

OCCURRENCE OF FOSSIL *PANTHERA PARDUS* LINN.
FROM THE PLEISTOCENE DEPOSITS OF SUSUNIA,
BANKURA, WEST BENGAL.

By

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ABSTRACT

A fossil fragment of mandible with last molar tooth collected from Jhikoria, Susunia, Bankura, West Bengal is described in this paper as *Panthera pardus* Linn. This is the first definite record of this species from the Pleistocene deposits of India.

INTRODUCTION

Among the fossil remains collected during the recent survey in the year 1982 by the Palaeozoology Division of the Zoological Survey of India at Susunia hill Bankura, West Bengal, we came across a fragment of mandible with an intact last molar tooth. On examining the material it appeared to be the last molar of *Panthera pardus* Linn. As far as we could ascertain from the literature (Lydekker, 1886 and Pilgrim, 1932) that there is a doubtful reference of a phalangeal figured by Lydekker, 1886 (G. S. I. No. F 225) and a metacarpal (G. S. I. No. F 225a) of *Panthera pardus* Linn. from Billa Surgam cave deposits in Karnul district of Andhra Pradesh.

Our discovery of a fragment of mandible with a last molar tooth, constitute the first definite record of fossil *Panthera pardus* Linn. from the Indian Pleistocene alluvial deposits from Susunia, Bankura, West Bengal.

SYSTEMATIC ACCOUNT

Phylum : CHORDATA
Class : MAMMALIA
Order : CARNIVORA
Family : FELIDAE
Species : *Panthera pardus* Linnaeus

Material : Fragment of left mandible with last molar tooth.

Locality : Jhikoria village about 13 km. North West of Susunia hill (23°2 3'30" 86°58'), Bankura, West Bengal.

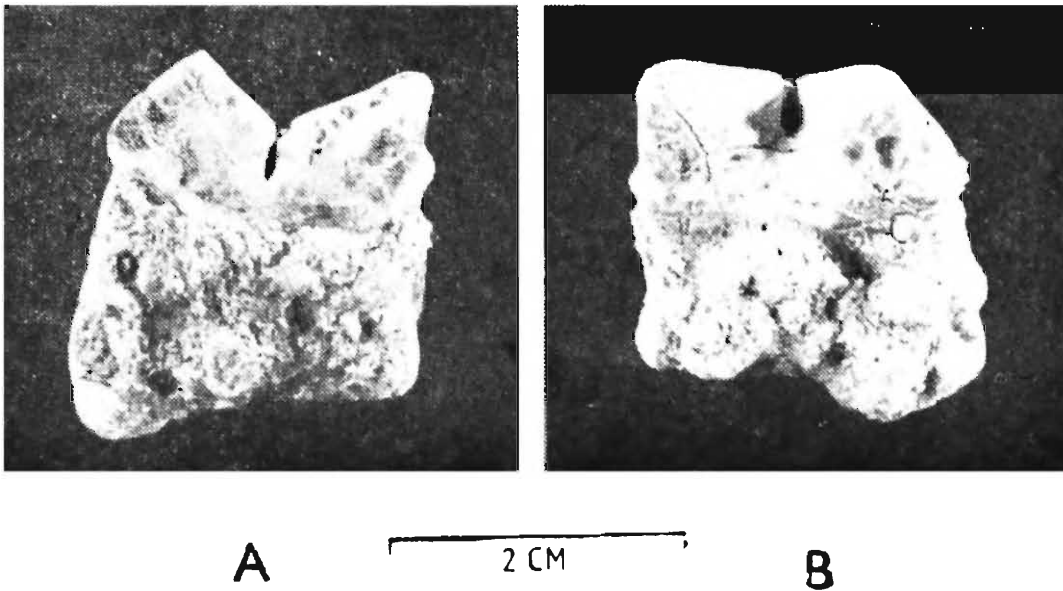
Date of Collection : 20th February, 1982.

Horizon : Oldest alluvial deposits, Pleistocene.

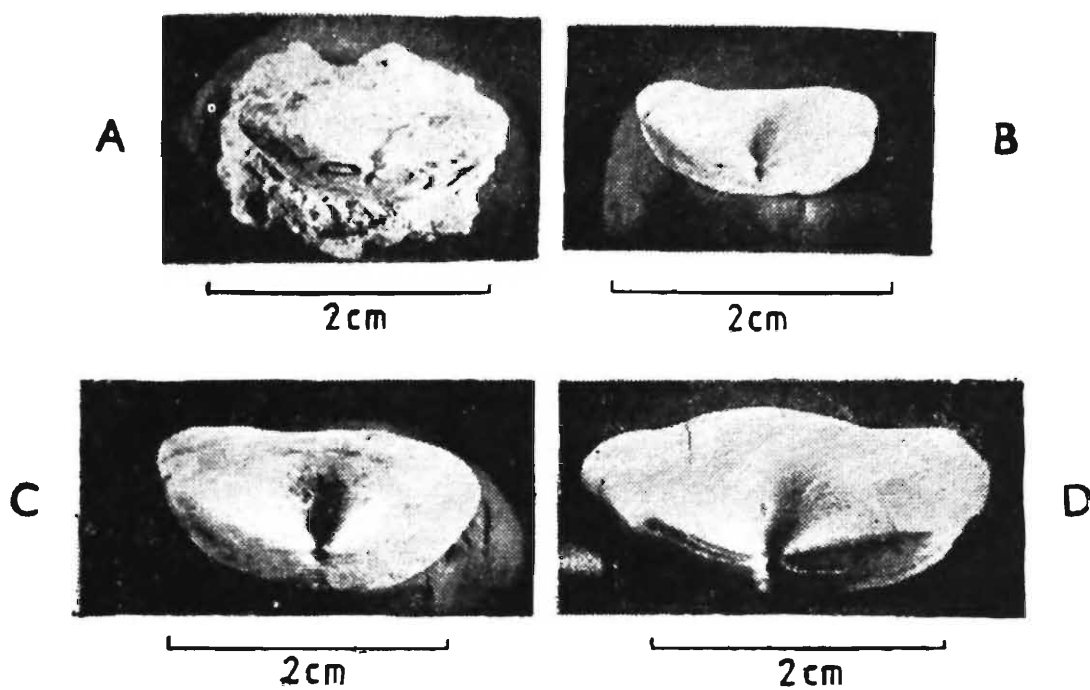
Collector : Shri K. D. Saha and party, deposited the material in the National Zoological Collection of the Zoological Survey of India, Calcutta, Reg. No. V. P. 17.

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PLATE IX



Figs. A-B. A. Lingual view of the left mandible with last molar tooth of *Panthera pardus* Linn. from Susunia hill, Bankura, West Bengal.
B. Buccal view of the above.



Figs. A-D. A. Occlusal view of *Panthera pardus* Linn. from Susunia hill, Bankura, West Bengal.
B. Occlusal view of *Panthera pardus* Linn. present in the Z. S. I. collection.
C. Occlusal view of *Panthera leo* (Linn.) present in the Z. S. I. collection.
D. Occlusal view of the *Panthera tigris* (Linn.) present in the Z. S. I. collection.

DESCRIPTION

The molar of the mandible is the sectorial tooth, the crown of this molar consists exclusively of the blades. It is divided into two equally compressed lobes, with straight margins, very sharp except the anterior one of the first lobe. The margins of the lobes meet at right angle from where a vertical fissure extends nearly half way down the crown. The outer surface of the crown presents an equally convexity from before backwards, in the inner side there is a deep groove in the lobes.

The fragment of the mandible is fossilised and organic material has been replaced by inorganic substances.

DISCUSSION

The structure of the last molar amongst the genus *Panthera* has some similiarity, but there are some differences in the specific level. The height of the two lobes in the molar of *Panthera pardus* are almost equal. In other two species *P. leo* and *P. tigris* there is a sizeable difference in height. The grooves between the lobes is deeper and wider in

P. leo than *P. tigris* and the lower border of crown of molar on the buccal side is rather irregular in *P. leo* (Datta, 1976). In *P. pardus* the groove is less wider than *P. tigris* and lower border of the crown of molar on the buccal side is more smooth, (Plates IX & X).

In measurements the length of the last molar of Susunia specimen of *P. pardus* is in between the recent species of *P. leo* and *P. pardus*. The width and the height from the base of mandible of the molar is almost equal in Susunia specimen and recent *P. pardus* and much larger in *P. leo* and *P. tigris* which can be seen from (Table 1.).

There is no fossil record of last molar of *Panthera pardus* from Siwalik or any other fossil bearing beds in India. Dutta (1976) described a mandible with a molar and fourth premolar of *Panthera cf. leo* from Susunia. Presently this species is distributed in whole of India from Kashmir and apparently the foot hills of the Himalayas in the North to Cape Comorin in South (Pocock, 1939). So, we can safely conclude that the last molar tooth from Susunia is the first definite record of fossil *Panthera pardus* Linn. from India.

TABLE 1. Comparative measurements (in mm.) of last molar tooth of Susunia specimen with the recent *Panthera pardus*, *Panthera leo* and *P. tigris*.

	Length	Width	Height from the base of mandible.
<i>Panthera pardus</i> (Z. S. I. V. P. 17) from Susunia.	20	8	9
<i>Panthera pardus</i> (Z. S. I. Reg. No. 17597.)	17.5	7.5	8.5
<i>Panthera leo</i> (Z. S. I. Reg. No. 9065.)	23	12	11
<i>Panthera tigris</i> (Z. S. I. Reg. No. 19024.)	28	13	13

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REFERENCES

- DATTA, A. K. 1976. Occurrence of fossil lion and spotted Hyena from Pleistocene deposits of *Susunia*, Bankura District, West Bengal. Jour: Geol. Soc. India, Bangalore, 17 (3) : 386-391.
- LYDEKKER, R. 1886. The Fauna of the Karnul caves. *Palaeont. Indica* Calcutta, Ser. 10, 4 : 23-58, pls. 7-11.
- PILGRIM, G. E. 1932. The fossil Carnivora of India, *Paleont. Indica*, Calcutta, N. S. 18 : 1-232, pls. 1-70.
- POCOCK, R. I. 1939. The Fauna of British India, Mammalia, 1, Taylor and Francis Publication, London.
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