

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

SOME MORE PLANCTONIC FORAMINIFERA FROM THE LOWER MD IN THE QUARRY CURFS HOUTHEM

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In a hole in the hard ground between the Mc and the Lower Md, in the quarry Curfs near Houthem, South-Limburg, about 3 m above the base of the quarry a very fine sample was taken by B. J. Romein and put at the disposal of the author. Several species of planctonic Foraminifera, not yet described in a previous paper (Planctonic Foraminifera of the chalk Tuff of Maestricht and environments; *Natuurhist. Maandbl.*, vol. 45, 1956, pp. 51-57, figs 1-24) were found. I will give here a short description with the figures of this planctonic faunule.

Gümbelina ultimumida White. This is the latest and smallest form of the *Gümbelina striata*-lineage. It occurs in very small specimens from the Cr₄ up to the Upper Md; also in the Lizard Springs Formation.

Gümbelitria cf. *cretacea* Cushman. The specimens are very small, as the type is, but are longer, with more rows of chambers than in the specimens described by Cushman from the Selma-Chalk. They are known also from the Uppermost Md; their gracious form in many respects resembles *G. mauriciana* Howe from the Eocene.

Globigerina turgida Finlay. Specimens which are very much similar to those, described from the Lizard Springs Formation of Trinidad by Bronnmann; in some specimens also the small chamber covering the umbilicus was found.

Globigerinella cf. *aspera* (Ehrenberg). Very small specimens seem to belong in the vicinity of this species. The specimens are totally planospiral, but, contrarily to this form from the Upper Maestrichtian of Germany and elsewhere, all specimens show not 6 chambers to a whorl, but only five. Moreover the surface is smooth and not provided with small pustules. So it may be a different species.

Globigerina primitiva (Finlay). This small four-chambered species occurred in several specimens in the sample; it is characterised by its flat dorsal side and the sutural aperture; it was des-

cribed by Bronnmann from the Lizard Springs Formation.

Globigerina hornibrooki Bronnmann. Specimens differing from the already previously mentioned *G. linaperta* seem to be more in the vicinity of *G. hornibrooki*, according to the description given by Bronnmann for specimens of the Lizard Springs Formation.

Globigerina pseudobulloides (Plummer). This species has already been mentioned from the Cr 4; it was found also in this layer, the Lower Md.

Globorotalia angulata White. This small *Globorotalia*, with 5 chambers in the last formed whorl, nearly flat dorsal side and more inflated ventral one, with a faint lip over the aperture, was described by White from the Velasco in Mexico. Quite similar specimens occurred in the sample.

These species, together with *Globorotalia mosae*, *Globigerina* cf. *eocaena*, *Globigerina wilsoni bolivariana*, and *G. linaperta*, strongly point to an assemblage which is considered to be of an age after the "faunal break", characterising the boundary between Cretaceous and Tertiary. Some of them were described from the Lizard Springs Formation, which is of Dano-Paleocene age; others were found in the Velasco, which also is considered as belonging to the Dano-Paleocene.

FIGURES.

1. *Gümbelina ultimumida* White. Hole in hard ground between Mc and Md, quarry Curfs, Houthem. $\times 100$.
- 2 and 3. *Gümbelitria* cf. *cretacea* Cushman, but with tendencies to *G. mauriciana* Cole; same locality. $\times 100$. Two different specimens.
4. *Globigerinella* cf. *aspera* (Ehrenberg). $\times 100$; same locality.
5. *Globigerina primitiva* Finlay. Same locality, $\times 100$.
6. *Globigerina turgida* Finlay. Same locality, $\times 100$.
7. *Globigerina* cf. *hornibrooki* Bronnmann. Same locality, $\times 100$.
8. *Globigerina pseudobulloides* Plummer. Same locality, $\times 100$.
9. *Globorotalia angulata* (White). Same locality, $\times 100$.

