Prosobranch community from the *Posidonia oceanica* "Reefs" in the Stagnone Lagoon (Marsala, Sicily)

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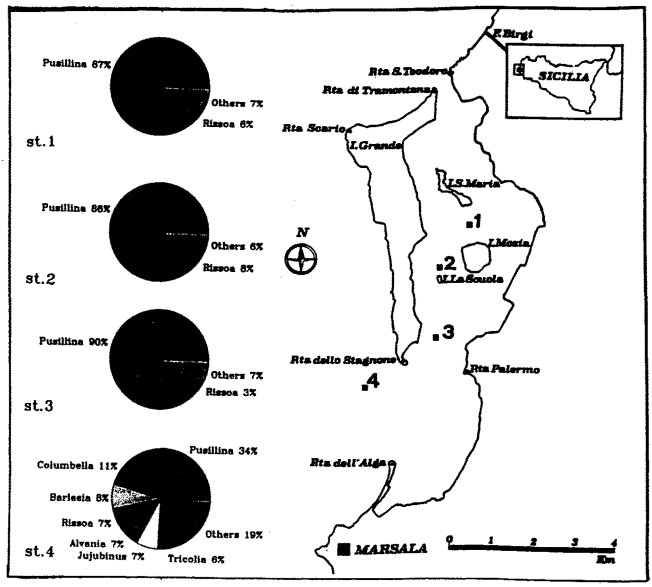
The Stagnone near Marsala is the biggermost sound of the Sicily. It can be subdivided in two basins; in the northern one, with major lagunar characteristics as low water movement and high sedimentation rates, the seagrass *Posidonia oceanica* grows till the surface on a thick "matte" layer. Typical "reefs" are therefore build up by the plant, displaced to form a number of parallel "cordons" (CALVO & FRADA'-ORESTANO, 1984). In the middle part of the basin (between the islands of Mozia and S.Maria) "cordons" became strongly arched to form a number of "atolls". The aim of the present study is to analize the colonization of such peculiar formations by the Mollusca Prosobranchia, a faunal group among the most representative and well adapted to the *Posidonia oceanica* leaf stratum.



Sampling has been performed in july 1990, in 4 stations at a depth of about 0,5 m, arranged along a N-S (inward-outward lagoon) transect (Fig.1). A total of 3.541 individuals, belonging to 40 species of Prosobranchia have been collected, utilizing the hand-towed net technique (RUSSO & VINCI, 1991).

An overall view of the structural trend concerning the malacological community can be given by the analysis of the quantitative dominances along the transect. It is evident that in the most "marine" station (st.4) the individuals are better shared out amog many genera. On the contrary in the lagoon (st. 1, 2, 3) the Rissoidae of the genus *Pusillina* are strongly dominant (more than 85% in each station). An increasing presence of *Rissoa auriscalpium* also occurrs (Fig. 1).

At least 4 taxa of Pusillina can be distinguished (*P. cfr. radiata, P. cfr. lineolata, P. cfr. philippi* and *P. cfr. incospicua*); however the shell variability is so high that the determination at species level is very difficult. It is reasonable to speculate that the Stagnone could be a sufficiently isolated site, with peculiar edaphic characteristics, where speciation processes are more effective (CHEMELLO & RIGGIO, 1990). The high variability in the populations of *Pusillina* species seems to support such speculation, besides to open new interesting fields of investigations, involving functional morphology and population genetics.

Among the other strong changes occurring in the lagoon, it is also worth noting that in the family Trochidae the species *Jujubinus striatus*, abundant in the marine station, completely desappears, while *Gibbula umbilicaris*, typical of shallow and exposed *Posidonia* beds (e.g. st.4), is mainly replaced in the sheltered "reefs" by *Gibbula adansoni*.

No differences between "cordons" and "atolls" have been noticed as far as the colonization by Prosobranchs.

On the whole the paramount dominance of Rissoidae, and in particular of the very controversial taxa of the genus *Pusillina* (cfr. VERDUIN, 1976), is a further evidence that the Stagnone, and its peculiar benthic formations as the "reefs" of *Posidonia oceanica*, is a rare and important marginal environment, suitable for studies on ecological segregation, population adaptative variability and speciation processes of the marine organisms.

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