

THE NANNOPLANCTON OF THE BRYOZOAN AND BUDA MARLS

(Paleogene of Budapest, Hungary)

by

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Abstract

In and near to Budapest the Paleogene sequence comprises (from below upwards) the following units: Nummulitic-Lithothamnian Limestone (certainly Upper Eocene), Bryozoan Marl, Buda Marl, Hárshegy Sandstone or "Tard" Horizon respectively, Kiscell Clay (Rupelian), varied Upper Oligocene.

The Hárshegy Sandstone and the probably heteropic Tard Horizon are practically unfossiliferous. The stratigraphic position of the abundant faunas yielded by the Bryozoan and Buda Marls have been a matter of controversy for hundred years. This problem could not be settled on the basis of the benthos only. Already M. HANTKEN was aware of the abundance of pelagic foraminifers, especially in the Buda Marl. Nevertheless, their detailed study is still missing, except for two short papers by E. SZÓTS (1961 and 1968).

Copious nannoplankton has been found in some favourable beds of the Bryozoan Marl and throughout in the Buda Marl. The samples studied by the author have been taken in the Mátyáshegy quarry and the Szépvölgy valley, outcrops well known since M. HANTKEN's time.

The nannoplankton assemblages of the Bryozoan and the Buda Marls turned out to be identical, the only difference being that *Cycloplacolithella formosa*, a species common in the Bryozoan Marl, is rare in the Buda Marl.

The assemblage is the following (begun with the more abundant species):

Coccolithus pelagicus (WALLICH)

Dictyococcites dictyodus (DEFL.)

Cyclococcolithus neogammation BR. et WILCOXON

Isthmolithus recurvus DEFL.
Braarudosphaera bigelowi (GRAN et BRAARUD)
Zygrhablithus bijugatus (DEFL.)
Lanternithus minutus STRADNER
Sphenolithus pacificus MARTINI
Cycloplacolithella formosa (KAMPTNER)
Reticulofenestra placomoprha (KAMPTNER)
Discoaster barbadiensis TAN
Discoaster saipanensis BR. et RIED.
Coccolithus eopelagicus (BR. et RIED.)
Chiasmolithus oamaruensis (DEFL.)
Helicopontosphaera sp.
Orthozygus aureus (STRADNER)
Discoaster tani nodifer BR. et RIED.
Discolithina pulchra (DEFL.)
Discolithina multipora (KAMPTNER)

It may be considered as completely autochthonous; only some Cretaceous species represent the extremely rare allochthonous elements.

This association may be referred to the *Isthmolithus recurvus* Zone of the nannoplankton zonation (sensu HAY et al. 1967). This is of Priabonian age (resolution of the 1968 Eocene Colloquium, Milano-Nice-Paris), corresponding the Priabonian stratotype. The assemblage of the overlying *Ellipsolithus subdistichus* Zone has been found in the Lattorfian stratotype.