



**SEVEN SEYCHELLOIS RECEIVE GRANTS TO
UNDERTAKE RESEARCH AS PART OF AN INTERNATIONAL DEEP WATER
EXPEDITION**

An innovative collaboration between Nekton Mission and the Seychelles' Conservation and Climate Adaptation Trust (SeyCCAT) has led to the financing of seven Seychellois researchers who will venture on an underwater expedition to explore the depths (up to 500 m) of the waters of Seychelles. The Seychelles Nekton expedition is a partnership between Seychelles and Nekton to undertake pioneering research in Seychelles' deep waters and develop national capacity to support Seychelles' marine spatial plan and the development of a sustainable blue economy.

Each leg of the expedition will host two or three Seychellois researchers, to explore the deep waters around Farquhar, Amirantes and Aldabra. Angelique Pouponneau, CEO of SeyCCAT, announced "We are so pleased to be co-financing this opportunity for seven Seychellois. It will not only give them an unforgettable once-in-a-lifetime experience but contribute to science nationally and internationally and, inform the policies we make about the marine environment and the blue economy."

"We are honoured and excited to be supporting new marine research and management projects led in Seychelles through this new collaboration with SeyCCAT" added Belinda Bramley, Nekton's Head of Impact. "All of these projects take advantage of the deep water research theme of our expedition and they each include a local training element."

SeyCCAT and Nekton are proud to announce the seven successful applicants and their research questions:

JENNIFER APPOO



Jennifer is the Science and Projects Coordinator at the Seychelles Islands Foundation (SIF). Before this, Jennifer was the Assistant Scientific Coordinator on Aldabra for a year. Jennifer is experienced in habitat, species and environmental monitoring and is passionate about marine biodiversity conservation.

Her research question will combine data on top marine predators from the Seychelles Islands Foundation with the data collected from the Nekton Expedition and will provide a complete picture of the marine predator community around Aldabra down to 500m.

Aldabra's near-shore marine area is divided into three management zones namely tourism zones, food security zones and conservation zones. This type of zonation strategy within a marine protected area is the first in Seychelles. The research will investigate the abundance, diversity and distribution of marine predators around Aldabra from the shallow to the deep sea and the effectiveness of the zoning plan on these top predators. The results will provide valuable lessons for sustainable fisheries management for Aldabra and this model example can be replicated in other locations in the country through the Marine Spatial Planning process.

CLARA BELMONT, STEPHANIE MARIE AND ANDREW SOUFFRE



Figure 1 CLARA BELMONT – SENIOR RESEARCH TECHNICIAN



Figure 2 ANDREW SOUFFRE – FISHERIES SCIENTIST



Figure 3 STEPHANIE MARIE - RESEARCH TECHNICIAN

Variability in trophic signatures of zooplankton and food web dynamics within Seychelles waters

Seychelles as an island state nation depends highly on fish as their main source of protein and planktons (small microorganisms in the water) happens to play a vital role in fish diet. They are the richest sources for omega 3 fatty acids that are essential for growth in fish as well as humans. However, with the effect of climate change plankton communities are at threat. A change in the plankton community results in a decrease in fish quality, which eventually affects their economic value. So, in order to ensure good fish quality for consumption SFA needs to find ways to observe how climate change is having an effect on the marine ecosystem so we can in turn work on management plan for sustainable fisheries.

SHEENA TALMA



A passionate conservationist and marine biologist, Sheena is always keen for an adventure. She has participated in research on blacktip reef shark, turtles and bonefish, all within the Indian Ocean Islands. Currently working with the Ministry of Environment, Energy and Climate Change she has been able to participate in the on-going conservation work being conducted in the island state.

Research topic: Spatio-temporal abundance and distribution of ichthyoplankton within the Seychelles waters.

The Indian Ocean remains a region of scientific interest as little research has been conducted within its waters and only a handful have investigated zooplankton communities especially the occurrence of fish larvae and eggs throughout the water column. Knowing what types of fish

larvae occur at different depths and oceanic regions gives valuable information as to the spawning dynamics of different fish species.

Identifying fish larvae and eggs from observation is however, very difficult and requires great expertise. Due to a host of technological advancements, scientists can now identify fish larvae and eggs using genetic identification. This project aims to identify species found at different locations and depths throughout the Seychelles waters. The findings will inform the preliminary species occurrence and spatial distribution of fish larvae in the Seychelles EEZ.

JEANNE MORTIMER



Dr. Jeanne A. Mortimer, born in Chicago USA, has made her living as an international conservation biologist consultant focusing on sea turtles and tropical coastal and marine ecosystems. She has worked in some 20 countries on six continents. Having first come to Seychelles early 1981 to conduct a national survey of sea turtles and recommend management strategy to Seychelles Government, she has continued to work as a special consultant to the Government

regarding sea turtle issues and was naturalized in 2007. She is on the governing Council of Island Conservation Society and is Chair of the Turtle Action Group of Seychelles. She lived and worked in the outer islands of Seychelles for extended periods totalling several years which enabled her to visit virtually every island in the country.

I will be researching “Marine Macrophytes” – i.e., marine plants (seagrass and algae) large enough to be seen without a microscope—known as “Gomo” in Kreol. These plants have been poorly studied in Seychelles. My research questions include: What species of seagrass and marine algae occur in the outer islands of Seychelles? How are the species distributed from island to island? What is the relationship between water depth and patterns of distribution and species composition? What is the maximum depth in which they can survive? I will also be collecting plant samples for the Seychelles National Herbarium.

DAMIEN LABICHE



Damien Labiche, 23, is currently working at the Ministry of Environment as an assistant conservation officer in the biodiversity conservation section. After his studies at Seychelles Institute of Technology, he worked with the Seychelles Fishing Authority as a scientific observer for 3 years. He joined the Department of Environment because he is passionate about nature and its protection and conservation.

Research topic: Identification of deep-sea shark and rays

Sharks and rays play an important role in the ecosystem as apex predators. In the Seychelles, sharks have been revered and traditionally hunted for consumption. Although a large quantity of sharks is recorded in the market catches, no deep-sea sharks have been recorded in the catch. Through a highly collaborative process our project aims to identify deep-sea sharks that may be collected on camera footage from ROV's Drop cameras and Subs. The occurrence of species in the area will be key to be able to compare data sets with regional and international partners. This is an important undertaking as it will allow for preliminary data to be collected and possible shark species to be identified in the Seychelles, where previous records do not exist.