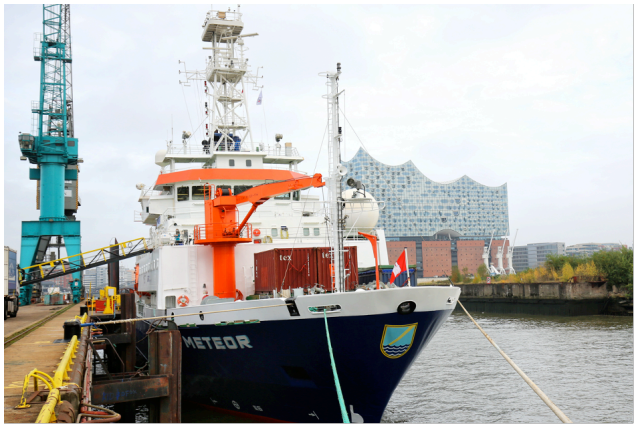
RV METEOR – M185 “ASSOCIATE”

29.10. - 26.11.2022, Hamburg - Lisbon

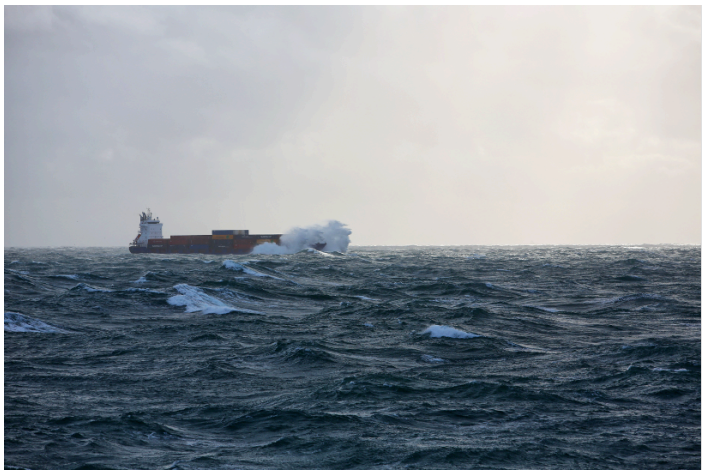
1st Weekly Report (29.10. – 06.11.2022)

The research cruise M185 with RV METEOR started on Saturday, October 29, 2022 in Hamburg. The testing of all cruise participants for SARS-CoV-2 by the ship's doctor was without any positive result and the subsequent tests in the following 5 days also confirmed the result of a COVID-free crew. The focus of this research cruise is the abundance and distribution of European eel larvae as well as the structure of the pelagic food web in the range of incoming willow leaf- or leptocephalus larvae before they complete their first metamorphosis, the conversion for life in fresh and brackish water areas. Investigations on the carbon pump, the recording of mesopelagic fish in this region using DNA traces in the water and comparative net catches, the uptake of microplastics by vertically migrating fish species and evolutionary biological adaptations of certain mesopelagic species complete the research portfolio of this cruise.



RV METEOR in the port of Hamburg.

The journey to the study area was still calm in the North Sea, but the journey through the English Channel led to stormy weather, caused by several offshoots of the hurricane Martin in the central Atlantic. With wave peaks up to 7 m high and wind gusts up to force 11, the journey through the canal had to be slowed down and the first planned station in the Bay of Biscay had to be moved a little further south.



A containership in rough seas.

All scientific instruments and devices were successfully tested at the first station of a transect from north to south along 6°12'W. The first net catches with an Isaacs-Kidd Midwater Trawl (IKMT) showed a wide spectrum of pelagic invertebrates and also some fish, mostly equipped with luminous organs. Copepods, luminous shrimp, pteropods, appendicularia and siphonophores characterize the picture. A hull-mounted sonar is used during station work to detect echo layers formed by denser aggregations of fish, squid and zooplankton organisms. Accompanying multi-net catches and the first use of a marine snow catcher to measure particle size and sinking velocities provided the first data.

Whale watchers will ensure a safe distance from marine mammals for the use of sound-emitting devices such as the echo sounder and the ADCP (Acoustic Doppler Current Profiler). To the delight of all on board, dolphins kept us company at two stations, chasing garfish on the sea surface next to the ship.

A dolphin hunting at night.

Despite the challenging weather, the atmosphere on board is very motivated and good. We are looking forward to the rest of the cruise.

Greetings on behalf of all cruise participants,

Reinhold Hanel

(Thünen-Institute of Fisheries Ecology)