

On a new species of *Macrocephalites* Zittel from Jurassic of Kachchh* (Gujarat)

D. K. PANDEY AND C. S. P. SINGH

Department of Geology, Banaras Hindu University, Varanasi 221 005

Abstract

A new species of *Macrocephalites* Zittel viz. *Macrocephalites (Macrocephalites) inflata*, has been proposed, described and illustrated from the materials of Jurassic of Pachchham* Island in the district of Kachchh*.

Introduction

Macrocephalites s. s., an ammonoid subgenus, was hitherto known from Kachchh by four species only, viz. *M. (M.) formosus* (J. de C. Sowerby), *M. (M.) chariensis* (Waagen), *M. (M.) madagascariensis* Lemoine and *M. (M.) triangularis* Spath. Recently, several specimens of *Microcephalites* have been collected from east of the village of Khavda (23°50'30"N and 69°44'E), Pachchham* Island, by the present authors. The specimen described here (*M. (M.) inflata* n. sp.) is very well preserved and does not match with any of the four taxa mentioned above.

Repository: The described specimen is lodged in the Department of Geology, Banaras Hindu University, Varanasi 221 005.

Systematic Description

Superfamily: STEPHANOCERATACEAE Neumayr, 1875

Family: MACROCEPHALITIDAE Buckman, 1922

Genus: *Macrocephalites* Zittel, 1884

Type species: *Ammonites macrocephalus* Schlotheim, 1813
(as interpreted by Zittel, 1884; ICZN Pend.)

Subgenus: *Macrocephalites* s.s.

Macrocephalites (Macrocephalites) inflata n. sp.

Pl. I, figs. 1a, b, c.

Material: A single specimen.

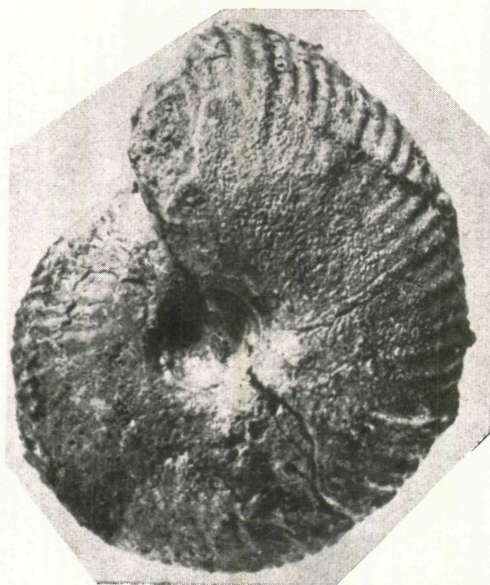
Horizon and Locality: Lower Callovian (Bed No. 26) – East of Khavda, Pachchham Island, Kachchh.

Diagnosis: Shell involute, strongly inflated, whorl section semicircular, flank irregularly ribbed with smooth umbilical region.

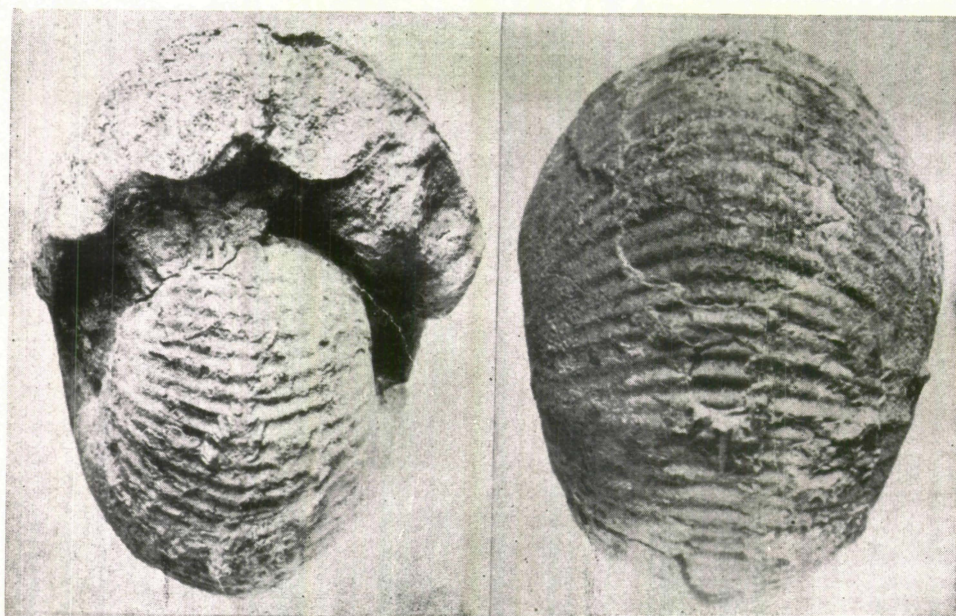
Description: Shell involute, depressed with semicircular whorl section, and strongly inflated, maximum inflation being at about dorsal quarter of the sides. Lateral surface feebly arched and rapidly sloping towards the broadly rounded venter, with which it merges so smoothly that the ventro-lateral junction line cannot be ascertained. Umbilicus very small, deep and with vertical walls; the umbilical edge forming a rounded off right angle

The shell surface bears irregular prorsiradiate ribs which are absent from the umbilical region. In early whorls the ribs start from very near the umbilical border (the corresponding edge remaining smooth) but gradually with increasing shell diameter the riblets recede farther away from it such that at a diameter of about 70 mm the inner half surface is practically smooth. The ribs pass over the venter uninterruptedly thereby producing a forward convexity.

*Variously spelt — Cutch, Kachh, Kutch; Putcham, Patcham.



1a



1b

1c

Figure 1. *Macrocephalites* (*Macrocephalites*) *formosus* n.sp. Holotype (PG 142/20).
Bed No. 26 (Lower Callovian), East of Khavda, Pachchham Island, Kachchh.

a—side view; b—apertural view; c—ventral view.

Dimensions (in mm):

Sp. number	Diameter	Height	Width	Umbilicus
PG/142/20 (Holotype)	70	30.0 (42.8%)	51.5 (72%)	13.5 (19.2%)

Remarks · This lone example is septate till end. It seems to be very near to *Macrocephalites (Macrocephalites) formosus* (J de C. Sowerby) (1840, Pl. 23, fig. 7; also Spath, 1928, p. 177, Pl. 21, figs. 1a, b, Kanjilal, 1974, p. 442, Pl. 33, figs. 2-4, Pl. 34, figs. 1-4) so far as nature of ribbing and umbilicus is concerned. But its greater inflation, comparatively wider umbilicus and semicircular whorl section distinguish it from that species. The thickest specimen (Sp. No. H/46/37) of *formosus* so far recorded by Kanjilal (*loc. cit*) from the Habo hills which has an inflation of 60 per cent of shell diameter.

On the other hand it is comparable to *Indocephalites diadematus* (Waagen) (1875, p. 130, Pl. 30, figs. 3a-c, 4a, b; also Spath 1928, p. 188, Pl. 21, fig. 7, Pl. 25, fig. 6) and *Mayaites rotundus* Spath (1928, p. 227, Pl. 30, figs. 3a-c; Pl. 44, figs. 7a, b) so far as whorl section is concerned but these species are ribbed up to the umbilical edge. In addition, the latter comes from a much higher horizon.

It can be readily distinguished from *M. (M.) chariensis* (Waagen) (1875, p. 126, Pl. 30, figs. 2a, b; Pl. 31, figs. 1a-c; also Spath 1928, p. 179, Pl. 25, figs. 2; Pl. 33, fig. 11; Pl. 34, fig. 2; Pl. 35, fig. 8; Kanjilal 1974, p. 445, Pl. 33, figs. 1, 5; Pl. 34, fig. 3) which has also a smooth surface near the umbilicus, by shape of the whorl section which in that species is subtrigonal. Moreover *chariensis* has broad and coarser ribs and slightly less inflation.

Acknowledgements: The authors are grateful to Prof. S. K. Agrawal, Department of Geology, Banaras Hindu University, for his valuable suggestions. Sincere thanks are due to Dr. S. Kanjilal for critical review of the manuscript and to Dr. G. E. G. Westermann, Professor of Geology, McMaster University, Canada for fruitful discussions.

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(Received April 2, 1981, Revised form accepted June 14, 1981)