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PhD project: Diversity and ecology of Africa pycnogonides (Pycnogonida, Arthropoda, Chelicerata)

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Summary: Despite the fact that sustainable management of the fishery resources and protection of the biodiversity of marine habitats is a fundamental concern for all countries and international institutions involved in management and conservation of the oceans, the marine ecosystems in Africa are among the most unknown worldwide.

Since 2004, the University of Vigo, in collaboration with the Spanish Institute of Oceanography, have been developing a long-term project for the study of biodiversity and benthic habitats in waters of the Atlantic and Indian African coast, in which this doctoral thesis is focused. The main objectives of this PhD is the study of the biodiversity and ecology of the pycnogonids of the African continental margin.

The thesis is based on the study and identification of the collections of the pycnogonid species and the analyses of environmental data collected during the bottom trawling surveys carried out since 2004 on board the oceanographic vessels Vizconde de Eza and Dr Fridtjof Nansen, as part of the EcoAfrik projects (IEO-UVigo) and EAF- Nansen Program (FAO- IMR Norway).

The work plan has been designed in two different phases: the first one is intended to the taxonomic study of pycnogonids and it will address the identification of all the specimens preserved in the collections at our disposal, following the work methodology of this group. In the second phase, data treatment will be addressed through the application of different univariate and multivariate techniques, biogeographic and ecological analyses, and the writing of the results.

Among the expected results it is worth mentioning the publication of a catalog of pycnogonids from the coasts of Africa, the description of new species, the redescription of poorly known species and the development of keys for the identification of the species. Likewise, the biogeographic and bathymetric distribution of all the species studied will be established, possible zonation patterns will be identified and the assemblages of pycnogonids based on the geomorphology of the bottoms and oceanographic parameters will be described.

