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Research Area: 1.4 Biological Oceanography



**PhD project: Spatial and temporal distribution of the order Cetacea in the Azores archipelago: relationship with biotic and abiotic factors**

**Supervisor: Dr. Jesús M. Torres Palenzuela (University of Vigo)**

**Summary:** The Azores are located in the middle of the North Atlantic Ocean, and this strategic location makes them an important habitat for pelagic organisms. The interaction between oceanographic and physiographic features enhance primary production and creates convergence zones that favour life aggregation around these waters. In the archipelago 28 different species of cetaceans have been sighted. Some of them are resident, while others are sighted only seasonally or occasionally. We aim to study the temporal distribution and habitat preferences of several cetacean species sighted around São Miguel (Azores). We need to undertake an extensive review of the oceanography of the region in order to understand how it can affect cetacean distribution. Whales and dolphins occurrence data were collected between 2008 and 2014 during the commercial trips of a whale watching company. To study habitat preferences we applied Generalized Additive Models (GAMs), non parametric statistical techniques widely used to study ecological systems with exploratory and predictive goals. We consider environmental variables in different scales in order to better capture the dynamic oceanography of the archipelago. Our main analyses focus on the three most sighted baleen whales of the Azores: blue whale, fin whale and sei whale.

