

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

by J. HOFKER

CIBICIDES BOSQUETI (REUSS).

Rosalina bosqueti Reuss, 1862, (1861), Paläontologische Beiträge II, Die Foraminiferen des Kreidetuffs von Maastricht; Sitzber. Math. Cl. k. Akad. Wiss. Wien, Vol. 44, p. 316, pl. 3, fig. 1.

Discorbina bosqueti (Reuss) Franke, 1925, Abh. geol. pal. Inst. Univ. Greifswald, Vol. 6, p. 92, pl. 8, fig. 13.

Discorbina bosqueti (Reuss) Franke, 1928, Abh. preuss. geol. Landesanst., N.F., 3, p. 190, pl. 18, fig. 5.

Discorbis bosqueti (Reuss) v. Raadshoven, 1940, Natuurhist. Maandbl., Jg. 24, p. 12.

Gavelinella bosqueti (Reuss) Visser, 1950, Thesis Leiden, p. 266, pl. 5, fig. 8.

Cibicides excavata (non Brotzen) Hofker, Publ. Natuurhist. Genootsch., Ser. 4, 1951, p. 17—19, figs 19, 20.

Test oval in regularly built specimens, nearly planispiral, but with the dorsal side more convex than the ventral one, which in most specimens is flattened or even slightly concave, with a narrow but distinct umbilical hollow.

Periphery subacute or rounded, lobulate in the last formed chambers.

At the dorsal side the chambers of the last formed whorl are clearly visible, those of the former whorls covered by the thickened dorsal wall. In most specimens 6—8 chambers are found in the last formed whorl; the last formed chamber often larger and more inflated especially at the ventral side. Sutures depressed at the dorsal side, not only the radiating ones but also the spiral. At the dorsal side the sutures are slightly bending backward. At the ventral side the sutures are depressed in the last formed

chambers but in the earlier ones they are limbate by irregular bosses of chalk; surface shining, with coarse perforations and small bosses between the pores. Pores with a diameter of about 4—5 μ , diameter not increasing during time. Aperture an arched slit at the ventral margin, sutural.

In transverse section the ventral walls do not open into the ventral umbilical hollow, the walls are thick in most specimens, but in the Md they become somewhat thinner. Walls opaque, often with yellowish colour. In horizontal section the septal walls are thin and single.

Diameter 0,50—0,90 mm, thickness 0,30—0,45 mm.

All characters point to real *Cibicides*, and not to *Discorbina* or *Gavelinella*. Visser mentions very small specimens (0,26 mm) which may belong to a different species. Visser's *Gavelinella tumida* (p. 267, pl. 5, fig. 9) also is *Cibicides bosqueti*, which is rather variable in its shape and size.

Hofker (1951) and Visser (1950, p. 289, pl. 6, fig. 6) both mention *Cibicides excavata* Brotzen as found in the Tuff-chalk of Maastricht; but all their specimens belong to *Cibicides bosqueti*, though the difference between real *exavata* from the Santonian and *C. bosqueti* is not very great.

The species occurs already in the upper parts of the Cr 4, is found in many samples of the Ma up to the highest Md, and, moreover in the Danian of Denmark and the Paleocene of South Limburg, where it occurs abundantly. The author found it also in the *Pseudotextularia*-zone of the drilling Maasbühl I, and in the *Pseudotextularia*-zone of Stevns Klint, Denmark.

Cibicides bosqueti is found also in many samples from the Kunrade Chalk, where it belongs to the autochthonous species. Moreover it forms with *Gav. umbilicatiformis* the only remaining Foraminifers in the typical sponge beds of the Mb. This indicates that the species has been adapted to quite different and even unfavourable circumstances, though in the spongebeds specimens are of small size.

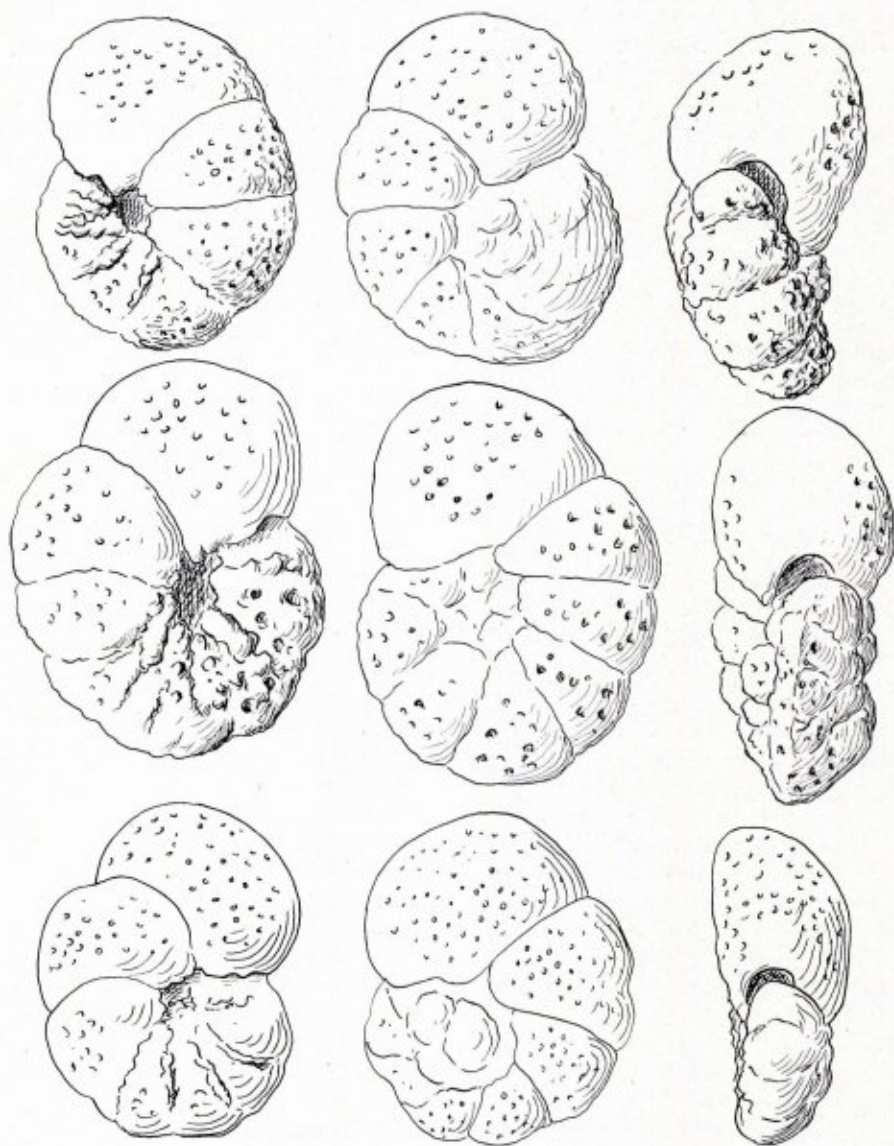


Fig. 1. *Cibicides bosqueti* (Reuss). Upper row: from coll. Kruit, 149, Enci, Cr 4. — Middle row: from coll. Hofker, 154, Enci, coprolitic layer, Enci Ma. — Lower row: from coll. Kruit, drilling OB. 194, No. 344, Md. — In all rows firstly the ventral side is figured, then the dorsal side, and afterwards the apertural face. All $\times 50$.

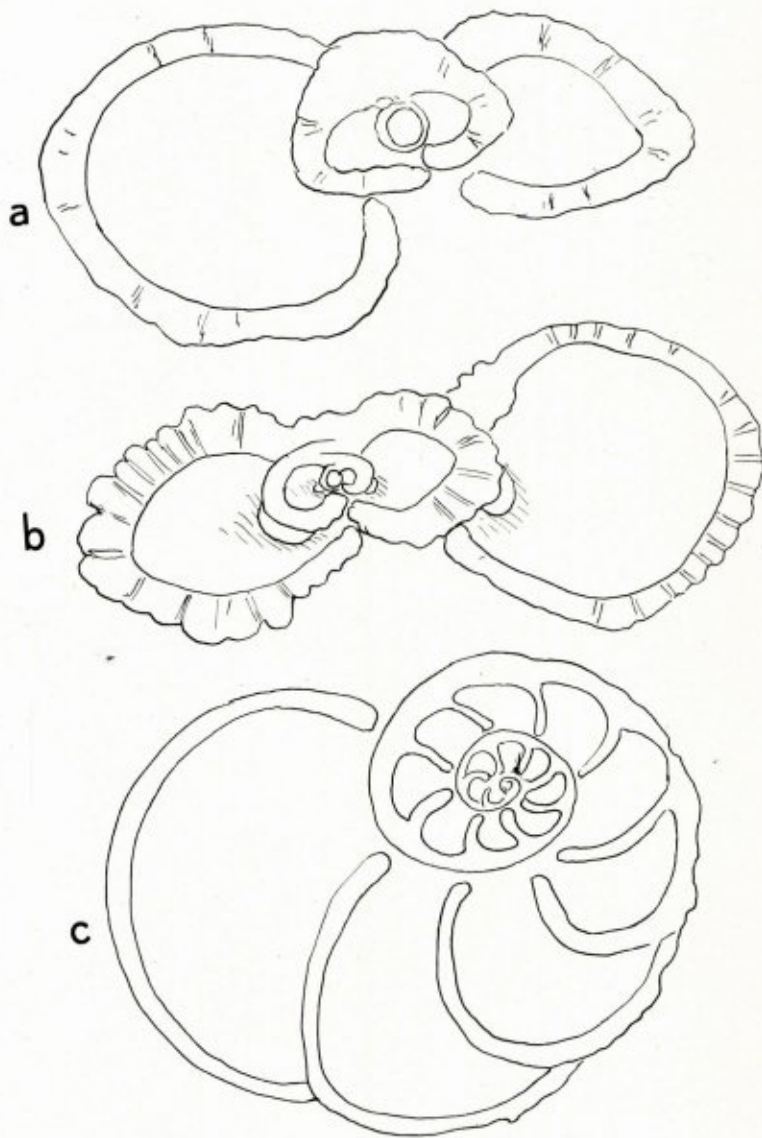


Fig. 2. *Cibicides bosqueti* (Reuss). a. Transverse section through the specimen of the upper row of figure 1; b, transverse section through the specimen of figure 1, middle row; c, longitudinal section through specimen of lower row of fig. 1, showing the simple septal walls. All $\times 100$.