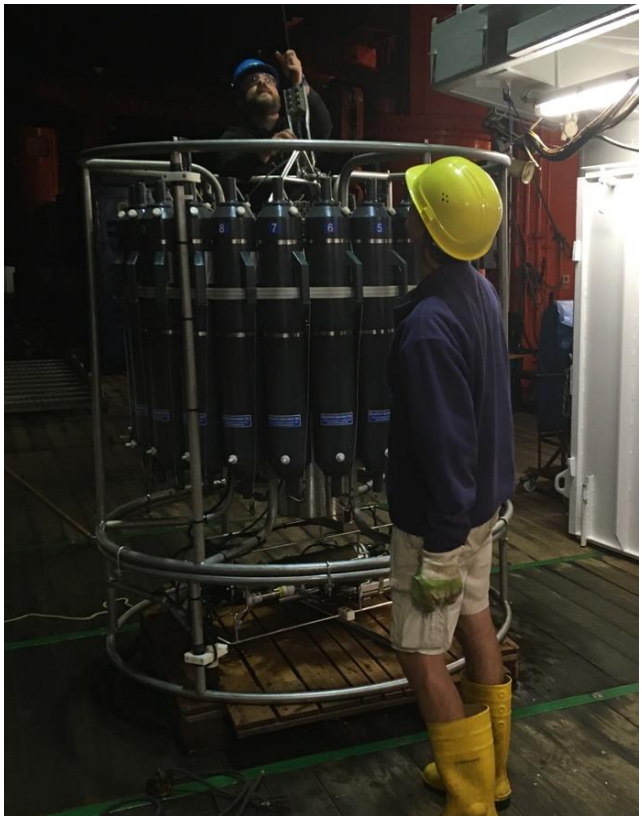
R.V. METEOR
Cruise M165 (GPF 18-1_81)
03.08.2020 - 06.09.2020
Emden - Emden

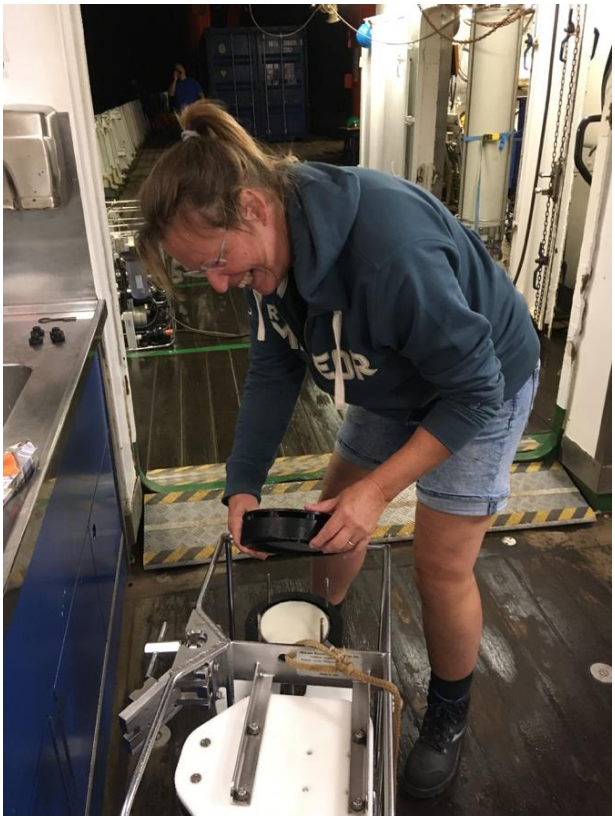
4th Weekly report, 24th – 30th August 2020

Saturday, in the twilight of the early morning, the twinkling lights on the Island Madeira greeted us at the horizon. We are on our way home but it will take until the 6th of September before we will enter the port of Emden.

The last days of station work were very intensive but provided us with surprises. We collected many water and suspended matter samples from which we will study particulate organic matter (POM), dissolved organic matter (DOM) and microplastic particles. Our station work concentrated itself on a transect located about 30 nm south but parallel to the transect that we had studied the week before. The water column now contained clearly detectable nepheloid layers that were not observed on the northern transect. This indicates that in contrast to what is commonly assumed, the presence of nepheloid layers in the NW African upwelling area is patchy and has locally restricted extensions.



CTD/Rosette by night



The last In-situ Pump sample

Tuesday morning we collected for the last time the drifting trap. The trap had sampled for two days following each other, particles in an offshore filament about 60 nm southwest from the first drifting trap sampling survey that was located in the active upwelling cell northwest off Cape Blanc. In contrast to our expectations, the traps had collected much more material as what could be expected based on the distance to the position of the active upwelling cells. First examination by light microscopy showed that the traps collected a rich plankton assemblage with a composition completely different to the ones collected in the active upwelling cells.

Tuesday evening, we arrived just befor sunset at our last in-situ pump station. This station was very special. The light beams of the ship attracted plankton, little fish, and successively somewhat larger fish. They were followed by hundreds of Calameres that came to the surface to catch the flying fish that jumped out of the water to spread their fins that enabled them to "fly" sometimes more than 10 meters before they fell into the ocean again. After a while, suddenly a hammerhead shark appeared followed somewhat later by more than 40 dolfins. The dolphins treated us with a real show. They collectively hunted in rows of about 10 animals next to each other. They jumped out of the water and dived synchronously. When they reached the other side of the ships lightbeam, they reorganised and synchronously started the next attack from the other side to catch the numerous calemares that had gathered near the ship. Unfortunately, every "show" has an end and when the last in-situ pump came on deck we had to turn off the lights to leave for the last two CTD stations in the night and early morning of Wednesday 26th of August after which we started our long transit home.

After collecting and processing the last In-situ Pump and CTD samples we went to bed for a couple hours of sleep with a smile on our face, content about the large amount of high-quality samples we will analyze in the coming days and back home and the beautiful night scenes still before our now closed eyes.

on behalf of the M165 cruise participants
met beste groeten van de blauwe oceaan

Karin Zonneveld
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