The genus *Heterostegina* (Foraminifera: Nummulitidae) ranges from the Middle Eocene to Recent, but the Oligocene species are poorly known. Here, Oligocene *Heterostegina* population from two localities of Southern Italy are investigated biometrically.

The occurrence of *Heterostegina* is reported for the first time from the lower Rupelian of the Caltavuturo Fm. from the Madonie Mts. (Sicily). This population (42 specimens) can be referred to the lower Rupelian because it was found in association with *Nummulites vascus* Joly & Leymerie, 1848, *N. fichteli* Michelotti, 1841, and *Halkyardia maxima* Cimerman, 1969 markers of chronobiozone SBZ 21 (Cahuzac & Poignant, 1997).

A second population (19 specimens) comes from the upper Chattian of the Calcareniti di Porto Badisco Fm. from Southern Apulia. The assemblage includes *Nephrolepidina morgani* and *Eulepidina dilatata* which are markers of SBZ 23.

Traditional biometric measurements such as the diameter of the protoconch (P), the diameter of the first spiral whorl (d1.0), the diameter of the first and half spiral whorl (d1.5) and the diameter of the second spiral whorl (d2.0) cannot be interpreted easily because of the depth-dependence of embryo size and involute/evolute form ratio (Pécheux, 1995). The number of primary chambers in the first whorl (N1.0), first and half whorl (N1.5) and two whorls (N2.0) have a low potential for distinguishing between the two populations and also in comparison to populations from the Eocene and the Miocene for which biometric data are available. On the contrary, whereas the number of operculinoid undivided chambers (X) shows a decreasing trend the number of chamberlets in the subdivided chambers increases in. Because of the difficulty to get complete equatorial sections, it is expedient to use parameter S_{3+4}, i.e., the sum of the number chamberlets in the third and fourth chambers. X and S_{3+4} are negatively correlated.

The phylogenetic affinities of the two populations are discussed. The population of the Lower Rupelian from Madonie Mts. could belong to a basal member of the lineage of *H. assilinoides* Blanckenhorn, 1890, whereas the population from Porto Badisco shows features of the lineage of *H. praecursor* Tan Sin Hok s.l.. Moreover, the investigated taxa can be differentiated using the spiral coiling diagram, which is routinely employed for *Nummulites*.

References: