
Marine island biogeography: an overview of patterns and mechanisms involved in endemism and community assembly

Sergio Floeter*¹

¹Universidade Federal de Santa Catarina – Campus Reitor João David Ferreira Lima, s/n - Trindade, Florianópolis - SC, 88040-900, Brazil

Abstract

In contrast to terrestrial species, marine species have received little attention in studies of island theory. However, in recent years, studies concerning the biogeography, macroecology, and evolution of marine organisms living in islands gained momentum. I will show recent results that highlight the different processes ruling marine versus terrestrial biodiversity, mainly due to major differences in species mobility and colonization potential. I will present advances on theoretical ideas and real data examples to demonstrate: 1) the effects of sea-level dynamics on speciation processes on islands and seamounts, 2) global patterns of paleo and neo-endemism, and 3) archipelagos as functional islands for marine organisms - with focus on Cape Verde Archipelago. I will also bring functional and phylogenetic perspectives (i.e. the effects of environmental filtering, competitive exclusion or neutral mechanisms) on community assembly and endemism of marine island biotas, thus giving context to the other talks of the symposium.

Keywords: functional traits, oceanic islands, marine organisms, speciation, sea, level

*Speaker