

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

GLOBOROTALIA PRAETUBERCULIFERA
nov. spec.

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In a former paper the author has dealt with *Pararotalia tuberculifera* (Reuss) (Natuurhist. Maandblad, vol. 46, 1957, pp. 32-39, fig. 1-18).

In that paper the author described the first appearance of this species in the Upper Mb of Southern Limburg, and stated that there the species very much resembles a *Globorotalia*. New samples gathered from the Southern part of the St. Pietersberg, in Belgium, near Lanaye, gave an abundant material, now from the lowermost Mb. Here the species always shows the characters of *Globorotalia*, and not of *Pararotalia*, since the ventral central knob is totally and always missing. Though the author is sure, as an uninterrupted sequence of forms is known to him from the forms in the Lower Mb, accompanied by the typical fauna of that level, up to the forms of the Upper Mb, that from that *Globorotalia*, *Pararotalia tuberculifera* evolved, it seems to be opportune to give this early form with only the features of *Globorotalia* a distinct name, and he so creates here the species *Globorotalia praetuberculifera*.

Description. Dorsal side only slightly elevate, ventral side more conical. At the dorsal side all chambers visible, sutures strongly rounded and often distinctly inflated, running into the periphery, as in *Globotruncana* and *Globorotalia*. Periphery acute, showing a single poreless rim. Sutures at ventral side slightly rounded, radical, running towards the centre, leaving only a very small central umbilicus free (or even it is covered by the tena of the chambers). Here the sutures slightly depressed. Aperture a narrow slit at the last formed ventral suture. Wall distinctly but finely porous. Diameter up to 0,45

mm, thickness up to 0,18 mm. Common in the Lower Mb of the Southern part of the Pietersberg.

This new *Globorotalia* in the Lower Mb, just above the highest layers of the Cr 4 in which a typical planctonic fauna is found pointing to the uppermost Cretaceous, stresses the view, already given in an earlier paper (Planctonic Foraminifera of the Chalk Tuff of Maestricht, Natuurhist. Maandblad, vol. 45, 1956, pp. 51-57) that the planctonic faunal break, always considered as indicating the Cretaceous-Tertiary boundary, in the Tuff Chalk of Maestricht is not found above that Tuff Chalk, but just underneath it. For in the whole Maestrichtian Tuff from the Mb up to the uppermost Md, no *Globotruncanae* could be found, whereas planctonic forms with a Tertiary or Danian habitus are very common. Of the genus *Globorotalia* now already four species are found in the Maestrichtian Chalk Tuff: *Globorotalia praetuberculifera* nov. spec., (Lower Mb), *Gl. membranacea* (Ehrenberg) (Lower Md), *Gl. mosae* Hofker (Upper Mc and Lower Md), and *Gl. angulata* (White) (Lower Md).

The sequence *Globorotalia praetuberculifera* to *Pararotalia tuberculifera* strongly points to a development during the Cretaceous-Tertiary boundary of *Pararotalia* from *Globorotalia*, and to a very close relationship between these two genera.

FIGURES.

Globorotalia praetuberculifera nov. spec. Two specimens have been figured, the one, the upper one, holotype, dexterally coiled, the other, coiled to the left, with already the peripheral spines typical for *Pararotalia*. Along the way climbing upwards from Petit Lanaye, in the lowermost Mb (sample 164 Hofker). $\times 170$.

The lowest row shows a specimen which, though having the features of a real *Globorotalia*, already possesses the spiral periphery and a dorsal ornamentation along the sutures, leading over to *Pararotalia tuberculifera* (Reuss). Lowermost Mb, in a hollow flint, Canal Albert, tranchée de Castor; $\times 170$.

