



Epiphytic foraminifera on leaves and rhizomes of *Posidonia oceanica* from Ischia Island (Tyrrhenian Sea, Italy).

S. Casieri (1), V. Frezza (1), S. Mancini (2) and M.G. Carboni (1)

(1) Dipartimento di Scienze della Terra, Sapienza University, Rome, Italy, (2) Dipartimento di Biologia Vegetale, Sapienza University, Rome, Italy (sara.casieri@uniroma1.it)

Posidonia prairies play a significant role in temperate and tropical coastal marine systems, mostly in the structuring of habitats through the production of organic matter and oxygen. In the Tyrrhenian Sea (Vulcano Island), comparative studies on recent epiphytic foraminifera have been carried out only by Langer (1993). Preliminary analyses conducted on several samples of *Posidonia oceanica* allowed us to observe foraminifera in their living position and habitat. In order to study the living epiphytic assemblage only the foraminifera still attached to the *Posidonia* leaves have been considered. In fact, living foraminifera (Rose Bengal stained) present in the sediment of *Posidonia* meadows, although alive at the sampling time, don't permit to know if the foraminifera were really epiphytic or if they simply lived in the sediment characterized by *Posidonia* meadows.

Several sheaves (6-7 leaves each) of *P. oceanica* have been sampled by a scuba diver in the sea-grass habitat of Ischia Island (Tyrrhenian Sea) at five stations comprises between 15 and 22 m water depth. The *Posidonia* leaves have been immediately cut and immersed in a solution of distilled water and ethanol to preserve both the organic matter and the carbonate. The samples have been initially studied at the optic binocular microscope to record the whole living assemblage that consists of foraminifera, still in their living position, bryozoans and the calcareous algae *Hydrolithon*, *Melobesia* and *Pneophyllum* (Corallinaceae, Rhodophyta). Subsequently, pieces of the leaves with foraminifera have been glued on stubs and photographed at the SEM.

Qualitative analyses of the foraminiferal content allowed us to recognize many epiphytic foraminifera. These are all hyaline taxa belonging to Cibicididae, Homotrematidae, Planorbulinidae and Rosalinidae. The most abundant species are *Cylocibicides vermiculatus*, *Lobatula lobatula*, *Miniacina miniacea*, *Neoconorbina posidonicola*, *Planorbulina mediterraneensis*, *Rosalina brady* and *Tretomphalus concinnus*. The flat and long leaves of *P. oceanica* present two sides colonized by different organisms. One side of the leaves is always colonized by crustose coralline algae; foraminifera usually don't live on this side except for *P. mediterraneensis* and *T. concinnus*. On the other side, where the algae are very rare, a higher number and species diversity of foraminifera and bryozoans is found. Furthermore, these are larger and more developed than on the algae-side. This may be due to mechanic reasons (foraminifera don't stick well to the algae) or, more likely, the presence of a carbonate substrate could limit the capacity of the foraminifera to join the bacteria, diatoms and fungi that represent their food source. The presence of the species *M. miniacea* is limited to the rhizomes where it is found very abundant and it shows the characteristic pink/red color.

Langer M. R., 1993. Epiphytic foraminifera. *Marine Micropaleontology* 20, 235-265.