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**FOSSIL VERTEBRATES FROM MARUVATIOOR  
(TIRUCHCHIRAPPALLI DISTRICT,  
TAMIL NADU)**

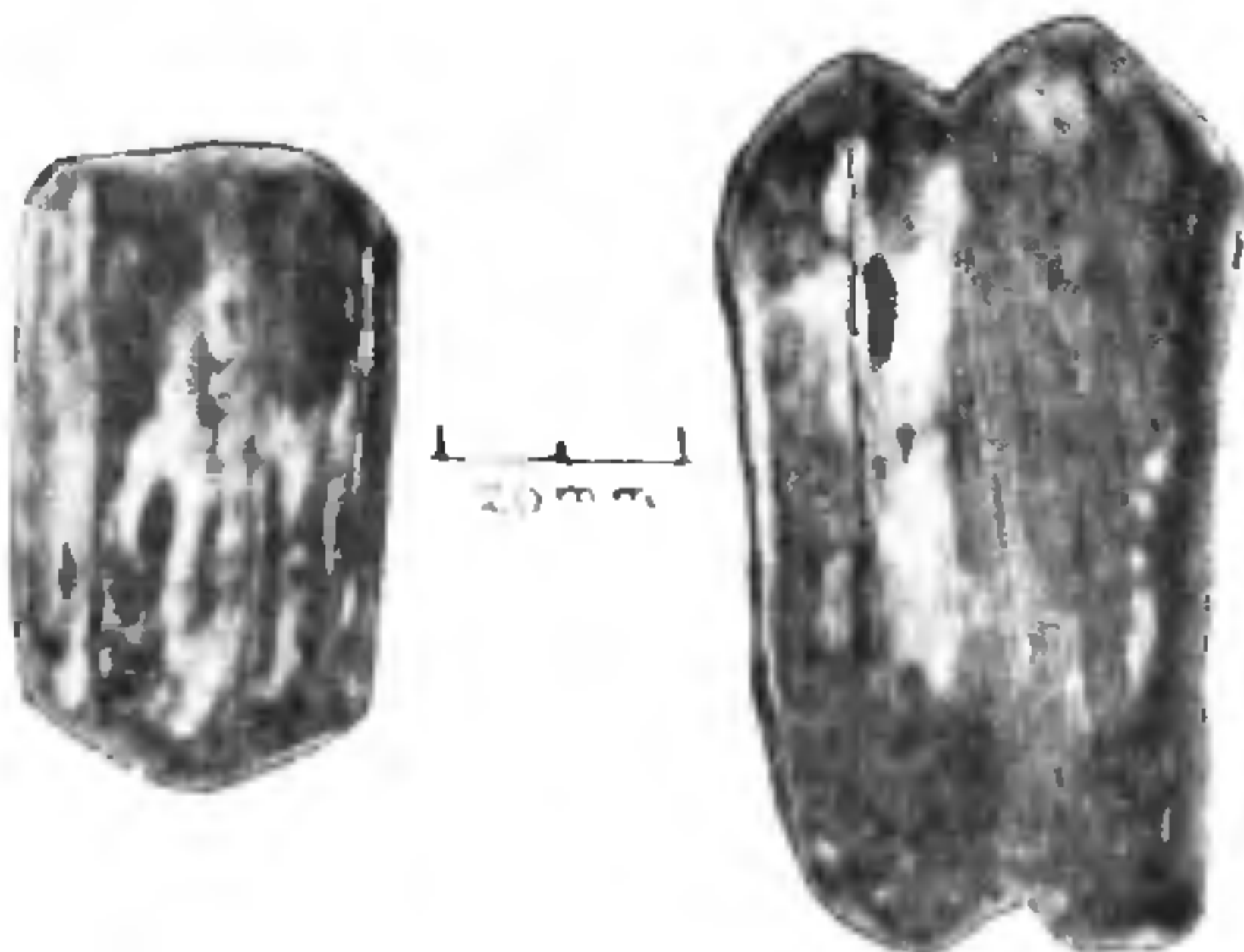
**II. Notes on the Equine and Bovine Teeth**

THE present note deals with two fossil teeth belonging to the genera *Equus* Linnaeus and *Bos* Linnaeus collected by Dr. K. V. Lakshminarayana, in 1971 from the alluvial beds on the bank of Marudiyar River near Maruvattoor Tiruchchirappalli District, Tamil Nadu.

These mammalian remains might have been drifted by the nullahs flowing over some adjoining Late Pleistocene deposits on the Cretaceous rocks (*vide* Mangain and Sastry, 1967). A brief description of the fossil teeth are given below.

*Equus* sp.

(Plate 1, Fig. A)



A

B

PLATE I. Fig. A. *Equus* sp. [Lower right 3rd premolar]. Fig. B. *Bos* sp. [Upper left 2nd molar].

**Material**

Lower right 3rd premolar (Reg. No. V.P. 3).

**Description**

Angle between metaconid and metastylid V-shaped, protoconid and hypoconid rather straight; parastylid not reaching metaconid; length of the crown 25.5 mm; total height 42 mm; maximum breadth of the crown 14.5 mm.

**Remarks**

The structure of the tooth resembles largely that of *Equus namadicus* Falc. and Caut., but nothing definite can be said about its specific status due to the absence of upper tooth and other supporting data. However, Rao and Seshachar (1927) and Rao (1927) have also reported fossil equine tooth from Ariyalur, Tamil Nadu.

*Bos* sp.

(Plate 1, Fig. B)

**Material**

Upper left second molar (Reg. No. V.P. 4).

**Description**

Hypsodont; erupting tooth having basal pillar, tip of the basal pillar 12 mm below the tip of the crown; length of crown 33 mm; height of tooth 64 mm; maximum breadth of the crown 17.2 mm.

**Remarks**

Mangain and Sastry (1967) reported the occurrence of *Bos* sp. from Ariyalur, based on lower jaw and limb bones. The present is, therefore, the first record of an upper tooth, hence interesting.

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Zoological Survey of India,  
8, Lindsay Street,

K. D. SAHA.

Calcutta 700 016, September 23, 1974.

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**A NOTE ON THE SMALLER FORAMINIFERA  
FROM THE BARIPADA BEDS, MAYURBHANJ  
DISTRICT, ORISSA**

THE present note deals with the foraminifera obtained from the Baripada Beds exposed on the eastern bank of the Buhabalang river. The writers collected the samples from the Baripada Beds during 1970 and observed the following stratigraphic sequence of the rocks:

	Lithounits	Age	Thickness in metres
	Laterite Conglomerate	Post-Miocene	4. 1.
Baripada Beds	Greenish grey shales	Middle Early Miocene —? Late Miocene	6
	Arenaceous yellowish white fossiliferous limestone containing megafossils— <i>Ostrea</i> sp., etc.	Early Miocene	1.2
	Greenish white shales	Early Miocene	Not determined

The greenish grey shales have yielded a rich assemblage of species of many smaller foraminifera. The most important among them are: *Ammonia beccari Kaeboeensis* (Le Roy), *Criboelphidium subuncertum* (Asano), *Turborotalia obesa* (Bolli), *Turborotalia continuosa* (Blow), *Florilius communis* (d'Orbigny), *Buliminella brevior* Cushman, *Buliminella hanzawai* Asano, *Buliminella* aff. *B. longicamerata* Bandy, *Brizalina singhi* n. sp., *Valvulineria sastrii* n. sp., *Cribrononion dattai* n. sp., *Lagena amphora*, and *Cibicides tewari* n. sp. Other forms identified upto generic level are *Triloculina*, *Uvigerina*, *Lagena* etc. *Ammonia beccari Kaeboeensis* (Le Roy) occurs in abundance in the arenaceous yellowish white fossiliferous limestone.

Blow<sup>1</sup> recorded the range of *Turborotalia obesa* from within the Zone N<sub>2</sub> to Zone N<sub>23</sub> (Late Oligocene to Pleisto-Holocene). It is, therefore, a long ranging form. *Turborotalia continuosa*, on the other hand, is restricted within the Miocene. Blow<sup>1</sup> considers its range from within Zone N<sub>6</sub> to Zone N<sub>17</sub> (middle part of Early Miocene to Late Miocene). In view of this, the greenish grey shales may be referred to the middle Early Miocene to Late Miocene, with the conformably underlying limestone and greenish white shales lying very likely at the base of the Early Miocene.

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Department of Geology,  
University of Lucknow,  
Lucknow, June 21, 1975.

PRATAP SINGH.\*  
A. K. JAUHARI.  
K. P. VIMAL.

\* Present Address: I.P.E., ONGC., Kaulagarh Road, Dehra Dun.

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#### THE MORPHOLOGY OF *MONOCERCOMONOIDES CHAKRAVARTII* N. SP. (PROTOZOA: MASTIGOPHORA) FROM THE GUT OF THE INSECT *POLYPHAGA INDICA*

DURING the course of a survey of the intestinal flagellates of arthropods of Maharashtra, an interesting flagellate was found in the middle and hind gut of the insect *Polyphaga indica*. The organism, belonging to the genus *Monocercomonoides* Travis (1932)<sup>1</sup>, was relatively rare in its occurrence and was found in only a few of the 249 hosts examined.

In the stained preparations, the parasite appears somewhat spherical (Figs. 2, 7, 8); pyriform (Fig. 1) or irregular (Figs. 3, 5) in outline. The blepharoplastic complex situated at the anterior end of the body comprises of three granules (Figs. 4, 7, 8). One of these gives origin to the funis, while the second one is the point of origin of two anterior flagella and the third one gives rise to one anterior flagellum, the trailing flagellum and the axostyle (Figs. 4, 7, 8).

The three anterior flagella are unequal, measuring 4.6–11.8  $\mu$ m, 6.7–12.8  $\mu$ m and 7.2–14.9  $\mu$ m with averages of 7.4  $\mu$ m, 8.8  $\mu$ m and 9.8  $\mu$ m respectively. The trailing flagellum is about twice the length of the body and measures 9.8–21.6  $\mu$ m (average 14.5  $\mu$ m). In many cases one of the flagella is thicker than the others (Figs. 3, 4, 6). Some of the flagella terminate in distinct acronemes (Figs. 5, 8). The funis is short and filamentous (Figs. 4, 7, 8) and measures 2.6–4.6  $\mu$ m, with the average of 3.6  $\mu$ m.

The axostyle is extremely delicate and could be observed only in a few well stained organisms (Figs. 1, 2, 5). It extends upto the posterior end of the body (Fig. 1) or projects out slightly (Figs. 2, 5). The posterior half of the axostyle is slightly thicker than the anterior half (Fig. 5). The posterior tip is enlarged into a fine spear-shaped structure, tapering to a point (Figs. 2, 5). The nucleus lies behind the blepharoplastic complex and is variable in shape and size. It is