THE RECENT DISTRIBUTION OF BENTHIC SHALLOW-WATER FORAMINIFERA IN CORFU ISLAND (GREECE, IONIAN SEA) – A BIODIVERSITY HOTSPOT BETWEEN THE EASTERN AND WESTERN MEDITERRANEAN

Weinmann, A.E.[1], Triantaphyllou, M.V.[2] & Langer, M.R.[3]

[1]Natural History Museum Vienna, Geological-Paleontological Department, Vienna, Austria, anna.weinmann@nhm-wien.ac.at
[2]National and Kapodistrian University of Athens, Faculty of Geology and Geoenvironment, Athens, Greece
[3]Rheinische Friedrich-Wilhelms-Universität Bonn, Institute of Geosciences, Bonn, Germany

The Island of Corfu (Greece) is situated in the northern Ionian Sea, which forms a transition zone between the Eastern and Western Mediterranean basins. This suggests the potential for a high biodiversity in marine organisms such as shallow-water foraminifera. We analyzed the foraminiferal assemblages of 51 samples from 25 unique locations around the island. They covered a depth range of 0.5 to 40 m and a variety of habitats (sandy sites, rocky shores and seagrass meadows). We calculated diversity indices and performed several analyses (e.g., Cluster and PCA) to study the community structures of local foraminiferal assemblages. With 200 benthic foraminiferal species we found a high species richness, which is comparable to neighboring areas of southern Albania but significantly higher than other locations in Greece or Italy. Diversity indices such as Fisher α and Shannon index were comparable or higher to other locations. We found that the main ecological drivers for assemblage composition were water depth (<2 m, 2–5m and >5 m) and habitat distribution, leading to 3 main Cluster-assemblages around the Island: 1) sandy or rocky, shallow-water areas from the South and West, 2) deeper areas from the West and 3) rocky, vegetated areas of variable depths from the North and West. We also found that the recent tropical invader *Amphistegina lobifera* is well established in Corfu. Our results show that the biodiversity of shallow-water foraminifera around Corfu Island is indeed high, which is most likely attributed to its unique location in the Mediterranean transition zone. It is also likely that Corfu Island is currently benefitting from ongoing range expansions of warm-adapted foraminiferal taxa due to ocean warming, as currently represented by the presence and establishment of *A. lobifera*.