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**MAMMALIAN REMAINS FROM LOCALITY 5
AT CHOUK'OUTIEN**

BY

W. C. PEH

CENOZOIC RESEARCH LABORATORY
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PALÆONTOLOGIA SINICA

Editors:

V. K. Ting and Y. C. Sun

Mammalian Remains from Locality 5
at Chouk'outien

BY

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With one plate and one text-figure



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MAMMALIAN REMAINS FROM LOCALITY 5 AT CHOUK'OUTIEN

BY W. C. PEI



INTRODUCTION

Within the Chouk'outien region there are several localities which bear Mammalia fossil bones. Only one of them has yielded the *Sinanthropus* material which is named Loc. 1¹. The Mammalia fossil bones accompanying the *Sinanthropus* remains are being studied by the staff of the Geological Survey including myself. From other fossiliferous localities no remains of *Sinanthropus* have yet been found. These localities are named by numbers according to the succession of their discovery or to some other fact. The Mammalia remains from Loc. 6, or Chikushan as it is called by the natives, were studied by Dr. C. C. Young and the result has already been published in Vol. VII of *Palaontologia Sinica*. The fossils from Loc. 2 and those from Locs. 3 and 4 are now being studied by Dr. C. C. Young and myself respectively and their works will be finished very soon. The present paper is the study on the rather poor and badly preserved materials from Loc. 5.

Loc. 2 and Loc. 6 were known as early as more than ten years ago by the study of Drs. J. G. Andersson and O. Zdansky. In the year 1927 Locs. 3 and 4 were discovered by Drs. C. Li and B. Bohlin who were in charge of the excavation work on the *Sinanthropus* site. In the year 1929, from Locs. 5, 7, and 8 a certain amount of fossil bones were collected by myself. The present paper is chiefly based upon the materials found in 1929 and a few in the succeeding year by myself.

The location of the several fossiliferous localities at Chouk'outien has been shown in the sketch map in Teilhard and Young's preliminary report² and it is unnecessary to repeat it here. In regards to the geology and the other descriptions of the fossiliferous deposits I also refer to the same paper.

(1) Teilhard de Chardin and Young, C. C. Preliminary Report on the Chouk'outien Fossiliferous Deposits. Bull. Geol. Soc. China, Vol. VIII, No. 3, pp. 173-204, 1930.

(2) Teilhard de Chardin and Young, C. C. *ibid.* p. 176, fig. 2.

Locality 5 is situated about 800 meters south of the *Sinanthropus* Locality or Loc. 1, a place west of a limestone quarry in operation named Ch'angshunyao.

The bone remains are found in a dyke-like deposit extending in a north-south direction, and penetrating in a very high limestone cliff. The length of the dyke-like deposit is not more than 20 meters while the width is only 2 meters. The height, left by the removal of the surrounding limestone by quarrying, is about 5 meters.

The fossiliferous sediments consist of fine stratified light-colored red clay, with more rarely sands, and occasionally with small rounded pebbles of various kinds of rocks. For the most part, these pebbles are greenish Jurassic sandstones. In character the deposit at this locality appears to be more like that of Chikushan, or Loc. 6, than that of layer 4, of Loc. 1.⁽¹⁾ The color of the upper part of the sediment is more blackish than that of the lower. Such a change of coloration may be due to weathering. Rain water may have carried decayed organic matter into the clay along cracks along which the blackish color was first formed.

The few fossils found at this locality are all in a bad state of preservation. Only eight forms, five specifically indeterminable, were obtained. These comprise *Insectivora*, *Carnivora* and *Rodentia* as follows:

INSECTIVORA

Talpida gen. et sp. indet.

Crocidura sp.

CARNIVORA

Meles leucurus Hodgson

Mustela (Putorius) sp.

RODENTIA

Cricetulus sp. Zdansky

Cricetinus varians Zdansky

Microtus cf. *brandti* Radde

Murina gen. et sp. indet. Zdansky

At last I desire to express my sincere thanks to Père Teilhard de Chardin and Dr. C. C. Young for their kind guidance and criticisms during my investigation work, to Drs. W. H. Wong and Davidson Black, the directors of the Geological Survey of China and the Cenozoic Laboratory of the Survey respectively for their allowances and help for my collection and study of these materials, and to Drs. A. W. Grabau and V. K. Ting for their guidance and corrections in my manuscript. I am also indebted to Mr. S. Y. Wang who drew the figures for publication and to Mr. S. T. Lee who took the photographs for the plate.

(1) Teilhard de Chardin and Young, C. C. *ibid.* pp. 179-183 and 185-186.

DESCRIPTION OF THE FOSSILS

Order **INSECTIVORA** CuvierFamily **TALPIDÆ** Gray**Talpidæ** gen. et sp. indet.

One right humerus indicates the presence of one of the *Talpidæ* at this locality. Its total length is, at least, 13.7 mm. and its maximum breadth of the upper articular surface and of the distal is 11.0 mm. and 8.7 mm. respectively. These dimensions show that our specimen is smaller than *Talpa europaea* Linn. and almost equal to *Scaptorchirus primitivus* Zdansky.⁽¹⁾

HORIZON AND LOCALITY. Lower Polycene beds of Loc. 5 at Chouk'outien.

Family **SORICIDÆ** GrayGenus **CROCIDURA** Wagler**Crocidura** sp.

Pl. 1, Figs. 1a and 1b.

One left lower jaw, whose premolars and the angular process are missing, represents the family *Soricidæ*. The incisor of our specimen has a noticeable denticle on its superior border and two longitudinal furrows, one on its inner side and the other on the superior. The non-articular region of the condyle between the two articular facets, is broad and short. The molars show no trace of red or brown stain and are of ordinary *Soricidæ* type. The size is smaller than in a *Crocidura* sp.⁽¹⁾ living in Manchuria, larger than in *Crocidura* sp. Zdansky⁽²⁾ from Loc. 1 of Chouk'outien, but is the same as in *Crocidura leucodan* Hermann, the European form. The dimensions are given in mm. as follows:

Length from condyle to the point of I.....	11.3
— of M ₃ —I	7.1
— of M ₃ —M ₁	3.8
Height of the doronid process.....	4.2
— of lower jaw bone below M ₂	1.6

(1) Cat. No. 338 in the osteological collection of the Cenozoic Laboratory of the Geological Survey.

(2) Zdansky, O. Die Säugetiere der Quartärfauna von Chouk'outien, Paläontologia Sinica, Ser. C. Vol. V, Fasc. 4, pp. 8-12, 1928.

Breadth of M ₁	1.1
— of M ₂	1.0
— of M ₃	0.6

Our specimen differs from other *Soricinæ* by the entirely white color of the teeth. More in detail, it differs from *Neomys* by the broad non-articular region of the condyle and by the absence of the lingual prolongation of the lower facet, and from *Sorex* by the presence of only one superior denticle on the incisor. In these characters, on the other hand, it agrees with *Crocidura*. According to Schlosser¹ and Zdansky² *Crocidura* should have no denticle on the incisor. But this does not hold, either for the Manchuria living *Crocidura*³ or for the *Crocidura attenuata* M.-Edwards.⁴

For the specific determination we need more complete collections of the fauna of Loc. 1 in which the fossil shrews are also present.

Our specimen seems to differ from *Crocidura* sp. Zdansky⁵ from Loc. 1 by the presence of the denticle on the incisor as well as by its smaller size.

HORIZON AND LOCALITY. Lower Pliocene beds of Loc. 5 at Chouk'outien.

Order **CARNIVORA** Gray

Family **MUSTELIDÆ** Swainson

Genus **MELES** Storr

Meles leucurus Hodgson

Pl. 1, Figs. 2 a-b.

- 1847 *Meles leucurus* Hodgson J. As. S. Beng. p. 763, pl. 29-31.
- 1925 *Meles leucurus* Zdansky O. Quartäre Carnivoren aus Nord-China. Palæ. Sinica, Ser. C, Vol. II, Fasc. 2, pp. 10-14, Pl. II, Figs. 1-6, 1925.
- 1930 *Meles leucurus* Young, C. C. On the Mammalia Remains from Chikushan, near Chouk'outien. Palæont. Sinica, Ser. C, Vol. VII, Fasc. 1, p. 14, Pl. 1, fig. 6, 1930.
-
1. Schlosser, Max. Tertiary Vertebrate from Mongolia, Palæont. Sinica, Ser. C, Vol. 1, Fasc. 1, p. 5, 1924.
2. Zdansky, O. *Ibid.* p. 17.
3. Cat. No. 338. in the osteological collection of the Cenozoic Laboratory.
4. Milne-Edwards, M. H. Recherches des Mammifères. Tome 11, Pl. 38, fig. 42a.
5. Zdansky, O. Die Säugetiere der Quartär-fauna von Chouk'outien. Palæont. Sinica, Ser. C, Vol. v. Fasc. 4, pp. 16-21 and Pl. 1, Figs. 14-23, 1928.

One left upper molar and one incomplete skull, with the left maxilla missing, the base damaged, and the anterior portion slightly distorted, represent the genus *Meles*. With the help of a perfect specimen from Loc. 3 the chief characters recognizable on the skull are as follows:

The sagittal crest is feebly developed and gently forking behind the postorbital process. The shape of the brain case is more swollen than in *M. taxus* Bodd and like that of *M. leucurus* Hodgson.

As in all the *Meles*, the upper carnassial is a massive triangular tooth, in which the interior lobe (deuterocone) is basin-shaped with a distinct posterior cusp, and a variable small anterior one. In our specimen, the anterior cusp arises in a more posterior position and the deuterocone, as a whole, seems less expanded, than in *M. taxus* Bodd. Both these characters are recognizable in *M. leucurus* Hodgson.

By the general outline and the number of the cusps M^1 of our specimen is of the typical *Meles* shape. But the anterior lobe of the cingulum is less expanded than in *M. taxus* Bodd, so that the space left between M^1 and P^4 is distinctly larger. This character occurs also in *M. leucurus* Hodgson.

The complete measurements of the skull will be given when the better skull from Loc. 3 has been studied. Here I can only state that the distance between the postorbital process and the occiput is about 72.0 mm. and the maximum breadth of the brain case 47.0 mm.

The dimensions of the teeth of our specimen, compared with some other fossil and recent *Meles*, are given in the table below: (in mm.)

	<i>Meles</i> (fossil)				<i>Meles leucurus</i> (recent)			
	Loc. 5 Chouk'outien	Loc. 105 Zdan-sky.	Loc. 6 Young	Materials in Stockholm [†]	Materials in Tientsin	Materials in the Cenozoic Laboratory		
						Chouk'outien.	Mongolia	
M^1 I.	—	13.0	16.2	15.5	13.6	15.0	13.5	14.5
b.	10.1	10.1	12.3	12.0	11.2	11.0	10.8	11.3
P^4 I.	8.3	—	9.1	—	8.7	7.6	7.5	8.5
b.	6.5	—	7.4	—	6.6	6.2	6.0	6.4

(†) After Zdansky.

DISCUSSION

COMPARISON WITH THE LIVING FORMS

Among the known *Meles* the closest form to our specimen seems to be *M. leucurus* Hodgson on account of

- a) the small size,
- b) the swollen shape of the brain case and the feebly developed sagittal crest, and
- c) the less developed hind part of P⁴ and the anterior part of M¹.

We shall consequently adopt this name for the fossil here described. According to the description given by Gray¹, *M. chinensis* Gray does not differ from *M. leucurus* Hodgson except in the character of the skin. *M. taxus* Bodd. differs from our specimen in the more developed postorbital process, and in the characters noted above. *M. anakuma* Temm. differs from our specimen in the smaller size of the brain case and in the slightly elongated shape of M¹.

COMPARISON WITH FOSSIL MELES FROM CHINA.

Fossil *Meles* found in Loc. 105, Yuanch'ühsien, Shansi, and in Loc. 6 of Chouk'outien, have been described by Zdansky in 1925 and recently by Young under the same name of *M. leucurus* Hodgson. As a conclusion of the present study, I am inclined to think that those fossils are specifically different from the one here described and consequently from *M. leucurus* Hodgson. For, as is clearly shown by Zdansky's figures (Zdansky Pl. 11, Figs. 1 & 2, 1925) the Shansi badger differs from all the examined skulls of *M. leucurus* Hodgson in its apparently broader, higher, and comparatively shorter muzzle, more convex profile of the skull, and larger and more anterior expanded M¹.

M. cf. taxipater Schlosser⁽²⁾ from Mongolia is only known by the lower jaw and according to Miller⁽³⁾ it does not belong to the modern genus *Meles*.

Meles from Nihowan described by Teilhard and Piveteau⁽⁴⁾ is only known by the lower jaw and isolated upper molar so that we do not know whether it is closely allied to Zdansky's Shansi specimen or to the Chouk'outien one.

HORIZON AND LOCALITY. Lower Pliocene beds of Loc. 5 at Chouk'outien.

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1. Gray, G. E. Cat. Mam. of Carni, Bachy., and Eden. Mam. in British Museum, 1869.
 2. Schlosser, Max. Tertiary Vertebrate from Mongolia. Palaeont. Sinica, Ser. C, Vol. 1. Fasc. 1, pp. 9-13, Pl. 1. figs. 21-24, 1924.
 3. Miller, G. S. Jr. Revised determinations of some Tertiary Mammals from Mongolia. Palaeont. Sinica, Ser. C, Vol. v, Fasc. 2, pp. 11-12, 1927.
 4. Teilhard de Chardin and Piveteau, Jean. Les Mammifères fossiles de Nihowan (Chine). Annales de Paléontologie, Tome XIX, 1930.

Genus **MUSTELA** Linn.**Mustela (Putorius)** sp.

Pl. I, Figs. 3a-d.

This form is represented by one badly preserved skull, the characters of which are not clearly recognized in front of the postorbital process. Compared with a skull of *Putorius putorius* Linn. our specimen looks shorter and narrower. The brain case has a larger maximum breadth and smaller height. As in the *P. putorius* Linn. the auditory bullæ are inflated and subtriangular and their inner border diverges slightly backward.

The upper carnassial, the only tooth left in our specimen, (Pl. I, Fig. 3d) is 7.5 mm. long and 2.3 mm. broad. This tooth seems to be relatively longer and narrower than in *P. putorius* Linn. and in the living *Putorius* of the Chouk'outien region and its deuterocone is smaller and in a more anterior position.

The dimensions (in mm.) are as follows:

Length

— from foramen magnum to anterior patatine foramen	47.8
— from basicondylate to " " "	31.5

Breadth

— at mastoid region.....	25.8
— behind postorbital process.....	9.7?
— at occiput	24.3

Height

— from base of the foramen magnum to lambda	11.0
— from floor of the brain case to inter-arietal ridge	16.8

Since the species actually recognized by zoologists are so many, and so difficult to be distinguished by the osteological characters, we prefer not to attempt specific determination before a further study of better materials from Loc. I can be made.

HORIZON AND LOCALITY. Lower Pliocene beds of Loc. 5 at Chouk'outien.

Order **RODENTIA** Vicg d'AzryFamily **MYOIDÆ** WeberSubfamily **CRICETINÆ** MurrayGenus **CRICETULUS** Milne-Edwards**Cricetulus** sp.

1928. *Cricetulus* sp. Zdansky, O. Die Säugetiere der Quartär-fauna von Chouk'outien, Palæont. Sinica. Ser. C, Vol. v, Fasc. 4, pp. 58-60, Pl. v, Figs. 12-19.

Three right and two left lower jaws, more or less complete and belonging to the same species, are probably referable to the *Cricetulus* sp. Zdansky 1928 from Loc. 1 of Chouk'outien. From Zdansky's form our specimen differs slightly by a more inward position of the outer crescentic cusp of the lower molars and by the fact that both the "linguales vorder-cingulum" and "schluss-cingulum" (Schaub) of M_1 and M_2 are prolonged towards the middle of the tooth.

Dimensions (in mm.):

Specimens	1	2	3	4	5	Zdansky's Specimens		
Length of M_1, M_3	3.8	3.8	3.7	4.0	—	3.8	3.9	
M_1	l.	1.45	1.6	1.5	1.55	—	1.5	1.5
	b.	1.0	1.0	1.05	1.1	—	1.2	1.2
M_2	l.	1.2	1.1	1.1	1.25	1.0	1.2	1.2
	b.	1.0	1.1	1.0	1.1	1.0	1.2	1.2
M_3	l.	1.1	1.1	1.0	1.1	1.0	1.1	1.1
	b.	0.9	0.9	0.9	1.0	0.9	0.9	—

HORIZON AND LOCALITY. Lower Pliocene beds of Loc. 5 at Chouk'outien.

Genus **CRICETINUS** Zdansky

Cricetinus varians Zdansky

1928. *Cricetinus varians* Zdansky, O. Die Säugetiere der Quartär-fauna von Chouk'outien. Palæont. Sinica, Ser. C, Vol. v, Fasc. 4, pp. 54-58, Pl. v, Figs. 4-11.

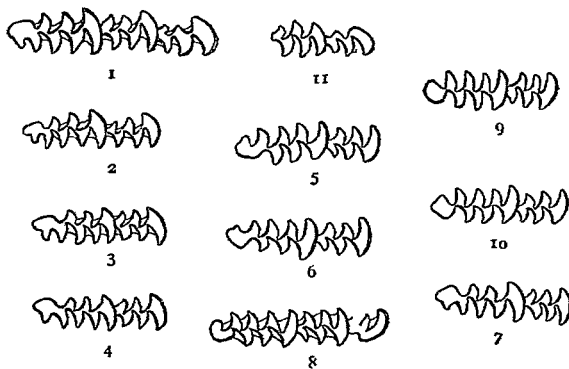
Two lower jaws, one with two worn, and the other with two fresh posterior molars, represent *Cricetinus varians* Zdansky. Compared with the description given by Zdansky, our specimen clearly exhibit the characters of this form. Together with Zdansky's specimen their dimensions are given as follows :

		Zdansky		
M ₁	length	2.1	2.1	2.0
	breadth	1.3	1.3	1.3
M ₂	length	1.7	1.9	1.8
	breadth	1.5	1.5	1.5

Subfamily **MICROTINÆ** MillerGenus **MICROTUS** Schrank**Microtus cf. brandti** Radde

Pl. 1, Figs. 4a-d.

1862. *Arvicola brandti* Radde. Reisen im Süden von Ost-Siberien in den Jahren 1855-1859. Bd. 1, p. 199, pl. VII, figs. 3a-k.
- 1888-94. *Microtus brandti* Büchner E. Säugetiere, Rodentia. St. Petersburg, Pl. XIX, Fig. 6.
1928. *Microtus? brandti* Zdansky, O. Die Säugetiere der Quartär-fauna von Chouk'outien. Paläont. Sinica, Ser. C., Vol. v, Fasc. 4, pp. 60-63, Pl. v, Figs. 20-50.

Text-fig. 1. Lower molar teeth of *Microtus cf. brandti* Radde X 6.

1. Right M₁-M₂ (Pl. 1, Fig. 4a)
2. " M₁&M₂ (Pl. 1, Fig. 4b)
3. " "
4. " "
5. Left "
6. " "
7. Right "
8. Left M₁-M₂ (Pl. 1, Fig. 4c)
9. " M₁&M₂
10. " "
11. Right M₂&M₂ (Pl. 1, Fig. 4d)

Eleven lower jaws and one piece of broken skull represent the genus *Microtus* (Hinton). According to the relationship observed on M_1 between the anterior loop and its adjacent triangle, our 11 lower jaws may be classified into two groups: Group A, being represented by seven specimens (Fig. 1, 1-7), in which the anterior loop of M_1 is confluent, either broadly or moderately, with its adjacent triangle; Group B, being represented by three specimens (Fig. 1, 8-10), in which the anterior loop of M_1 is separated from this triangle.

The measurements of our specimens are given in the following table:⁽¹⁾

Specimen	1	2	3	4	5	6	7	8	9	10	11
Length											
.. of tooth row	7.1	—	—	—	—	—	—	5.9	—	—	—
.. of M_1 — M_2	4.9	4.5	4.4	4.8	4.9	4.4	4.3	4.5	4.5	4.8	—
.. of M_2 — M_3	4.0	—	—	—	—	—	—	3.0	—	—	3.3
.. of M_1	3.1	2.8	3.0	3.1	3.1	2.9	2.7	2.9	2.6	2.9	—
Breadth											
.. of M_1 (largest)	0.85	0.4	0.70	0.8	0.9	0.75	0.85	0.8	0.75	0.80	—
.. of M_2 (largest)	1.3	1.0	1.1	1.25	1.2	1.1	1.1	1.2	1.2	1.25	—
.. of M_3	0.85	—	—	—	—	—	—	—	—	—	0.85

In addition to this difference Groups A and B seem to differ in that, in Group A the 4th. inner and 3rd. outer re-entrant fold, that is, the two re-entrant folds found just behind the loop, are shallower but wider than their posterior ones on the same side, while in Group B they are almost equally deep and narrow as the others on the same side.

In Group A, specimens 2 and 3 (Fig. 1, 2 and 3) differ from the others by the development of a supplementary weak re-entrant fold in the front and on the inner side of the anterior loop of M_1 . Among Group B the specimen 8 (Fig. 1, 8) is different from the other two (Fig. 1, 9 and 10) in the alternate arrangement of the two foremost re-entrant folds on both sides on M_1 .

(1) All the measurements are taken at the crown of the tooth.

M₃ of specimen 1 (Fig. 1, 1) has a very prominent third outer angle; on the contrary, the same angle of specimen 11 (Fig. 1, 11) is exceedingly weak.

Working on better material than ours, Zdansky thought that the differences noticed by him between the Group A and Group B were not specific ones. We adopt provisionally his position. It must be observed, nevertheless, that, according to the type form figured by Büchner, *Microtus brandti* Radde should correspond to our Group B not Group A, on account of the confluence of the loop.

HORIZON AND LOCALITY. Lower Pliocene beds of Loc. 5 at Chouk'outien.

Subfamily **MURINÆ** Baird

Murinæ gen. et sp. indet. Zdansky.

1928. Zdansky, O. Die Säugetiere der Quartär-fauna von Chouk'outien. Palæont. Sinica, Ser. C, Vol. v, Fasc. 4, pp. 66-68, Pl. v, Figs. 60-62.

One badly preserved lower jaw indicates the presence of one of the *Murinæ*. The teeth of our specimen are greatly worn. Nevertheless, by the shape and the size, the molars seem to be the same as in the *Murinæ* indet. Zdansky, a form which is chiefly characterized by the absence of any small antero-external cusp in M₂, a feature very characteristic of *Mus rattus* Linn.

Dimensions: (in mm.)

M ₁ length.....	2.5
breadth.....	1.7
M ₂ length.....	1.8
breadth.....	1.5
M ₃ length.....	1.5
breadth.....	1.2

HORIZON AND LOCALITY. Lower Pliocene beds of Loc. 5 at Chouk'outien.

Incertæ sedis

From this locality we have recovered one humerus, two ulnæ, four femurs, and one tibia+fibula of small Rodents. A close determination of these specimens is not at present possible.

CONCLUSION

As shown by the table below, the fauna of Loc. 5 is found to be essentially the same as that of most of the other localities. Thus there can be but little doubt that the sediments are of the same age as in the other fissures of the Chouk'outien region (Chouk'outien Phase B of Teilhard and Young).

The small size of the majority of the fossils in this collection is entirely due to the fact that Loc. 5 represents a very small fissure in which the lithological facies of the deposit is just the same as in another small cleft, Loc. 6 (Chikushan). It is, however, noteworthy that the small forms met with in Loc. 5 are mostly wanting in the Chikushan fauna and replaced by *Lepus* and *Vulpes*. Such a difference is probably due to some accidental circumstance of habitation.

Fauna of Loc. 5	Other Localities				
	1	2	3	4	6
<i>Talpida</i> indet.	+?	—	+?	—	—
<i>Crocidura</i> sp.	?	—	?	—	—
<i>Meles leucurus</i> Hodgson	+	—	+	-+	+?
<i>Putorius</i> sp.	+	—	+	—	—
<i>Cricetulus</i> sp. Zdansky	+	+?	+	+	—
<i>Cricetinus varians</i>	+	—?	+	+	—
<i>Microtus</i> cf. <i>brandti</i> Radde.	+	—	+	+	—
<i>Murinae</i> indet. Zdansky	+	—	+	+	—

+ means present in other localities.

— means absent in other localities.

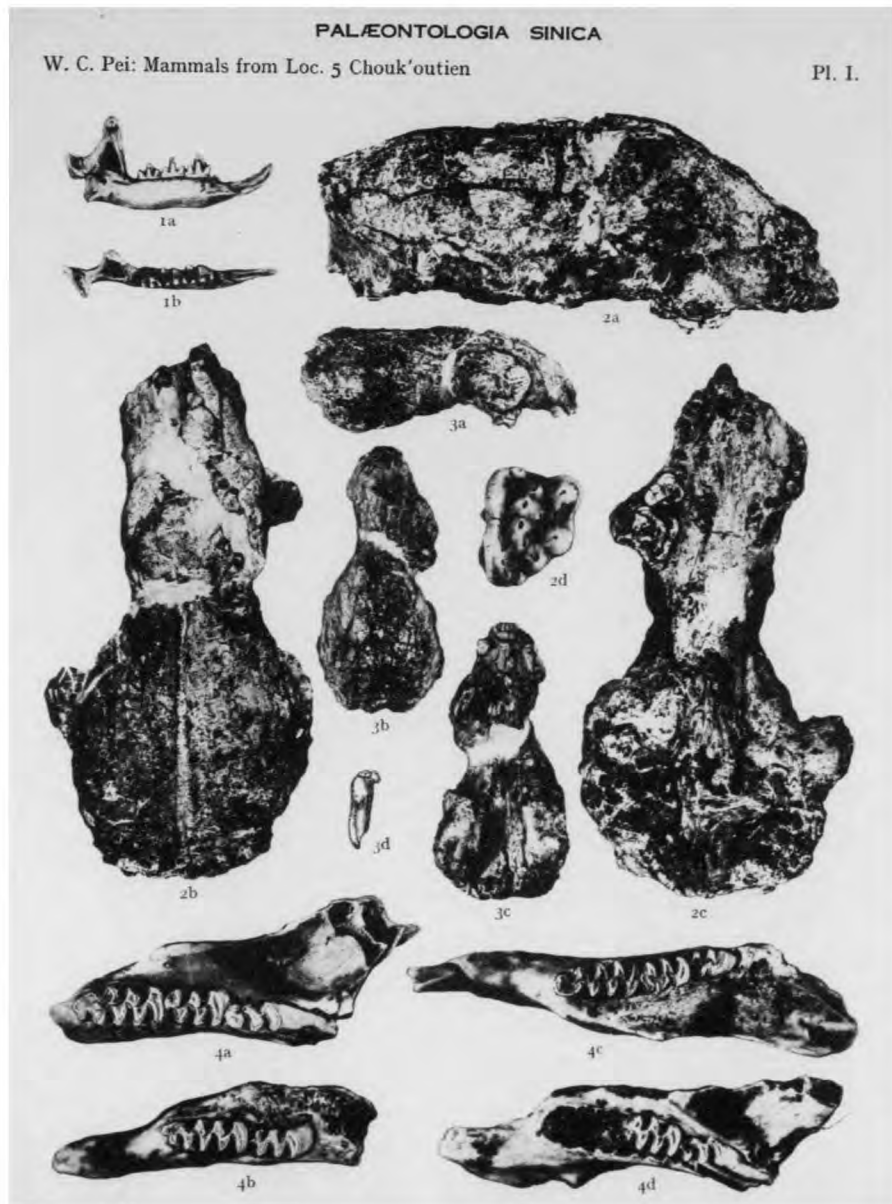
EXPLANATION OF

PLATE I

PLATE I

(Photographs by S. T. Lee)

- Fig. 1, *Crocidura* sp.....p. 7
1a, Inner view of lower jaw X 2.
1b, Crown view of lower jaw X 2.
Geological Survey of China Cat. $\frac{c}{c.281}$
- Fig. 2, *Meles leucurus* Hodgsonp. 8
2a, Lateral view of skull X 1.
2b, Dorsal view of skull X 1.
2c, Palatinal view of skull X 1.
2d, Left M¹ X 2.
Geological Survey of China Cat $\frac{c}{c.281}$
- Fig. 3, *Mustela (Putorius)* sp.....p. 11
3a, Lateral view of skull X 1.
3b, Dorsal view of skull X 1.
3c, Palatinal view of skull X 1.
3d, Incomplete right P⁴ X 2.
Geological Survey of China Cat $\frac{c}{c.283}$
- Fig. 4, *Microtus* cf. *brandti* Raddep. 13
4a, Right lower jaw with M₂ — M₂ X 6.
4b, Broken right lower jaw with M₁ and M₂ X 6.
4c, Left lower jaw with M₁, M₂ and broken M₃ X 6.
4d, Broken right lower jaw with M₂ and M₃ X 6.
Geological Survey of China Cat. $\frac{c}{c.284}$



此地點所產之化石如下：

蟲食類 (*Insectivora*) 兩種

Talpidae indet.

Crocidura sp.

肉食類 (*Carnivora*) 兩種

Melis leucurus Hodgson

Mustela (Putorius) sp.

齧齒類 (*Rodentia*) 四種

Cricetus sp. Zdansky

Cricetus varians Zdansky

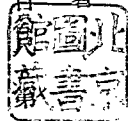
Microtus cf. brandti Radde

Murina indet. Zdansky

359.569
244-7

周口店骨化石沉積第五地點之哺乳動物化石

灤縣裴文中著



周口店骨化石沉積第五地點，在車站迤西，距第一地點（即中國猿人地點）約南八百餘米。第五地點之骨化石沉積位於石灰岩高崖之上，其旁之石灰岩及沉積之一部，皆為常順石灰窯礮炸而去，僅餘之部，南北長約二十公尺，東西寬僅二公尺。

第五地點之骨化石沉積，就其成因而言，與同地之其他骨化石沉積相同，皆原為奧陶紀石灰中之縫隙，後為紅色土所填充，土中即含有古代動物之化石。就其沉積之情形而言。此處之沉積與第六地點（即雞骨山）頗相似，與第一地點則稍異，概因第一地點原為甚大之洞穴，第五及第六地點則原為甚小之裂縫，故外物沉積之情形，自有異同。

第五地點所產之化石，皆破碎不完整，共有八種。此八種之中，尚有兩種之種屬名不能鑑定，三種之種名未定。此八種化石似皆產於第一地點，而為第六地點所無。其化石種類，與第六地點不同之故，似因各種動物之習性不同，棲止之地自異，結果則各地點所產化石之種類即有差別矣；實與沉積生成之原因及情形以及沉積之時代無關也。

此地所產化石，以獾 (*Martes*) 為較值注意。前人研究第六地點之獾，謂與現代華北生存之獾同種，然據著者此次研究之結果，則覺第五地點所產之獾，實與現在華北生存之獾同種，第六地點之獾則或為他種。



古生物誌丙種第七號

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第二冊

周口店骨化石沉積第五地點之哺乳動物化石

(學術研究與國立中央研究院合作)

實業部地質調查所
國立北平研究院地質學研究所 印行

中華民國二十七年七月

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