

ON THE SKULL OF *METAILURUS* OF PONTIAN AGE FROM SHANSI

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The specimen described in this paper was collected from the Pliocene beds of Yü-shêh district, Shansi province. The material consists of a single skull, and its preservation is rather perfect and only slightly damaged. Both zygomatic arches being broken, the nasal region is a little compressed and the occipital region quite slightly damaged. Cat. No. V. 926.

Family Felidae Gray

Sub-family Felinae

Genus *Metailurus* Zdansky

Metailurus major Zdansky

(Pl. I, Figs. 1—3)

1924. *Metailurus major* Zdansky. Tertiary Carnivoren Chinas. Palaentologia Sinica, Ser. C, vol. II, Fasc. I, pp. 123—131, Tab. XXIX, Figs. 1—4.

Description

Skull.—The skull is rather short, broad and highly arched. Saggital crest not prominent and with sharp edge. Braincase rather swollen. Premaxilla not in contact with frontalia. Nasalia obtangular in shape and a little broader at the anterior end. Anterior frontal foramen large.

The general shape of the skull of the described specimens can be compared with that illustrated by Zdansky (1924. Tab. XXIX, figs. 1 & 2) and the latter being only a little broader.

Upper dentition.— I^1 damaged. I^2 , the second upper incisor not conical, being quadrate oval in shape and on the top of the crown with an external crescent and two internal minute conicles. I^3 , the third upper incisor being conical in shape and a rudimentary cusp exists at the base of the posterior edge.

Upper Canine.—Between I^3 and the upper canine there follows a short diastema (9 mm.). The upper canine is flat and curved with sharp posterior edge; while on the anterior side being thick, broad without sharp edge. Both upper canines are damaged and no measurement can be made. The characters of the upper canine are well comparable with that described by Zdansky (1924. Tab. XXIX, Fig. 1).

Premolars and Molars.—Behind the upper canine there follows a rather long diastema (11 mm.) and then exists P³. Second premolar always absent. P³ rather long and narrow with a prominent main cusp, one rudimentary anterior and two posterior cusps. P⁴, the carnassial a little damaged and with three external cusps: the prominent paracone, the metacone and the parastyle; they are separated from each other by a deep separate cut notch. A well developed inner cusp or the protocone being present; and this is the distinguishing character from machairodont. M¹ long oval lying obliquely beside the carnassial.

Dimensions of the dentition of *Metailurus major* (in mm)

Specimens now described		Zdansky's specimens
H. of I ²	5,00	4,20
L.....	4,00	3,80
H. of I ³	10,00	8,20
L.....	7,00	6,70
Diastema I ³ — C	9,00	6,00
H. of C	36,00 (approx.)	—
L.....	17,00	15,00
W.	10,00	9,00
Diastema C — P ³	14,00	18,00
L. of P ³	16,00	15,00
W.	9,00	8,00
L. of P ⁴	25,00	24,00
W.	13,00	9,00
L. of M ¹	10,00	9,00
W.	4,00	6,00
L. of the skull.....	202,00	186,00
zygomatic breadth	124,00	135,00

As indicated by the measurement made from the two specimens in the above table, we can see that the skull of the described specimens is a little longer and narrower than that described by Zdansky (Tab. XXIX, figs. 1 & 2). Judging from my observation this is only an individual difference.

This kind of felid of the genus *Metailurus* is so far very interesting that its dentition character bearing much resemblance with that of *Machairodus*; this is especially indicated by the shape and structure of the upper canine. In this sense there seems to exist some genetical relationship between them. Both *Machairodus* and *Metailurus* were also contemporaneous of the lower Pliocene age.

References

- [1] Zdansky, Ot. 1924 Tungertiare Carnivoren-Chinas, *Palaeontologia Sinica*, Ser. C, Vol. II, Fasc. I.
[2] Pei, W. C., 1934, On the Carnivora from locality I of Choukoutien, *ibid.*, Ser. C, Vol. VIII, Fasc. I

山西蓬蒂層 *Metailurus major* 的頭骨之研究

張 席 湜

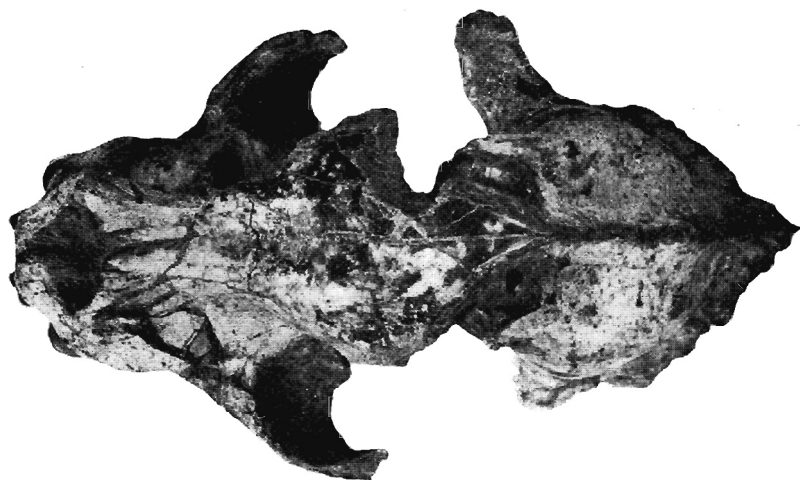
摘 要

本文材料係採自山西榆社蓬蒂層，只一個骨，保存情況尚稱完美。僅兩弧骨折斷，鼻骨被擠壓，枕骨部份稍受損壞。

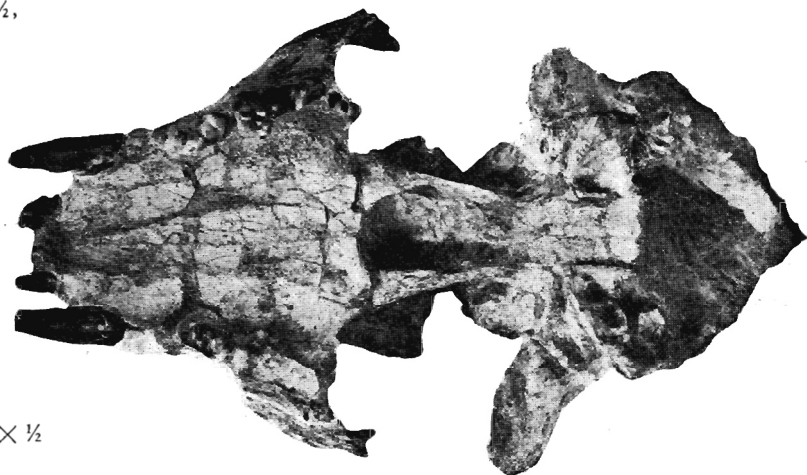
頭骨的形狀與齒之構造與師丹斯虛在中國古生物誌內種第八號（1924, Tab. XXIX, figs 1 & 2）所描寫者可以相比，係屬同種。

Metailurus major 屬貓科，但就犬齒之形狀而論，與劍齒虎之犬齒想為近似，與貓科者不同。犬齒很發育，扁平而彎曲。前面稍鈍，而後面具有銳利之鋒刃，但前後兩面均無鉅齒而與劍齒虎不同。第一門齒（ I^1 ）與第二門齒（ I^2 ）的齒冠鈍，外面具月形弧，內面具有兩個小突起，與劍齒虎成椎形者不同。第三門齒（ I^3 ）成圓椎形，基部內側具一突起。只有兩個前臼齒（ P^3, P^4 ）。 P^3 具有一個主尖，很發育，後面復具有兩個副尖。 P^4 狹而長，外面具有三個尖，內前方尚具有一尖；這是與劍齒虎重要區別之點。

根據犬齒的構造與形狀而言，*Metailurus major* 與劍齒虎似乎有血緣關係，二者均係上新世同時代的產物。



Top view, $\times \frac{1}{2}$,



Palatal view, $\times \frac{1}{2}$



Left side view, $\times \frac{1}{2}$,

The skull of *Metailurus major* Zdansky