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### Programme/Abstracts



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**Coastal Biotopes of Santa Maria Island: a re-evaluation of the Marine Protected Areas.**Ana I. Neto Francisco F. M. M. Wallenstein, **Nuno V. Álvaro** & Marlene Terra

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The definition of most Azorean Marine Protected Areas was based mainly on bibliographic revisions of old and scarce data. Consequently, there are areas of ecological importance that are not covered by any type of protection. The evaluation of the littoral biotopes and their importance in the island context and the archipelago is of major importance for the definition of such protection figures. With the purpose of re-evaluating MPAs, a study on coastal biotopes was conducted on the island of Santa Maria. Intertidal and subtidal communities (down to 30 m depth) were characterized based on sampling sites around the whole island. Data was collected mainly by nondestructive methods and analysed with Primer software. Resulting biotopes were integrated in a GIS system, and their distribution around the island compared with the existing MPA's coverage. Although most of the biotopes are covered by the present MPAs, their delimitation will have to be revised in order to include adjacent areas that are not subject to protection. A new MPA will be proposed based on landscape evaluation, species present and community structure.

**Conservation needs for a small marine protected area intensively used for recreational purposes: the Punta Nizuc reef, Western Caribbean**Patiño del Olmo Susana<sup>1</sup>, **Pedro-Luis Ardisson**<sup>1</sup> & Alfonso R. Condal<sup>2</sup><sup>1</sup> Cinvestav, Unidad Mérida, 97310 Mérida, Yucatán, México. <sup>2</sup> Département des sciences géomatiques, Université Laval, Québec (Québec), Canada G1K 7P4Corresponding author: Pedro Ardisson [ardisson@mda.cinvestav.mx](mailto:ardisson@mda.cinvestav.mx)

The Punta Nizuc reef, a component of the 'Costa occidental de Isla Mujeres, Punta Cancún y Punta Nizuc' Marine Protected Area (MPA) and one of the most visited reefs in Cancun, Mexico, is an extreme example of a reef used for recreational purposes. This fringing reef is composed of three shallow nearshore barriers receiving on a daily basis up to 1700 tourists during the high season. Its overall area is 26 km<sup>2</sup>, but all tourist activities are carried out within an actual area  $\leq 0.5$  km<sup>2</sup>. This excessive and concentrated use imprints perceptible changes in the reefscape. Since the identification of conservation needs rely on a sound understanding of the reef as a natural system, a detailed survey was carried out to determine if physical and biological reef attributes change among reef barriers as a function of depth and distance from the coastline. On the ground of spatial analysis techniques, results show that coral colonies shallowest and closest to the coastline are those asking for more strict regulation, and that for a reef the very fact of making part of a MPA does not guarantee a protection status in the absence of real and effective regulation of its intensity of use.

**Understanding the life history and species biology of key species in a Marine Protected Area Network improves the design of MPAs and monitoring protocols.****Jeremy T. Claisse**<sup>1</sup> & James D. Parrish<sup>2</sup><sup>1</sup>PhD Candidate, University of Hawaii at Manoa Department of Zoology / <sup>1,2</sup>Hawaii Cooperative Fishery Research Unit / <sup>2</sup>USGSCorresponding author: Jeremy T. Claisse [claisse@hawaii.edu](mailto:claisse@hawaii.edu)

Yellow tang, *Zebrasoma flavescens*, provides the largest aquarium fish catch in the state of Hawaii, constituting 84% of all aquarium fish collected on the west coast of Hawaii Island. Perceived declines of fish populations led to establishing MPAs which prohibit aquarium collecting on more than 30% of this coast beginning in 2000. A large monitoring program has been in effect since one year before the MPAs were established. Significant increases in yellow tang abundance have been interpreted to indicate that the MPA network has been a success. However, the basic life history/species biology of this species remained relatively unknown, and this has created problems in interpreting the data from monitoring. Over the past 2 years, we have begun to examine age, growth, reproduction, movement, and habitat utilization for this species. New revelations about their age and growth, as well as improved understanding of ontogenic differences in habitat usage, have led to changes in the way monitoring data are interpreted and how the monitoring is being done. These results underline the importance of understanding the basic biology of key species when designing MPA networks and developing monitoring protocols that will be used to gauge their success.