

HELICOSPHAERA MEDITERRANEA Müller,1981, AND ITS STRATIGRAPHICAL  
IMPORTANCE IN THE LOWER MIOCENE

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Helicosphaera mediterranea Müller,1981

- 1979 Helicopontosphaera cf.sellii Bukry & Bramlette -- Báldi-Beke & Nagymarosy,p.56.
- 1980 Helicopontosphaera cf.sellii Bukry & Bramlette -- Báldi-Beke,p.171,  
Pl.2:4,Pl.4:11,12,13,16,19,20.
- 1980 Helicopontosphaera cf.sellii Bukry & Bramlette -- Nagymarosy,p.235,  
Pl.4:1,Pl.5:3-6.
- 1981 Helicosphaera mediterranea n.sp. -- Müller,p.428,Pl.1:13,14.
- 1981 Helicosphaera crouchii n.sp. -- Bukry,p.462,Pl.4:13-16,Pl.5:1-4.
- 1981 Helicosphaera transylvanica n.sp. -- Gheza,Pl.1:1-10,manuscript

Recently,three new species of Lower Miocene Helicosphaera were described:

2.3.1981 : H.mediterranea

9.1981 : H.crouchii

? .198? : H.transylvanica (only manuscript available)

They are all characterised by two large opening separated by a bridge sub-parallel to the minor axis of the ellipse.The bridge is optically continuous with the proximal part of the central area.The two latter species are here regarded as junior synonyms of H.mediterranea.The form mentioned from Hungary as H.sp.cf.H.sellii by Báldi-Beke & Nagymarosy was checked by Bukry in 1977 and found to be identical with his later H.crouchii and thus now

H.mediterranea.

H.mediterranea is widely distributed, being recorded from the Lower Miocene of the Tethys (Greece, Corsica, DSDP Site 372) and the Paratethys areas (Romania, Hungary, Austria, Switzerland). Müller (1981) found it at the type locality of the Burdigalian (NN 2, very rare, and NN 3, more common) in the Aquitaine Basin and Bukry (1981) reported it from CN2/CN4 of the Pacific Coast of California, onshore and on the Continental Borderland as well as at DSDP Site 469 (Leg 63).

The ranges given for H.mediterranea and its junior synonyms are shown in Figure 1. In the Carpathian Basin, its range goes considerably higher up than in the Mediterranean and the Pacific occurrences. The Carpathian Oligocene/ Miocene -- Paleogene/Neogene boundary was only defined on the basis of HOS (highest occurrence surface) and it would be useful to look out for some LOS (lowest occurrence surface) and take them into consideration, too.

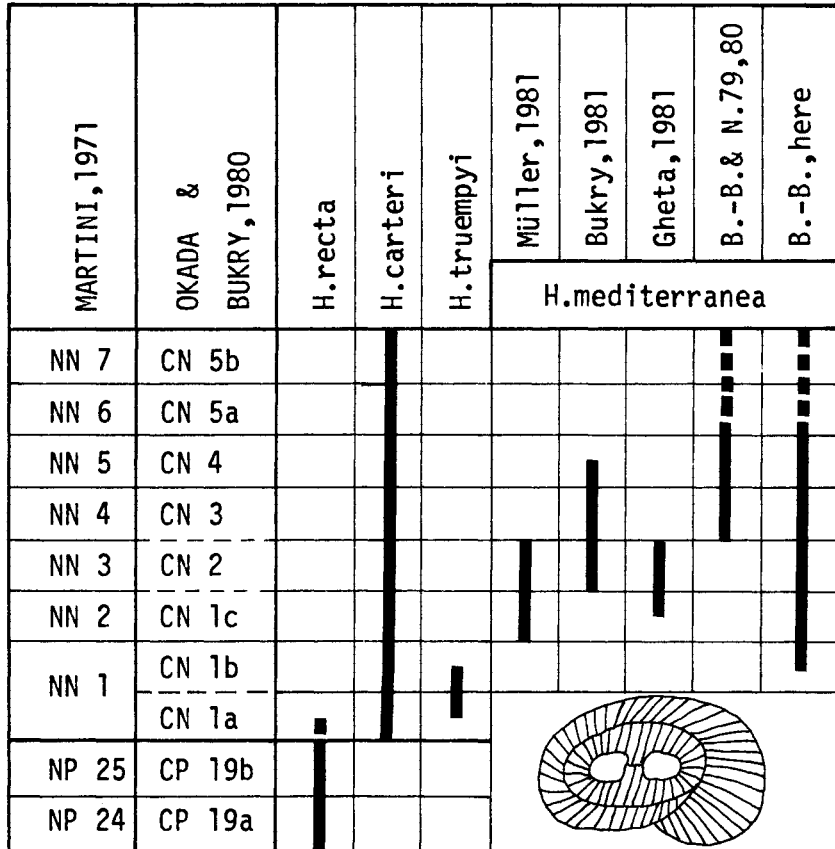


Fig.1  
Distribution of  
some species of  
Helicosphaera  
near the Oligocene/  
Miocene boundary

The LOS of H.carteri seems to be close to the NP 25/NN 1 boundary and the LOS of H.mediterranea a little later in NN 1. The LOS and the HOS of the seemingly shortlived H.trümpyi Biolzi & Perch-Nielsen (1982) also falls within the lower part of NN 1.

The presence or absence of the stratigraphically important forms is often controlled ecologically. The helicosphaerids are neither purely oceanic nor typical nearshore forms and this fact increases their usefulness.

## References

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