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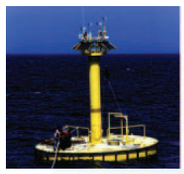

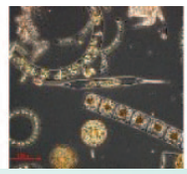


POGO Capacity Building News

POGO Visiting Professorship 2014

Report from the POGO Visiting Professorship in Brazil

Some of the participants of the POGO Visiting Professorship with Prof. Mosetti.
Image credit: Anon, CEM-UFPR

The 2014 POGO Visiting Professorship took place between 19 October and 3 November 2014, when Prof. Renzo Mosetti from the Instituo Nazionale di Oceanografia e di Geofisica Sperimentale (OGS) delivered a training programme at the Centre for Marine Studies, Federal University of Paraná. The title of the training course was "Innovative integrated marine monitoring systems in coastal regions" hosted by Dr. Eduardo Marone.

The course comprised of a series of lectures and practical activities, mainly processing observational data, and included a field trip to the Paranaguá Bay where scholars observed currents with electromagnetic and acoustic devices and measured water properties with CTD and other methods. Some participants requested training in the use of such instruments which was provided at the Marine Physics Group.

The impact of the training on Centre for Marine Studies was very positive, more than 90 students and professionals participated in the course in addition to the 50 that had registered. As a result, the host plans to establish a permanent training centre for ocean observations for participants coming from Latin America and the Caribbean from 2016 onwards.

Participants in the training course came not only from Brazil, but also from Argentina, Peru, Colombia and Uruguay. In addition to support from POGO, funding was also provided by the International Ocean Institute, Brazil OC's resources and Brazilian grants from sources made available by the local host. In-kind contribution of CEM-UFPR also provided substantial support to the programme.

This article was provided by Dr. Eduardo Marine (Center for Marine Studies - Federal University of Paraná) and Dr. Renzo Mosetti (Instituto Nazionale di Oceanografia e di Geofisica Sperimentale).

POGO-AMT Fellow reports on 24th Atlantic Meridional Transect Cruise

Rafael Rasse, post-doctoral researcher at the Instituto Venezolano de Investigaciones Cientificas (IVIC), reports upon his training from the Atlantic Meridional Transect Cruise

During the AMT24 led by Plymouth Marine Laboratory, Rafael contributed to collecting new biogeochemical samples (particulate organic carbon, POC, and total suspended solids) with the aim of establishing a bio-optical model to estimate POC in the mesopelagic zone. A large part of the training focused on the analysis of existing optical and biogeochemical measurements collected during previous AMT cruises and this analysis was carried out by means of a programming language (Matlab).

"I learned to program by using Matlab. For that, I have processed a large datasets (inherent optical properties, physicochemical properties, particulate organic carbon (POC) and pigments) from previous AMT expeditions (AMT-19 and AMT-22). Simultaneously, I have acquired new basic and advanced knowledge about optical properties of the ocean (basic concepts, instrumentations/methods normally used to measure these, and its applications to predict biochemical parameters such as POC) among other relevant aspects.

I participated actively in the AMT-24 between 22nd September and 1st November 2014 (a total of 42 days in the sea). Before setting off for the cruise, I spent time helping to prepare all instruments used to measure optical properties of the ocean as well as the filtration system for collecting samples of POC, total suspended solids and pigments. My activities over the cruise were divided in two periods. During the morning I was processing data from previous AMT and discussing these results with Dr. Giorgio Dall'Olmo. I also began to write a manuscript that we are planning to submit for peer-review. Over the afternoon (between 5-6 hours per day) I was filtering sea water from mesopelagic region (between 2- 500 m depth) to collect and store samples of POC and total suspend solids (around 700 samples were collected in total).

Rafael Rasse (right) with Giorgio Dall'Olmo preparing equipment on the AMT24 cruise
Image credit: PML

The most useful applications that I acquired over the training were processing large data sets using Matlab; and valuable knowledge gained in ocean optics and its applications to better understand the biogeochemical cycles of C, O and N. The main topic of research in my institution consists to study the dynamic of the carbon and nitrogen cycles in the Cariaco basin and Caribbean Sea. Therefore, I'm planning to use all mentioned tools for improve the quality of my current research and contribute to better understand the C and N cycle in these places.

This fellowship was an important opportunity to update my scientific knowledge in the best practices of oceanography, particularly, in the optical properties of the ocean and its applications. The most important contribution of the fellowship was the international collaboration that I have established with Dr. Giorgio Dall'Olmo."