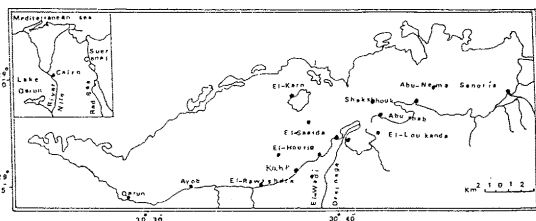


Lake Quarun is a saline land-locked lake, located in Al Fayoum depression in the western desert of Egypt (Fig. 1). It is shallow with a mean depth 4.2 m. Only 18% of its area has a depth ranging from 5 to 8 meters. The average S‰ has increased due to evaporation from 11.1‰ (in 1906) to 32.5‰ (in 1928) but is expected to remain unchangeable) until the middle of the next century (SOLIMAN, 1989). Transplantation of marine fishes started in 1928 by introduction of mugilids, then 1935 by *Solea vulgaris* and finally with shrimp postlarvae in 1977 & 1980 and later the stocking program for shrimp was stopped. Shrimp species were acclimatized well during the following period as reported by ISHAK *et al.*, 1980. Prawn production increased steadily from 2.4% in 1984 to 36.2% in 1990 of the total lake production. *M. stebbingi*, in particular, increased from 1.7% in 1979 to 30% in 1984 and then reached to 100% of total prawn landings of the lake in 1989 (ABDEL RAZEK, 1991). *M. stebbingi* has formally proved its efficiency as a shallow water species with apparently great tolerance to markedly high salinities in Suez Canal Lakes (GAB-ALLA *et al.*, 1990) and this is considered an important reason for its succession in Lake Quarun.

More than 77% of *M. stebbingi* catch was landed at El-Loukanda, Shakshouk, El-Saaida and Abu-Shanab centers, east of the lake, were 5% 30-31% and bottom is sand and sandy mud. While in western part Kahk and El Rawashdia are the most productive with regards to shrimps.

The maximum size recorded of *M. stebbingi* in Lake Quarun was 12.0 cm for females and 11.0 cm for males which proves a considerably optimal environmental conditions for its growth in comparison with other habitats. The results show the estimated minimum size for mature female of *M. stebbingi* in Lake Quarun to be 8.3 cm T.L which is the minimal biological size for maturation compared with other areas of occurrence. In Lake Quarun *M. stebbingi* showed a clear breeding season over a period from June to October and the recruitments appeared from August to October.

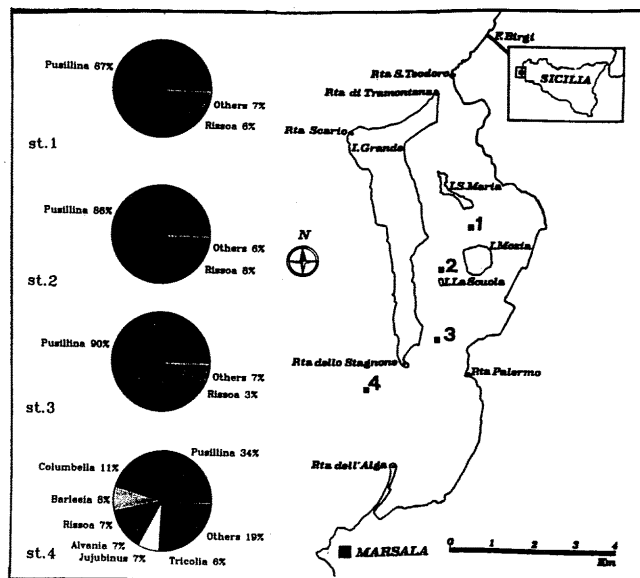
Unfortunately, the active period of *M. stebbingi* spawning as well as the higher occurrence of its newly born groups, coincided with the intensive period of fishing in the lake (July-October). This system causes a drastic effect on the abundance of mother shrimps as well as juveniles, this seriously affecting the shrimp fishery of the lake. For this reason, much attention has to be given to the fishing periods, as well as fishing gears used, for good management of shrimp fishery in Lake Quarun.



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The Stagnone near Marsala is the biggest 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 analyze 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 among 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 occurs (Fig. 1).

At least 4 taxa of *Pusillina* can be distinguished (*P. cf. radiata*, *P. cf. lineolata*, *P. cf. philippi* and *P. cf. 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 disappears, 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* (*cf. 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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