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**ABSTRACT VOLUME**

**and**

**FIELD TRIP GUIDE**

# **IV International Rhodolith Workshop**

**Abstract Volume and Field Trip Guide**

Edited by

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## Miocene to Recent rhodoliths of the Azores: Systematics, palaeoecology and palaeobiogeography

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In the Azores, fossil rhodoliths are known only from the island of Santa Maria, and recent rhodoliths are known, so far, from the islands of São Miguel, Pico and Graciosa (Fig. 1). Studies on this subject are still sporadic (e.g. Amen et al., 2005; Rosas-Alquicira et al., 2009). Since 2000, a local team at the University of the Azores (MPB-Marine PalaeoBiogeography) has been studying the fossiliferous outcrops of this archipelago, having as result a series of checklists of different organisms, descriptions of the outcrops and palaeobiogeographical studies.

A study on rhodolith fossil deposits will help to understand if the local factors were more important in deciding the relative scarcity or surplus of rhodoliths than some of the possible global influences that also impacted the middle Miocene world (Halfar & Mutti, 2005; Johnson et al., 2010).

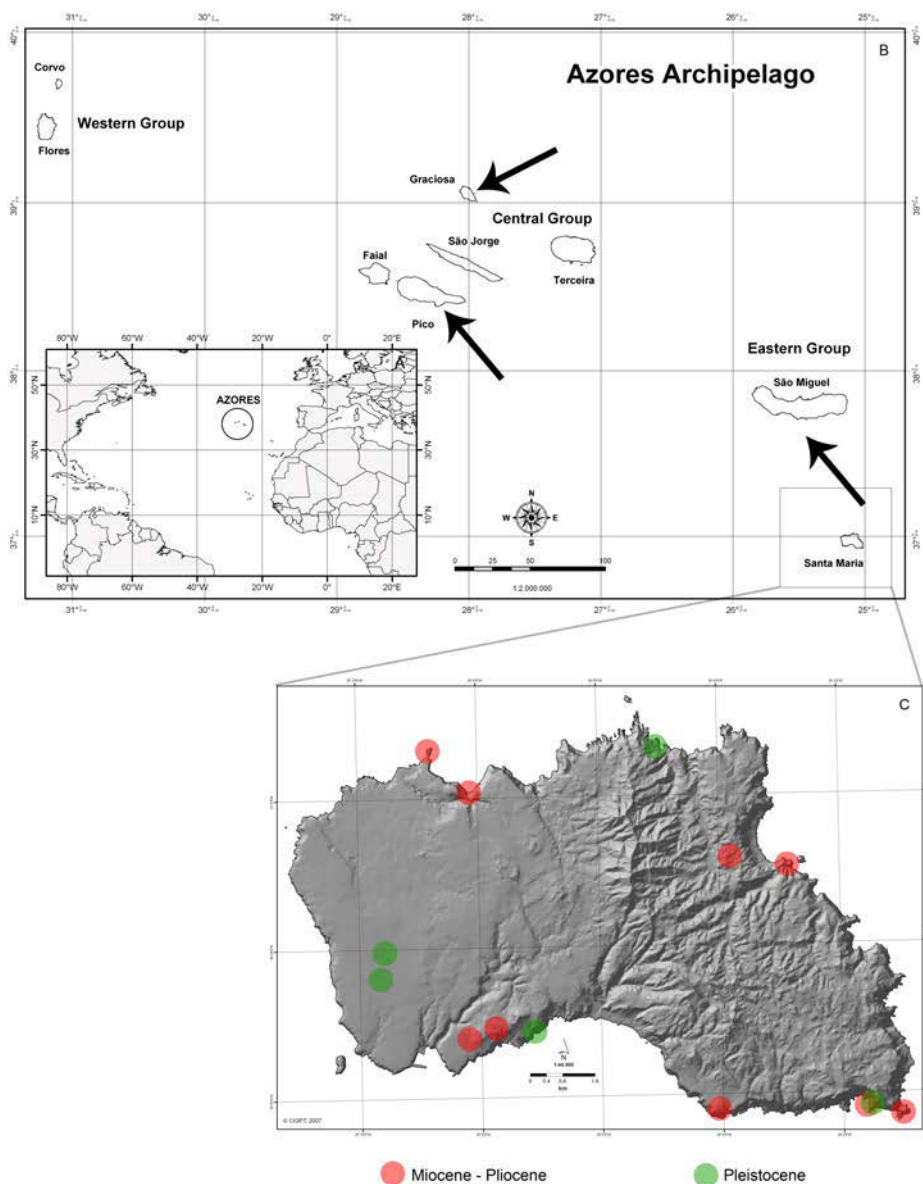
Rhodoliths will be collected from several Late-Miocene-Early Pliocene outcrops in Santa Maria Island.

The project aims to produce the first taxonomical study of the Late-Miocene-Early Pliocene rhodolith coralline algae for the Azores and to produce check-lists of the rhodolith coralline algae species by Island collected from selected outcrops. The outcrops will be studied geologically, chronostratigraphically and geochronologically in the frame of the project "The Route of the Fossils". Data sets will be used to establish the (palaeo)-biogeographical relationships between the Atlantic archipelagos (Azores, Madeira, Canaries and Cape Verde). The results will be compared with those of other marine organisms (mollusks, echinoderms, littoral fishes, bryozoans, ostracods).

Living rhodoliths will be studied in order to understand the environmental conditions and compared with their fossil equivalents.

The Miocene rhodolith assemblages from the Macaronesian archipelagos will provide new data for the exciting biogeographic puzzle that these oceanic island systems pose.

This paper aims to present the project that has started in 2012 as well as first results on palaeoecology and taxonomy.



**Figure 1.** A: Location of the Azores Archipelago; B: islands where Recent rhodoliths can be found (arrows); C: location of the Miocene-Pliocene and Pleistocene outcrops from Santa Maria island.

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