



MYCTO_3D

OBSERVING AND UNDERSTANDING THE ROLE OF LANTERNFISH IN THE OCEAN FOOD CHAIN

Lanternfish, from the family of *Myctophidae*, are small, bioluminescent fish which are the main mesopelagic fish species' resource living at average depths of between 200 and 1000 metres.

Their considerable biomass and high nutritional value make them a special target for new forms of industrial fishing. However, myctophids play an essential role within pelagic trophic networks, between zooplankton and superior predators such as squid, fish, birds and marine mammals.

On the one hand, the Mycto_3d project involves determining the spatial distribution of these lanternfish and understanding their role in the food chain. On the other, the project is aimed at predicting what would happen to this species in the face of environmental variations or their removal by a future industrial fishing industry, and the consequences for their predators.

The Mycto_3d project will study the Southern Ocean, an area where myctophids predominate among mesopelagic fish populations and, correspondingly, an area that is home to their predators.

This interdisciplinary project brings together skills in ecology, oceanography and modelling to study the distribution in 3 dimensions of the dominant myctophid species of the Southern Ocean as well as the physical and biological characteristics of their habitats at different spatiotemporal scales.

Partners

Research centers

Centre d'études Biologiques de Chizé, UPR 1934 du CNRS, Chizé [\[Project Developer\]](#)
Interactions Biotiques et Santé Végétale (UMR 6243 du CNRS- INRA-UNSA), Sophia Antipolis
Laboratoire d'Océanographie et du Climat : Expérimentation et Approches Numériques (UMR 7159 du MNHN, CNRS, IRD, UPMC), Paris
Laboratoire des sciences de l'Environnement MARin/IRD (UMR 6539 du CNRS, IRD, UBO), Brest

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