

FORAMINIFERA FROM THE CRETACEOUS OF SOUTHERN LIMBURG, NETHERLANDS, XXVIII.

SIPHOGENERINOIDES ELEGANTA PLUMMER.

by J. HOFKER

Siphogenerina eleganta Plummer, Univ. Texas Bull., 2644, p. 126, pl. 8, fig. 1, 1927.
Siphogenerinoides eleganta (Plummer) Cushman, C. L. F. R., Contr., vol 16, p. 66, pl. 11, fig. 17, 1940.

The description by Plummer: „Test elongate, early chambers biserial merging into a succession of alternating oblique chambers that very rarely reach a Nodosarian development; very earliest portion of test marked by indistinct and irregularly developed longitudinal striations and spinulose projections that disappear rapidly upward; mature chambers very smooth and coarsely punctate; sutures sharply depressed; aperture terminal, elliptical, bounded by a short, flaring rim and connected to earlier apertures by an inner tube. Length up to 0,9 mm; average 0,5 mm”.

Comparing this description by Plummer with topotypic material from Mexia Brick Works, and Wills Point, one observes that this description is adequate up to a minor difference: the pores are not coarse, but only distinct. There are, in those type localities, also specimens which tend to have dentations at the sutures, character of *Loxostoma applinae* Plummer. There is, indeed, when reading Plummer's description of the two species, no real difference between them, and the two species must be closely allied.

Siph. eleganta is a typical species for the Paleocene; Cushman (Geol. Surv. Prof. Paper 232, 1951, p. 39) says about it: "This seems to be an excellent index fossil for the Paleocene”.

In Holland and Belgium it is found in the transitional layers between the Cr 4 and the Lower Mb, and in the Lower Paleocene just above the Upper Md. In the case that it is typical for the Paleocene, the transition between the Cr 4 and the Mb must already be Danopaleocene. Brotzen describes it from the Lower Paleocene of Sweden, under the name of *Loxostoma applinae*, but mentions already the lack or poor development of the indentations at the sutures; specimens received from

Wicher from the Paleocene of the Basin of Gams, Austria, and determined by him as *Loxostoma applinae*, show no difference with the specimens from Holland and Sweden; *Loxostoma applinae* and *Siphogenerinoides eleganta* are mentioned by many authors dealing with the planctonic faunal break at the Cretaceous-Tertiary boundary as a group of forms typical for the Danopaleocene, and here in Holland it appears for the first time just at this faunal break, the boundary between the Cr 4 and the Lower Mb.

There is strong possibility that Marie's *Rectobulimina carpentierae* from the Cr4 of the drill-hole Sluse, Belgium, also is *Siphogenerinoides eleganta* (Bull. Soc. géol. Belgique, vol. 24, 1956, p. B. 250, pl. 3, fig. 1—2). The triangular arranged chambers mentioned by Marie are never found, but he confounds the species with another one, found in older layers also (*Praebulimina rosenkrantzi* Brotzen).

FORAMINIFERA FROM THE CRETACEOUS OF SOUTHERN LIMBURG, NETHERLANDS, XXIX.

PRAEBULIMINA QUADRATA PLUMMER.

by J. HOFKER

Bulimina quadrata Plummer, Univ. Texas Bull., 2644, p. 72, pl. 4, fig. 4, 5, 1927.

“Test of megalospheric form almost cylindrical, stout, increasing in diameter only very slightly from the broad blunt initial end toward the broadly rounded oral extremity; microspheric form pointed aborally through a succession of small chambers that follow the proloculum to the later mature chambers that comprise a test identical in shape with that of the much more frequent megalospheric form; chambers smooth, very little inflated, broad, and short; sutures as sharp lines in the early part of test and faintly depressed above; wall thin; aperture a large ventral slit on the inner side of the last chamber and connected with all previous apertures by an inner tube that traverses the entire length of the shell. Length up to 0,65 mm in megalospheric form, average 0,5 mm; up to 0,8 mm in microspheric form.”

This description by Plummer agrees in all points with the characters of a species which