BENTHIC ZONATION IN MARINE CAVES OF THE NORTH AEGEAN SEA

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Only few Mediterranean marine caves have been examined quantitatively for the spatial variability of their sessile benthic communities, while this kind of research is totally missing for the Eastern Mediterranean. In the present study two submerged caves at Fara (11-18 m) and Agios Vasilios islets (24-40 m), off Lesvos Island, were mapped in detail and their biological zoning was surveyed with SCUBA diving and non-destructive methods (photo-quadrats). The coverage percentages of twelve taxonomic groups were calculated for three sites (two walls and ceiling) and three zones (entrance, middle, inner) of each cave. A similar biological gradient was observed at both caves, with total coverage decreasing and algae being replaced by invertebrates towards the interior. Sciaphilic algae dominated at the entrance of Fara cave, while their coverage was similar to that of sponges in the more shadowy entrance of the deeper Agios Vasilios cave. Plant life disappeared in the middle zone of the former but penetrated this zone in the latter cave, which receives higher light intensity through the larger entrance opening. Sponges dominated in the middle and inner zones of both caves. Scleractinians presented higher coverage on the ceilings of most cave zones and polychaetes in the inner dark zone of Fara cave. The percentage of bare rock was higher in the dark terminal tunnel of Agios Vasilios cave. The variation in coverage percentages of all groups at different sites and zones reflects the variety of topographic and physical features among and within caves, indicating a high level of individuality.

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