SENCKENBERG
research

METEOR M150

2. Weekly report (03.–09.09.2018)

During the second week of the cruise we were able to realise intensive sampling at transects T1– T3 (Flores Island), and in the meantime also the work at the seamount “Princess Alice Bank” (T5 and T6) is nearly finished. All in all, the sampling is quite successful – the CTD at the last location of T6, just returning on deck, constitutes the 230st deployment, after just one week of work at sea!

The sampling material looks quite promising; beside different sediments we got organisms of many different major groups, like e.g. sponges, echinoderms, molluscs (Fig. 1), crustaceans, fish, corals and brachiopods. After the cruise they will be studied and determined in the labs of the participating institutions and provide information regarding the major topics listed in WR 1.

Figure 1: a wonderful bivalve (*Pecten jacobaeus*) collected with the Henning-grab from station M150-#54 (50m depth). Foto: A. Ostmann.

The sampling stations of the transects are always located at the same water depth: 50m, 150m, 300m, and 500m. The three shallower stations are exclusively sampled with grabs to get sediment and the inhabiting benthos. As due to the few time available, an intensive mapping of the seafloor cannot be realised, we deploy the underwater video camera at 50m and 150m to check the composition and structure of the seafloor and to decide if the deployment of the grabs is possible. Beside the Shipek- and the Henning-grab (Fig. 2), two

small but quite efficient grabs for getting sediment and tiny organisms (meiofauna, protists), also the box corer (BC) is deployed at 150m and 300m, aiming to obtain larger amounts of undisturbed sediment. Moreover, it is also applied in depths >500m, for instance in 1,000m (T1), 1,500m (T3), 2,000m (T3, T5). Last but not least, also the multicorer is used in depths of 2,000m and 3,000m (if achievable) for obtaining undisturbed sediment, protists, and meiofauna.

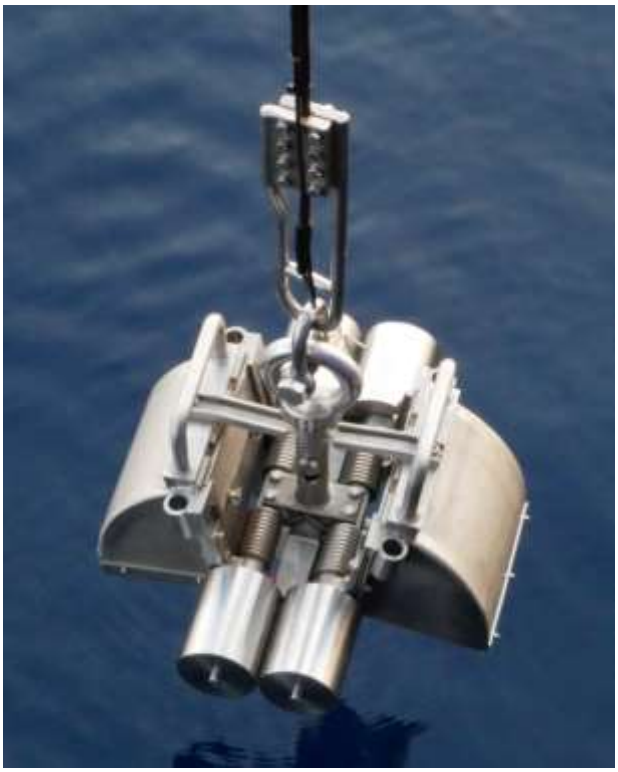

Figure 2: The Henning-grab is deployed. Foto: A. Ostmann.

Beside the grabs, also the deployment of two dredges and one sledge was scheduled, namely the epibenthic sledge (EBS; macro-epifauna), the Agassiz trawl (AGT; megabenthos), and the rock dredge (RD; megabenthos). The latter was planned to replace the AGT at stony and rocky grounds. However, unfortunately both the EBS and the RD were badly damaged during the second and first deployment, respectively, and they cannot be used during our cruise anymore. At least the EBS sampling can be partially replaced by additional box-coring, but sampling of megabenthos has to be restricted to depths >500m, in order to avoid its damage at stony/rocky grounds.

Also the water column was sampled intensively at almost all depths except 50m. CTD casts were made from 150m down to the deepest location on every transect, and 1–2 plankton

hauls were realised at selected locations; one horizontal haul at the water surface, and/or one vertical haul down to 200m depth.
As we got the research permission for the Formigas Bank, we decided to cancel one transect at each island. Although that means getting less sampling material from the islands, on the other hand it allows us to cover the whole study area.

On board all are in good health. Weather and sea are very cooperative, and the collaboration of the ship's crew and scientists is absolutely excellent!

On behalf of all participants I remain with kind regards

Kai George

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