



**2019 NF-POGO Visiting Fellowship for
Ship-board Training**

Fellowship Report

Name of Trainee: Mayara Lourenco

Name of Supervisor (Parent Institution): Dr. Björn Fiedler

Supervisor (Host Institution): Dr. Jan Taucher / Dr. Björn Fiedler

Dates of Training: 29/03 to 21/04

Section A

(To be completed by the fellow and returned to the POGO Secretariat)

Please note that this form will be passed on to the host and parent supervisor and when complete will be made publicly available on the [OTP](#) website;

1) Please provide a brief description of activities during the training period:

The training was divided onto two periods. The ship-board training during the RV Polarstern cruise PS135/2 (Cabo Verde – Germany) and an onshore training at the GEOMAR Helmholtz Centre for Ocean Research Kiel. During the ship-board training I received training in the following modules:

Oceanography – I learn how to handle the CTD (starting from preparing it, deploy, and post-process the data and samples). I measured discrete salinity directly on board with water samples from the CTD.

Biogeochemistry – the training focused on oxygen measurements for which I learned the Winkler titration technique and also how to process and analyse continuous underway measurements.

Marine Ecology – I was trained in all processes of collecting Zooplankton samples with the Multinet, from how to prepare it, deploy, and post-process the sampled organisms.



Microbiology – this course was most focused on sampling collection and pre-treatment, for which I collected water samples from different depth from the CTD, followed by filtration and preservation of those samples. During this module I was also trained on how to measure Chlorophyll-a.

Scientific communication – I learned how important it is to describe your scientific information in a way to be able to transmit the information to different target audiences.

At GEOMAR I learned how to handle the Planktoscope instrument (open-source hardware and software platform that allows for high-throughput quantitative imaging of plankton samples). I went on a day cruise with GEOMAR's RV Littorina to collect plankton samples with an Apstein net. This sample was later processed in the lab with the Planktoscope. I learned how to configure and operate the Planktoscope in an optimal way and also how to analyse the data.

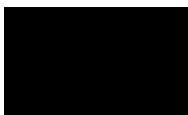
2) What applications of the training received do you envision at your parent institution?

Basically, all the training received is applicable in Cabo Verde. For being an oceanographic facility, the OSCM is principally equipped to do all this kind of measurements, but shiptime as well as well-trained experts are lacking. The use of the Planktoscope is the new tool that I will now introduce to my colleagues not only at OSCM but also at partner institutions such as IMar and UTA. Through the training I received at GEOMAR, a will develop a sampling and measurement protocol according to the needs of my colleagues.

3) Please provide your comments on the Fellowship Programme.

Being awarded with this fellowship was a great opportunity to move forward in my scientific career, allowing me to boost my skills, learn new things, and networking with renowned scientists. The concept of the program fit me very well, and the POGO team gave me support in all aspect, starting with the preparation of my training until I was back home. The major issue is that the program could work better if the monthly lump sums for accommodation would be increased a bit. With the current price increases it is very challenging to cover costs for this.

PRINT NAME



Date: 10/05/2023



Section B

(To be completed by host supervisor and returned to the POGO Secretariat)

Please note that this form will be passed on to the parent supervisor and trainee and when complete will be made publicly available on the [OTP](#) website;

1) Please provide your comments on the performance of the trainee.

Mayara was a very motivated and engaged participant during the at-sea training despite all the challenges that come along with a first-ever trip on a research vessel in the open ocean. She participated in all training activities and she was keen to get the most out of this opportunity. She learned new methods quickly and was even carrying out sampling work fully independently. During the post cruise training with the Planktoskope, Mayara shown to be a very committed student and a fast learner. She did a one-day cruise, where she collected samples on her own, to practise with the Planktoskope, and all this process was well done. By the end of the training, the trainee fully understood the concept, and is completely capable of running the equipment on her own and share her knowledge with others.

2) Is this exchange likely to lead to future collaboration with the trainee's parent institution? If so please give example(s) of how this collaboration may be pursued.

There is already a close collaboration between GEOMAR and Cabo Verde partners. However, there is a gap in capabilities to carry out ecological observations in Cabo Verde and the wider region. Having built up the expertise for the Planktoskope at OSCM can be used as a multiplier. Interested stakeholders can be trained in using this low-cost technology to collect important ecological data in a relatively easy and cost-efficient way. This technology can be further used to enhance ocean literacy in Cabo Verde by using this device during training events with school kids etc.

The ultimate goal is to establish regular, coastal time-series observations with the planktoskope and also contribute with this data to international synthesis efforts such as the EcoTaxa data base.

3) Please provide your comments on the Fellowship Programme.

We are grateful that the trainee has received support from POGO. This kind of support for ECOPs is very helpful for them to enhance not only their technical skills but also their professional network. Particulary ECOPs from Africa suffer from reduced mobility, hence, this fellowship program has a huge impact for them. The handling and organization of this fellowship by POGO went very smooth.

PRINT NAME

Dr. Jan Taucher
Dr. Björn Fiedler

Date: 11.05.2023



SECTION C

(To be completed by parent supervisor and returned to the POGO Secretariat)

Please note that this form will be passed on to the host supervisor and trainee and when complete will be made publicly available on the [OTP](#) website;

1) Do you agree with the above comments and do you have any additional feedback you wish to provide?

I fully agree with the statements above and like to thank POGO for having granted this fellowship to Mayara.

PRINT NAME

Dr. Björn Fiedler

Date: 11.05.2023