

NANNOPLANKTON CONTENTS OF THE TYPE-MAASTRICHTIAN

a note by Shirley E. van Heck

Following the current views, the type-Maastrichtian at the ENCI-Quarry near Maastricht can be subdivided into two lithological units: the Gulpen Chalk and the Maastricht Chalk, separated by a coprolite layer (ROMEIN, 1962). This subdivision is in accordance with an earlier, more refined lithological subdivision by UHLENBROEK (1912), and correlates as follows:

ROMEIN:	Maastricht Chalk	Md (+ 15 m.)	UHLENBROEK
	Coprolite layer	Mc (+ 10 m.)	
	Gulpen Chalk	Mb (+ 20 m.)	
		Ma (5 - 10 cm.)	

Nineteen samples from the type-Maastrichtian have been studied on their nannoplankton contents by SISSINGH (1977). Thorough reinvestigation of these samples (10 cm. per slide, 1200 X magn.) revealed some deviations, which gave reason for this note.

In total 142 species were recognised, several of which have not been described as yet. A selection of 56 species is presented on the distribution chart. To avoid any taxonomical descriptions, only published combinations have been used. The upper six samples (15.00 m. - 33.25 m.) were too poor for a quantitative analysis.

A most interesting result is, that Nephrolithus frequens appears far lower than reported by other authors, be it in very low number. This implies that most of the type-Maastrichtian belongs to the N. frequens Zone. Micula murus was also found, and several of the species described by PERCH-NIELSEN (1973) from the Maastrichtian of Madagaskar, e.g. Cribrocorona gallica, Eiffellithus parallelus, Markalius perforatus, Prediscosphaera majungae, Rhagodiscus reniformis, Stephanolithion munitum. Moreover, it appears that in many samples reworking is present as is demonstrated by the occurrence of Angulofenestrellithus snyderi, Aspidolithus parcus, Corollithion signum, Eiffellithus eximius and Tranolithus phacelosus from the Campanian, and of Reinhardtites levius from the Lower Maastrichtian.

The limited space in this Newsletter does not allow to elaborate on these results.

References

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Cr 4		Mb		Mc		Md		LITHOLOGICAL UNITS	
								SAMPLES	
0.00 m								33-25 m	
0.25 m							X	Actinozygus regularis	
0.50 m								Ahmuellella octoradiata	
0.75 m								Angulofenestrellithus snyderi	
1.00 m							X	Arkhangelskiella cymbiformis	
1.25 m							XX	Arkhangelskiella specillata	
1.50 m							X	Bidiscus rotatorius	
1.75 m								Biscutum castrorum	
2.00 m								Biscutum melaniae	
2.25 m								Biscutum panis	
2.50 m								Braarudosphaera bigelowi	
2.75 m								Braarudosphaera imbricata	
3.00 m								Broinsonia dentata	
3.25 m								Chiastozygus amphipons	
3.50 m								Chiastozygus inturratus	
3.75 m								Chiastozygus plicatus	
4.00 m								Corollithion exiguum	
4.25 m								Corollithion signum	
4.50 m								Cretarhabdus conicus	
4.75 m								Cretarhabdus crenulatus	
5.00 m								Cretarhabdus limbicrassus	
5.25 m								Cribrocorona gallica	
5.50 m							X	Cribrosphaerella ehrenbergii	
5.75 m							X	Cribrosphaerella linea	
6.00 m								Cribrosphaerella pelta	
6.25 m								Cyclagelosphaera margereli	
6.50 m								Cyclagelosphaera reinhardtii	
6.75 m								Diadorhombus rhombicus	
7.00 m								Discolithus hallii	
7.25 m								Eiffellithus disgregatus	
7.50 m								Eiffellithus eximius	
7.75 m								Eiffellithus parallelus	
8.00 m							X	Eiffellithus turriseifeli	
8.25 m								Goniolithus fluckigeri	
8.50 m								Kamptnerius magnificus	
8.75 m								Lithraphidites carniolensis	
9.00 m								Lithraphidites quadratus	
9.25 m								Lucianorhabdus cayeuxii	
9.50 m								Microrhabdulus decoratus	
9.75 m								Microrhabdulus stradneri	
10.00 m								Micula decussata	
10.25 m								Micula murus	
10.50 m								Nephrolithus frequens	
10.75 m							X	Palaeopontosphaera spp.	
11.00 m								Placozygus spiralis	
11.25 m							X	Prediscosphaera cretacea	
11.50 m								Prediscosphaera spinosa	
11.75 m								Prediscosphaera stoveri	
12.00 m								Reinhardtites levis	
12.25 m								Reinhardtites mirabilis	
12.50 m								Rhagodiscus angustus	
12.75 m							X	Stephanolithion laffittei	
13.00 m								Stephanolithion munitum	
13.25 m								Tranolithus phacelosus	
13.50 m								Vekshinella elliptica	
13.75 m								Vekshinella spp.	
14.00 m								Watznaueria barnesae	

Fig.1 - Species distribution within the type - Maastrichtian