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M150 BIODIAZ
CADIZ - PONTA DELGADA 2018

METEOR M150

1. Weekly report (27.08.–02.09.2018)

The research cruise M150 BIODIAZ of RV METEOR aims an intensive sampling of biological and sedimentological material from three islands of the Azores Archipelago – Flores in the west, Terceira in the centre, and Santa Maria in the east – as well as from one or two seamounts (Princess Alice Bank, Formigas Bank) (Fig. 1).

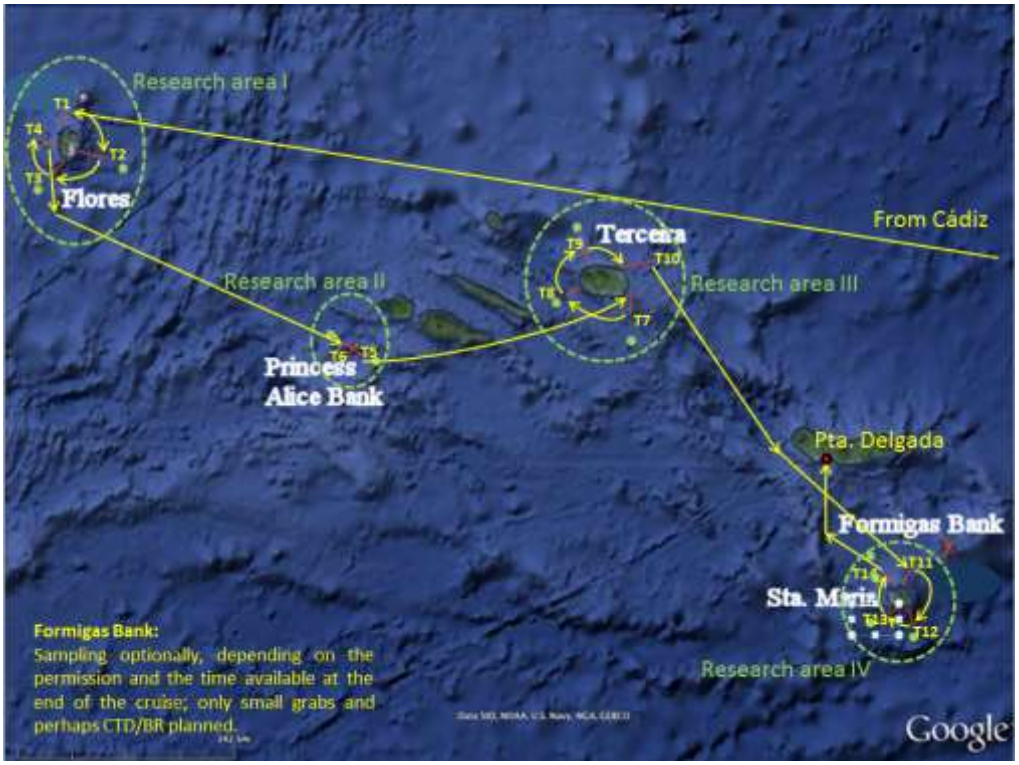

Fig. 1: Itinerary of FS METEOR cruise M150 BIODIAZ. Beside the steaming route (yellow arrows), the map shows the four research areas around the islands Flores, Terceira, and Santa Maria as well as the two seamounts Princess Alice and Formigas Banks.

The research program encloses six major topics, (a) to achieve the biodiversity around the islands and seamounts, (b) to detect whether the Azores may be characterized by a unique fauna, or if any exchange with other oceanic regions takes place, (c), to clear if there exist faunistic differences between the islands ins seamounts, or if an intra-Azorean faunistic exchange exists at least for certain taxa, (d) to record if there are differences regarding phytoplanktonic productivity around and between the islands and seamounts and (e) if the seamounts do influence the benthic and planktonic productivity, and (f) to study the influence of terrestrial erosion for the formation of the marine substrates surrounding the islands, in particular to detect the conditions in which such terrestrial influence is more and more replaced by an exclusive marine, biological formation of sediments.

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For that purpose we will take samples along 14 transects in selected water depths a series of different sampling gears, i.e. different grabs and corers as well as dredges and sledges for bottom sampling, plankton nets and water samplers, and several devices for the measurement of temperature, salinity, oxygen and other important parameters of respective water depths.

After leaving Cádiz on Monday past, we steamed with 10–11 knots towards Flores Island, our first research area. From a faunistic, ecologic, and biogeographic point of view Flores is of particular interest due to its remarkable isolation within the Archipelago.

The five steaming days were used by the scientific participants to install their laboratories and to configure and check the sampling gears. In the early evening of August 31st we reached our destination and started immediately with the sampling program at Transect T1 in the north of Flores, covering water depths from 50 m to 1,000 m. The work at T1 finished on September 1st, and in the meantime we begun to sample at eastern Transect T2.

On board all are in good health; waves between 1 and 2 metres height as well as convenient weather conditions with 21–24°C and mostly blue sky (only interrupted by rare warm rain showers are best prerequisites for a successful expedition!

On behalf of all participants I remain with kind regards

Kai Horst George
Chief scientist