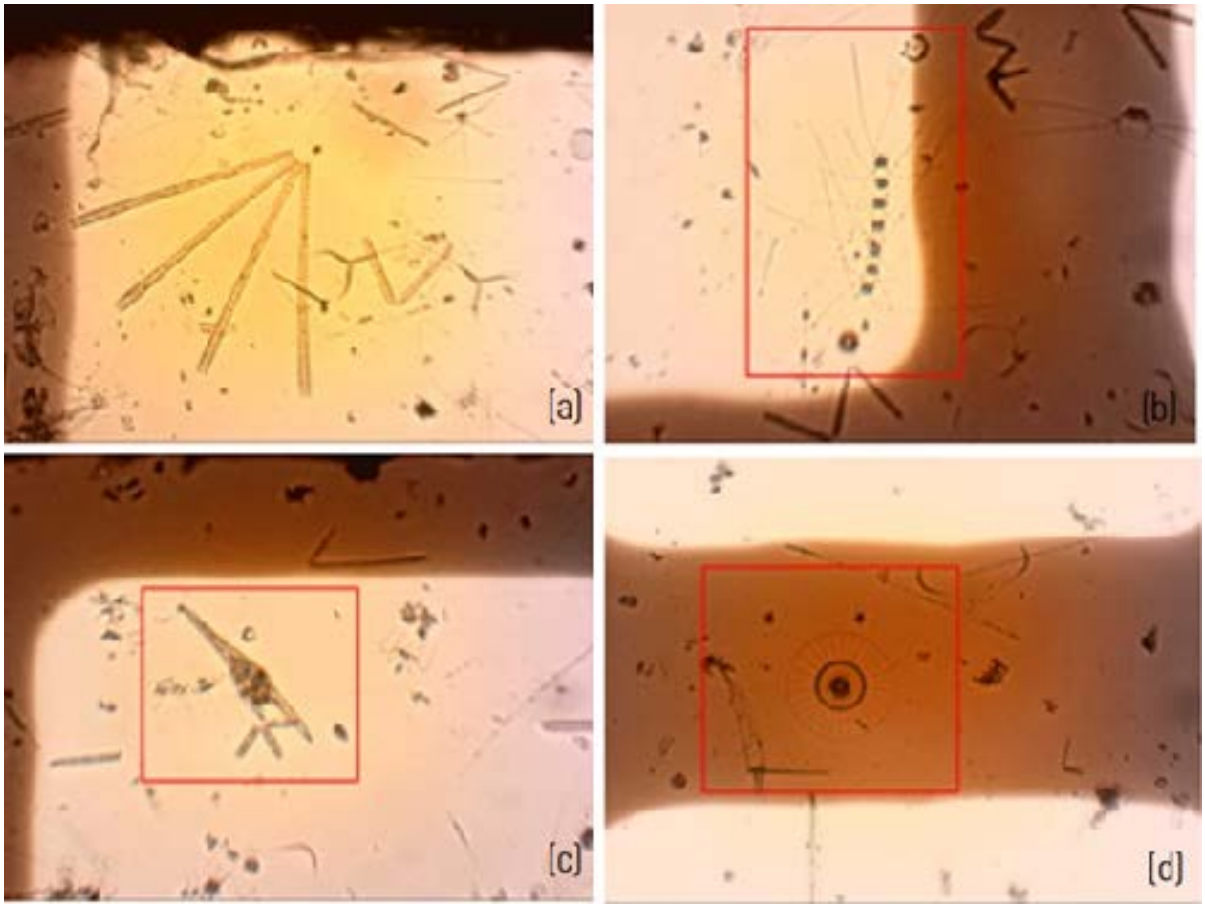
Project Update: March 2018

As of writing, March 2018, we have been on the field collecting our samples for the past 7 months and now we have 2 more months left. Fieldwork commenced last September during the peak of the southwest monsoon or the habagat in the Philippines and will conclude in May 2018.

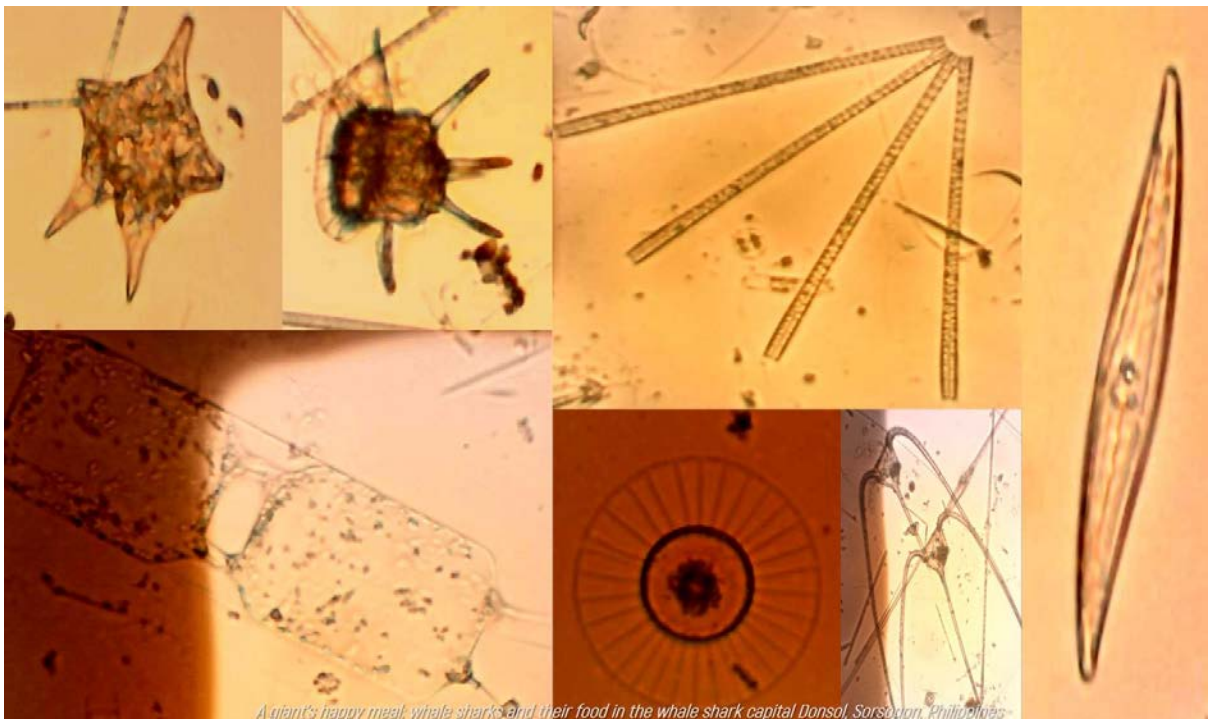
Each month we hire two differently-sized boats for our sampling. The first boat is a typical tourist boat in Donsol and is a lot bigger than the other. On board are three members of the team who are tasked to deploy four different types of equipment (i.e. Niskin water sampler, phytoplankton net, zooplankton net, and the CTD). Meanwhile, on board the other boat is another researcher that is in-charge with the use of the ADCP while cruising at a maximum speed of 4 knots.

Water samples obtained through the Niskin water sampler are further filtered post-field, kept chilled and will be subject to nutrient analyses in the laboratory. Plankton samples from the nets are viewed under the inverted microscope and stereomicroscope for the phytoplankton and zooplankton, respectively. Phytoplankton are the self-nourishing microorganisms that form the basis of the oceanic food web. Over the months, there has been observable differences in the samples from the net however, this will still be confirmed after all the analyses are done. Interestingly, samples from January 2018 were ridiculously dense. These small aquatic crustaceans are zooplankton called copepods. Zooplankton serves as food for most marine organisms from the smallest fish up to the biggest – the whale sharks. Another probable event in-time with our sampling on one specific station was spawning, that might explain the overwhelming number of fish eggs caught in the 200 micron plankton net

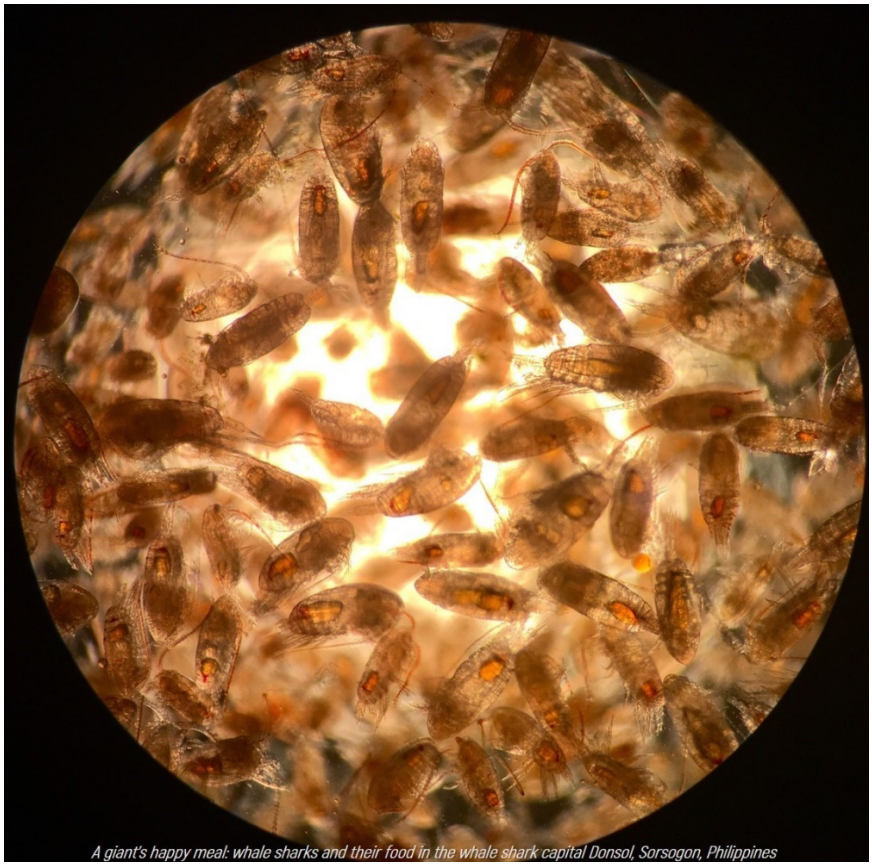
It was quite challenging to accomplish most of these tasks due to several difficulties that came along the way. First, the under-calculation of the budget for nutrient analyses. To address this, we set a meeting with the head of the laboratory conducting the analyses and have come to the agreement that we should take part in the actual analyses to compensate for the under-calculated budget. Second were the series of typhoons that hit the study site, Bicol region. It is crucial for us to collect samples during the new moon week, and these rough weather conditions have made it extra difficult to schedule. Nonetheless, we have been extremely blessed with reliable and skilled boatmen that whenever the weather gets better, we immediately set sail and proceed with the sampling. Lastly, the volcanic activities of Mt. Mayon. Although Donsol, Sorsogon is relatively far from the province of Albay (where Mt. Mayon is), the team will have to pass by it to reach Donsol by land and it has been quite of a struggle. Also, several of our flights have also been rescheduled due to Mayon's eruption. Despite all of these, we have been successful by far and we look forward to the last) months of sample gathering.



Phytoplankton samples viewed under an inverted microscope (Zeiss Axiovert25). ©GBApego

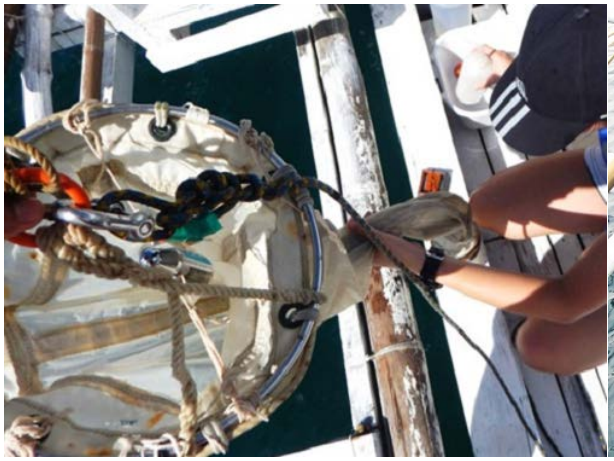


Different species of phytoplankton



Copepods viewed under the microscope

Fish eggs under the microscope




Left: Plankton collection. Right: About to do a 100-meter cast of the CTD.


Left: Collecting water samples from the Niskin Water Sampler. Right: Zooplankton Net with Flowmeter hauled from a vertical tow.

Phytoplankton net towed horizontally