



Structure, diversity and environmental role of foraminiferal assemblages from reefal settings of Moorea (Society Islands, French Polynesia)

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Reefal and shallow lagoonal environments around the island Moorea (Society Islands, French Polynesia) offer a spectacular variety of microhabitats providing a multitude niches and ideal settings for rich assemblages of tropical benthic foraminifera. The Society Islands are located near the hotspot of tropical marine diversity and represent a transitional location between the high diversity assemblages of the coral triangle and the low diversity biotas of the eastern Pacific. This area constitutes an important biogeographic link and stepping stone between the eastern and western biotas of the tropical Pacific Ocean. We have analyzed the structure, diversity and composition of benthic foraminiferal assemblages from around Moorea to document the composition, species richness and environmental role of larger and smaller benthic foraminifera from within the lagoonal system, the mangrove habitats and fore-reef sites. Foraminifera are prominent producers of calcium carbonate and contribute significantly to structures in reefal settings of the tropical Pacific. We evaluate the potential of larger symbiont-bearing foraminifera as environmental engineers and apply the FORAM-Index as proxy to assess the conditions around Moorea Island. We also evaluate the role of the Society Islands as stepping stone between biogeographic regions of the Pacific Ocean.