

TWO NEW LUTETIAN SPECIES OF ROTALIINA FROM KUTCH

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ABSTRACT—The paper records two planktonic foraminifers, *Globorotalia berwaliana* n. sp. and *Schackoinella tricamerata* n. sp. from Middle Eocene (Lutetian) sediments of Western Kutch.

INTRODUCTION

The paper describes and illustrates two new planktonic foraminiferal species—*Globorotalia berwaliana* and *Schackoinella tricamerata* from the Middle Eocene (Lutetian) sediments exposed in Berwali stream section, between Beranda (23° 33' 40" : 68° 40' 35") and Bernana (23° 26' 35" : 68° 37' 00"), Western Kutch. The biostratigraphic zonation and check list of the species from these sediments have been given in two separate papers by the authors (M.S., 1967). Both these new species belong to the *Globigerinoides kugleri-Globigerina frontosa* assemblage zone, Middle Eocene, Beranda-Bernana region.

SYSTEMATIC DESCRIPTION

The classification followed here is the one by Loeblich and Tappan (in Moore, 1964). All the type specimens are deposited in the Palaeontology Laboratory, Oil & Natural Gas Commission, Dehra Dun.

Order: FORAMINIFERIDA

Suborder: ROTALIINA

Superfamily: GLOBIGERINACEA Carpenter,
Parker & Jones, 1862

Family: GLOBOROTALIDAE Cushman 1927

Subfamily: GLOBOROTALINAE Cushman 1927

Genus: GLOBOROTALIA Cushman 1927

GLOBOROTALIA BERWALIANA n. sp.

Text-fig. 1, A—F

Test free, trochospiral; equatorial periphery lobulate, axial periphery rounded to sub-angular; dorsal side convex with 13-14 chambers arranged in 2½ whorls, early whorls distinctly raised above the level of the five chambers in the final whorl, earlier chambers of greater height than width, gradually increasing in size as added, later chambers slightly broader than high; sutures distinct, depressed, slightly curved on spiral side, radial on umbilical side; wall calcareous, finely perforate, radial in structure; surface finely pitted; aperture a low umbilical-extra-umbilical arch.

Dimensions of Holotype—Larger diameter 0.61 mm; shorter diameter 0.54 mm; thickness—0.42 mm.

Locality—Holotype (ONGC K 256) and figured paratype (ONGC K 257) from *Globigerinoides kugleri*—*Globigerina frontosa* assemblage zone, Middle Eocene, Beranda—Bernana region, Kutch.

Remarks—The species show marked variation in the degree of convexity of the spiral side. *Globorotalia perclara* Loeblich and Tappan, 1957, differs from *Globorotalia berwaliana* in

Superfamily : DISCORBACEA Ehrenberg, 1836

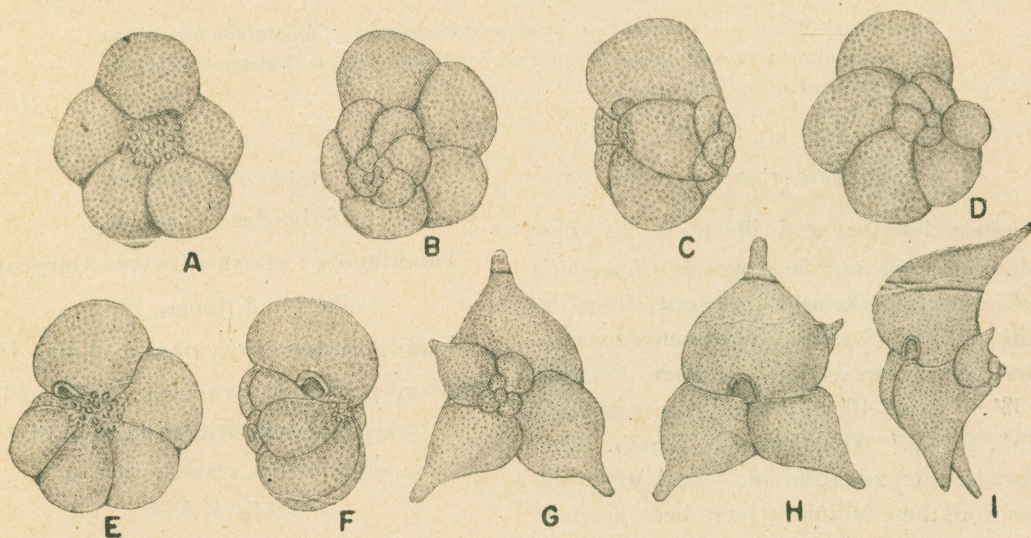
Family : GLABRATELLIDAE Loeblich and Tappan, 1964

Genus : SCHACKOINELLA Weinhandl 1958

SCHACKOINELLA TRICAMERATA n. sp.

Text-figs. G-I

Test trochospiral; spiral side with 9–10 chambers, inflated, rapidly increasing in size with growth; each chamber with a thick projecting spine; umbilical side with three chambers; sutures distinct, slightly depressed or flushed and curved on the spiral side; distinctly epressed and slightly curved on the umbilical



TEXT FIG. 1—A-F. *Globorotalia berwaliana* n. sp. G-I. *Schackoinella tricamerata* n. sp.

A. Umbilical view of Holotype (ONGC K 256);
D. Spiral view of paratype (ONGC K 257);
G. Spiral view of Holotype (ONGC K 260);

B. Spiral view;
E. Umbilical view;
H. Umbilical view;

C. Side view. x 46.
F. Side view. x 60.
I. Side view. x 115.

having a hispid surface, broader chambers, and in being smaller in size. *Globorotalia reissi* Loeblich and Tappan, 1957, is much smaller in size with smooth surface and broader chambers.

The species is named after Berwali stream section, from where it has been recorded.

side; wall calcareous, finely perforate, radial in structure; surface smooth; aperture a high arch, umbilical, at the base of the final chamber.

Dimensions of the Holotype—Larger diameter 0.22 mm; shorter diameter 0.17 mm, thickness—0.12 mm.

Locality—Holotype (ONGC K 260) and paratype (ONGC K 262) from *Globigerinoides*

kugleri—*Globigerina frontosa* assemblage zone, Middle Eocene, Beranda—Bernana region, Kutch.

Remarks—*Schackoinella tricamerata* differs from *Schackoinella sarmatica* in having only three chambers on the umbilical side and in showing a rapid increase in the size of chambers with growth. The authors have critically examined the wall structure of this species and have found it to be distinctly radial. Considering the trochospiral coiling as well, the authors favour its placement with the Glabratellidae, as suggested by Loeblich and Tappan (1964).

The species is named after its typical three chambers in the final whorl.

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