rhinoceros</i> sp.	+	+	-	+	-	-
<i>Sus lydekkeri</i>	+	+	-	+	-	-
<i>Cervus (Pseudaxis)</i> sp.	+	-	-	?	-	-
<i>Pseudaxis grayi</i>	?	?	-	+	-	-
<i>Euryceros pachyosteus</i>	+	+	-	+	-	-
<i>Capreolus</i> sp.	+	-	-	+	-	-
<i>Bovidae</i> indet. a.	+	-	-	?	-	-
<i>Bovidae</i> indet. b.	-	+	-	+	-	-
<i>Macacus anderssoni</i>	+	-	-	+	-	-
<i>Aves</i> indet.	+	-	-	?	-	-
<i>Reptilia</i> indet.	+	-	-	+	-	-

In general, we may say that all the fossiliferous localities differs slightly one from the other, a condition which can be readily explained by differences in purely local environment. Such local variations by no means imply clear differences of a faunastical value.

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