

RETICULOFENESTRA ORNATA Müller, A MARKER NANNOPLANKTON SPECIES IN THE MIDDLE OLIGOCENE

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Studying the nannoplankton content of the Oligocene deposits from Romania we were stricken by the explosive appearance of the *Reticulofenestra ornata* Müll. species in different structural units but at the same chronostratigraphical level.

Several samples collected from the lowermost part of the Ileanda Formation (Transylvania Basin, sites: the valleys Rohia and Valea Dracului, Grindu hill) yielded a very rich nannoplankton assemblage, almost a coccolithit, predominated by *Reticulofenestra ornata* Müll., and subsequently *Dictyococcites dictyodus* (Defl. & Fert), *Orthozygus aureus* (Strad), *Transversopontis fibula* n. sp. At the same level, Rusu (1972) described a macropaleontologic assemblage with *Nucula comta* Goldf. This species proved to be a very reliable paleontologic element for worldwide correlations (it was also mentioned in the Oligocene deposits from Belgium, N. of the Federal Republic of Germany, S. of the Soviet Union, etc.).

A similar nannofloristic assemblage was recorded by Martini and Lebenzon (1971), Lebenzon (1973) from the Tarcău Nappe (Eastern Carpathian Flysch Zone, site: Tărcuța valley). Beside the outbursting appearance of *Reticulofenestra ornata* Müll., the authors also mentioned a poor presence of: *Dictyococcites dictyodus* (Defl. & Fert), *Orthozygus aureus* (Strad.), *Zigrablitus bijugatus* (Defl.).

This biostratigraphic level with *Reticulofenestra ornata* Müll. was reported by Müller (1970), Müller and Blaschke (1971) from the Bavarian Molasse and from Piberbach drilling (Upper Austria), by Martini and Lebenzon (1971) and Lebenzon (1973) from the Eastern Carpathian area and by us, from the Transylvania Basin. All these samples were collected from the same chronostratigraphic level — Middle Oligocene.

Thus, we consider that the explosive appearance of *Reticulofenestra ornata* could be useful for dating the Middle Oligocene formations (= NP23 *Sphenolithus predistentus* zone). Further researches might prove the universality of this marker level.

PALEONTOLOGY

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Comparing the assemblages cited by Müller, Martini and Lebenzon and our assemblage, two striking facts are to be noticed: first, the outburst of *Reticulofenestra ornata* and second, the scarcity of exactly the

same accompanying species: *Dictyococcites bisectus* Hay, Mohler, Wade — syn. *D. dictyodus* (Defl. & Fert), *Coccolithus pelagicus* (Wallich), *Orthozygus aureus* (Strad.), *Transversopontis* sp.

Fam. COCCOLITHACEAE KAMPTNER 1928

Genus *Reticulofenestra* Hay, Mohler, Wade 1966

Reticulofenestra ornata Müller 1970

pl. I, figs. 1 — 9

Reticulofenestra ornata n. sp.; Müller 1970, p. 116, pl. 1, figs. 4—6;

pl. 2, fig. 4

Remarks. This species was described from Middle Oligocene of Füssing drilling and until now it was not encountered in deposits of other ages. Only images of the proximal side were obtained at TEM. In transmitted light the distal plate exhibits a narrow ring around the central opening.

Stratigraphic distribution: Frequent in the Middle Oligocene deposits from Bavarian Molasse, Upper Austria, Eastern Carpathians Flysch Zone, Transylvania Basin.

Genus *Transversopontis* Hay, Mohler, Wade 1966

Transversopontis fibula Gheța n. sp.

pl. II, figs. 1 — 7

Name: after the Latin name fibula (= buckle).

Holotype: I.G.G. collection, no. P. 101, 561 — XIV/5/17.

Type locality: Rohia village near Tirgu Lăpuș, Maramureș county.

Type level: Lowermost part of the Ileanda Formation, in the *Nucula comta* level, Middle Oligocene.

Description: Large lopodolit, ellipsoidal with two almost circular perforations separated by a bridge parallel to the short axis of the ellipsa. The bridge, irregularly shaped, presents thickenings on one or both sides.

Remarks. *T. fibula* differs from *T. pulcher* (Defl.) Hay, Mohler, Wade by its broad bridge, straight and irregularly shaped, and from *T. obliquipons* (Defl.) Hay, Mohler, Wade by its straight bridge parallel to the short axis of the ellipsa.

Stratigraphic distribution: Middle Oligocene, NP23 *Sphenolithus predistentus* zone.

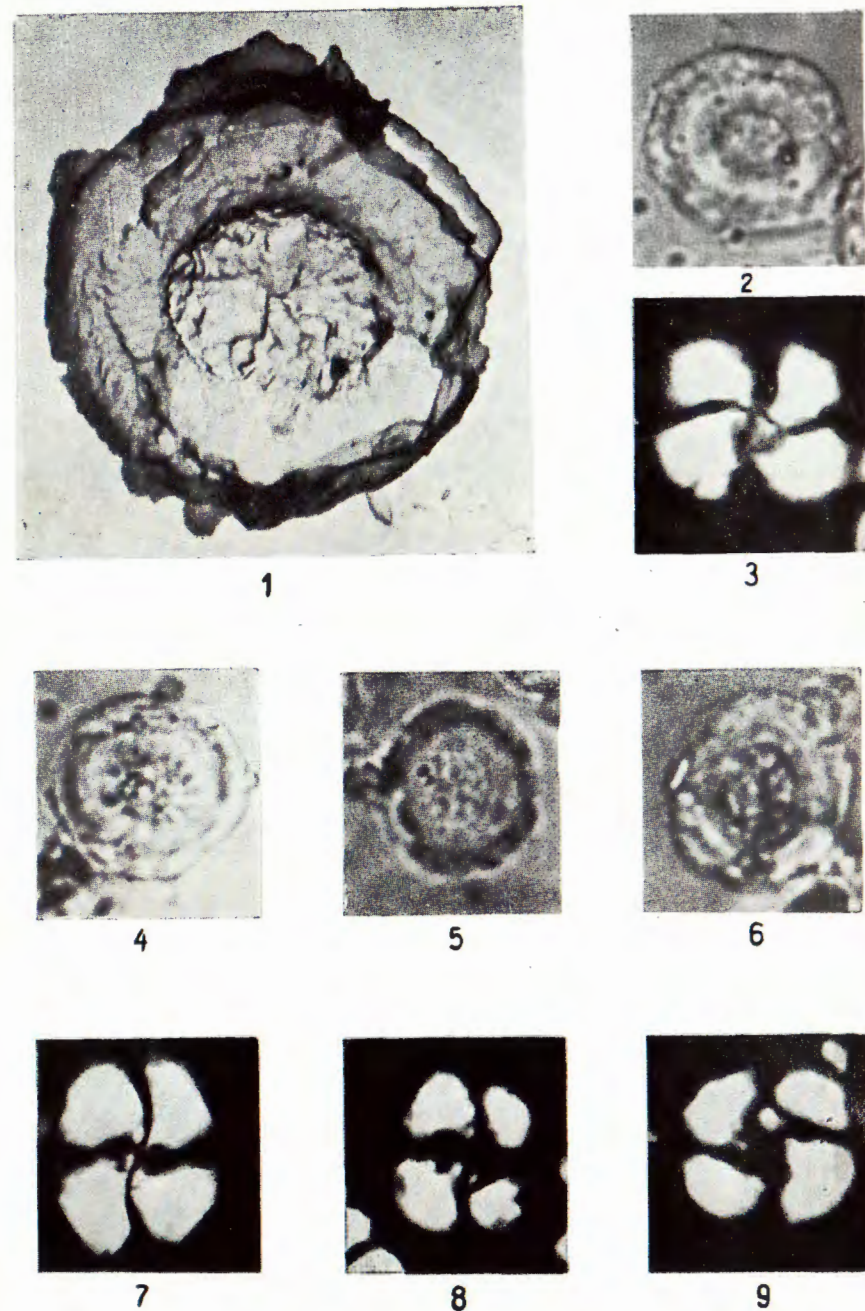


PLATE I. Figs. 1 — 9. *Reticulofenestra ornata* Müller: 1, proximal side (TEM); 2 — 4, 5, 7, 8, proximal side (transmitted light, 2, 4, 5, N II; 3, 7, 8, N ×); 6, 9, distal side (transmitted light, 6, N II; 9, N ×).

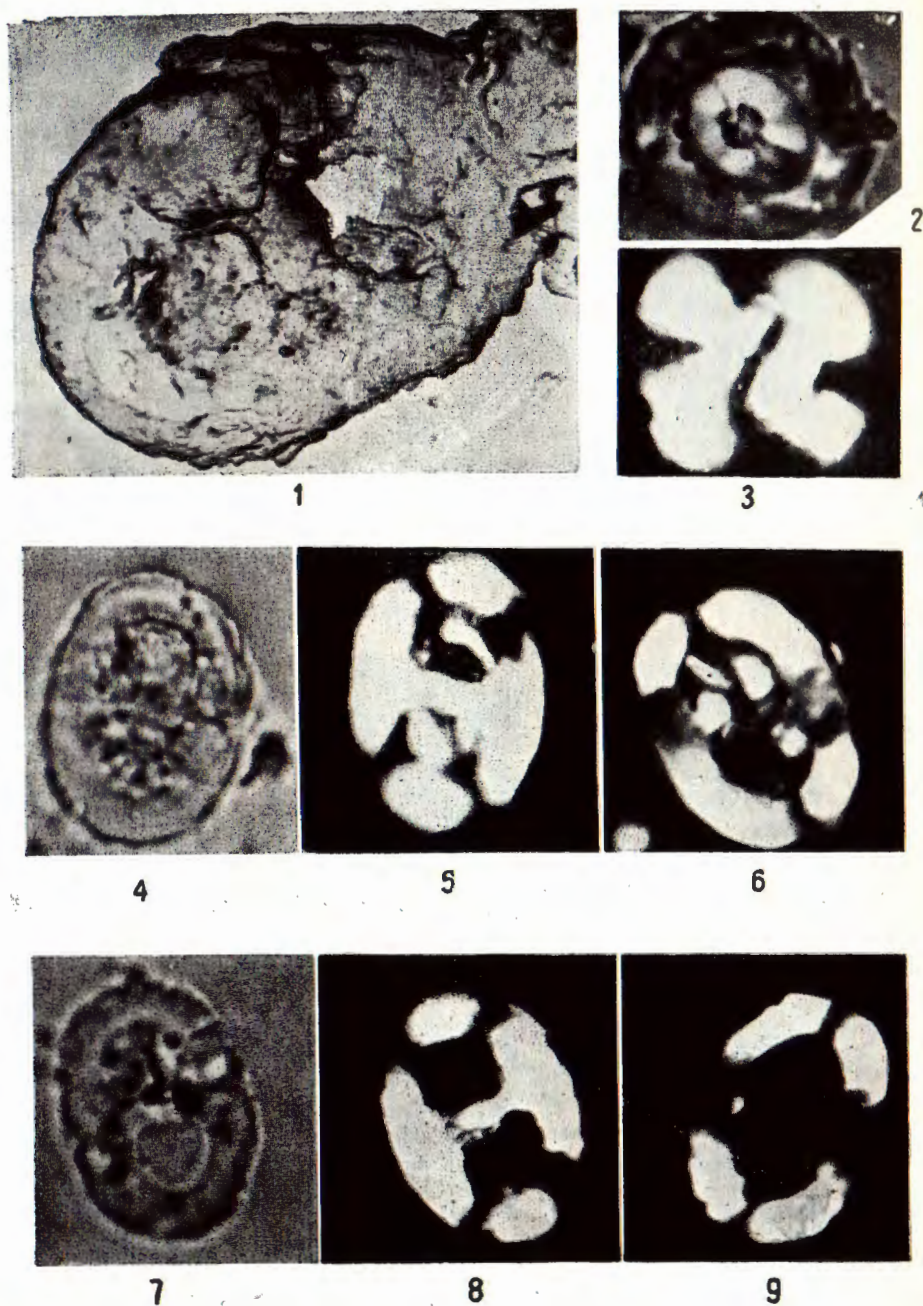


PLATE II. Figs. 1, 4 - 9. - *Transversopontis fibula* n. sp.: 1, TEM; 4 - 9, transmitted light; 4, 7, N II; 5, 8, N X; 6, 9, N X 45°. Figs. 2, 3. - *Dictyococites bisectus* (Hay, Mohler, Wade): 2, 3, transmitted light, 2, N II; 3, N X.

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