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THE ROLE OF ENDOLITHIC AND EPILITHIC BIOCRUSTS ON KARSTIFICATION IN COASTAL ZONE OF CASPIAN SEA

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Karst landforms are one of the dominant facies in Iran where more than 50% of areas covered by carbonated rocks particularly in arid and semi-arid areas. Apart from the role of atmospheric parameters on dissolution and geochemical reactions in karst developments, microbial communities play an important role to create karst features, at least in a micro-scale at the first actions. In this research, the influence of Endolithic biocrusts on development of Karst cracks and dissolution processes was studied along an evaporated soluble formation at the coastal zone of Mazandaran, Caspian Sea. Also, the role of Epilithic communities on creating Karren-Lapies was studied in the studied area. Microscopic analysis and scanning electronic microscope (SEM) were used for recognition of biocrusts and activities. The results indicated that Endolithic species by accelerate rock decomposition, and chemical denudation of rocks developed the dissolution of carbonate rocks, while Epilithic increases the dissolution and bio-weathering processes due to microbial respiration which provides the environment for other biological crusts and develop Lapiez.

Keywords: Karst; epilithic; endolithic; Caspian coastal zone