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# TWO NEW GENERA OF RECENT TROCHAMMINIDAE (FORAMINIFERIDA)

BY

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## ABSTRACT

The trochaminid genera *Trochamminopsis*, n. gen., type species *Trochammina quadriloba* Hoeglund, 1948, and *Deuterammina*, n. gen., type species *Trochammina glabra* Heron-Allen and Earland, 1932, are proposed. *T. quadriloba*, is from the Recent of the Skagerak and Koster Channel, Sweden, and *T. glabra* from the Recent S of Cape Horn and E of Tierra del Fuego, South America. Both species are temperate to cold water forms.

As a result of the examination of Recent trochamminids in the collections of the British Museum (Natural History), London, and in the Hoeglund collection, deposited in the Naturhistoriska Riksmuseet, Stockholm, the writer arrived at the conclusion that the trochamminids as a whole need a careful morphological revision before a satisfactory classification of this complicated group of polythalamous arenaceous foraminifera can be established. The apertures, as usual, are of primary significance. On the basis of the apertural features 2 new Recent trochamminid genera *Trochamminopsis* Brönnimann and *Deuterammina* Brönnimann are herewith proposed.

*Trochamminopsis* BRÖNNIMANN, n. gen.

*Type species*: *Trochammina quadriloba* Hoeglund, 1948 (for *Trochammina pusilla* Hoeglund, 1947, preoccupied by *Trochammina pusilla* (Geinitz), 1848).

The type species has been reported by Hoeglund (1947, p. 201-203) to occur in the Skagerak and the Koster Channel, Sweden. The holotype of *T. quadriloba* illustrated by Hoeglund on his pl. 17, fig. 4a-c, is from a dredge sample, depth ca. 200 m, taken in the Koster Channel (58° 53 05" N; 11° 05 00" E).

*Definition of Trochamminopsis, n. gen.*

The free trochospiral test is similar to *Trochammina*. The single aperture is an interiomarginal umbilical opening. The thin and imperforate walls are agglutinated. They are devoid of interior secondary structures and do not form secondary chamber subdivisions.

*Remarks*

*Trochamminopsis*, n. gen., differs from its closest ally *Trochammina* Parker and Jones, 1859, type species *Nautilus inflatus* Montagu, 1808, by its distinctly centrally located, umbilical, not umbilical-extraumbilical, interiomarginal aperture. Secondary apertures are absent in both genera. One could compare, as far as the apertural features are concerned, the relationship between *Trochamminopsis* and *Trochammina* with that between *Globigerina* and *Globorotalia* (*Turborotalia*). In the trochamminids, however, no transitional forms between the umbilical and umbilical-extraumbilical aperture have been seen. The respective generic features therefore seem to be quite stable.

The description of the holotype of *Trochammina pusilla* (= *quadriloba*) by Hoeglund (1947, p. 201) mentions as aperture an interiomarginal slit between the inner margin of the last chamber and the preceding coil hence there is no doubt that the aperture is not areal but at the base of the septum. On the other hand, Hoeglund did not precise its position in respect to the umbilicus and his illustration of the holotype pl. 17, fig. 4a, leaves the reader in doubt as to the exact situation of the aperture. Topotype material of *Trochammina pusilla* (= *quadriloba*) from the collection Hoeglund deposited in the Naturhistoriska Riksmuseet, Stockholm, Sweden, however showed that the small crescent-like aperture is distinctly umbilically situated. Scanning photographs of a topotype from the Koster Channel will be illustrated in a forthcoming paper on trochamminids.

*Deuterammina* BRÖNNIMANN, n. gen.

*Type species*: *Trochammina glabra* Heron-Allen and Earland, 1932.

The type material is from dredge samples taken at the Discovery Station WS 88, E of Tierra del Fuego, depth 118 m, and at the Discovery Station 338, just S of Cape Horn, depth 121 m (Heron-Allen and Earland, p. 334, pl. 7, fig. 26-28). The details regarding the stations are listed by Heron-Allen and Earland on p. 304 (Station 388) and on p. 305 (Station WS 88). The holotype of *T. glabra* is deposited in the collections of the British Museum (No. ZF 3528). It is from Discovery Station WS 88 and illustrated by Heron-Allen and Earland on their pl. 17, fig. 26-28.

*Definition of Deuterammina, n. gen.*

The free trochospiral test is similar to *Trochammina*. Each chamber has 2 apertures, i.e. a primary interiomarginal, umbilical-extraumbilical opening and a secondary opening at the umbilical tip of the chamber and opening into the umbilicus. The primary apertures are covered in the course of growth whereas the secondary umbilical openings are visible and disposed in a low trochospire. The thin imperforate walls are agglutinated and devoid of secondary internal structures and do not form secondary subdivisions of the chambers.

*Remarks*

The writer examined the holotype of *Trochammina glabra* in the collections of the British Museum (Nat. Hist.), London, and found that Heron-Allen and Earland's illustrations (1932, pl. 7, fig. 26-28) correspond well with the type. Although these authors did not mention secondary umbilical apertures (1932, p. 344) only a large and loop-shaped aperture on the inner edge of the final chamber, the illustration of the umbilical side of *Trochammina glabra* (1932, pl. 7, fig. 27) suggests the presence of umbilical openings below the tips of the chambers. The examination of the holotype by the writer confirms the existence of these secondary umbilical and slightly backward oriented apertures. Scanning photographs of the apertural features will be published in a forthcoming paper.

*Deuterammina*, n. gen., has the same secondary umbilical opening as *Arcoparrella* Mikhalevich, 1971, type species *Arcoparrella planulata* Mikhalevich, but lacks the curved loop-like or hook-like or straight slit-like aperture in the septal face.

*Deuterammina*, n. gen., differs also from the only other trochamminine genus with secondary openings on the umbilical side *Tiphotrocha* Saunders, 1957, type-species *Trochammina comprimata* Cushman and Brönnimann, 1948, from the Recent Mangrove swamps of Trinidad. The secondary openings occur only in adult specimens of *Tiphotrocha comprimata* and in the re-entrant behind the umbilical lobe hence they are in a sutural not in an umbilical position.

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