

Chattian Larger Foraminifera from the Benitaxell Range (Prebetic Domain, SE Spain) - Discussion on the Characterization of Shallow Benthic Zone 23

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Abstract

In the northeastern part of the Benitaxell Range (Prebetic Domain, SE Spain), a kilometre-scale continuous carbonate strata with larger foraminifera and coralline algae crop out. The association of larger foraminifera is characteristic of Shallow Benthic zone 23, upper Chattian: *Austrotrillina asmariensis*, *Operculina complanata*, *Heterostegina assilinoidea*, *Spiroclypeus blankenhorni*, *Nummulites vascus*, *N. kecskemetii*, *Amphistegina bohdanowiczi*, *A. lessonii*, *Nephrolepidina* spp., *Eulepidina dilatata*, *E. elephantina*, *Miogypsinoides formosensis*, *Postmiogypsinella intermedia*, *Rotalia viennotti*, *Risananeiza pustulosa*, *Victoriella conoidea*. Chronostratigraphical species of *Nephrolepidina* and *Miogypsinoides* show a great variation that includes different species of supposed different age. If only thin sections are available for study, few specimens may lead to confusing interpretations. Especially, *Nephrolepidina* specimens show a wide range of embryo's size that would include the chronospecies *N. praemarginata* (SB 22), *N. morgani* (SB 22B-25), and *N. tournoueri* (SB 24-24). The biometrical parameters used in species distinction actually depend on embryo's size, and cannot be studied from random sections. Similarly, in *Miogypsinoides* the number of spiral chambers is variable and is thus in need of a statistical study, unfeasible without loose material. The presence in SB 23 of *N. aff. vascus* and *E. elephantina* is confirmed, although a detailed characterization of the former is needed. Two species of *Amphistegina* are recognized, *A. bohdanowiczi* and *A. lessonii*, the latter previously reported only from Miocene sediments. *Neorotalia viennotti* and *N. pustulosa*, usually reported from the upper Chattian, actually belong to the former, characterized by a large, protruding ventral pile. *Risananeiza pustulosa* is a characteristic species of the SB 23, which has been reported (usually as *Neorotalia* spp.) in Tethyan sediments from Spain to Iran. The association is very similar to assemblages reported from other Tethyan sites, showing a similar paleobiogeographic distribution of larger foraminifera during the Chattian and thus a good reliability for stratigraphical correlation.