An interview with Mabuta Simataa

Mabuta Simataa is the first Namibian Masters's student to study sharks and rays in Namibian waters. He has a BSc. in Fisheries Science from the University of Namibia, and is now collecting data for his MSc research project with the Namibia's Rays and Sharks (NaRaS) project.

You're doing your Masters research with the NaRaS project. Can you tell us what you are researching?

We are assessing the biodiversity of chondrichthyan species in the Namibian Island Marine Protected Area (NIMPA) using stereo-Baited Remote Underwater Video systems (called BRUVs for short). What this means is that we are trying to document the different types of species of sharks, skates, rays, and chimaeras (collectively called 'chondrichthyans') found within the NIMPA. The data we collect will help us to describe the biodiversity of sharks and their relatives at various sites within the NIMPA and describe their distribution.

Mabuta Simataa (right) hauls up a BRUVs from the seafloor, assisted by Angus van Wyk from SAIAB. © Ruth H. Leeney.

Tell us a little about BRUVs- what kind of information do they collect and why are they useful?

Stereo-BRUVs consist of two cameras inside waterproof housings, attached to a base-bar and encased within a frame with a baited container in front of the cameras. Our BRUVs are lowered to the seafloor and are left recording for 60 minutes. The footage is then used to assess the recorded the habitat in that area and the many marine species using that habitat – of course, we are mostly interested in the sharks! Stereo-BRUVs are a non-extractive method, meaning they have little impact on the area being studied and therefore there are an ideal sampling method to use in a marine protected area.

A BRUVs ready to be deployed in the Namibian Islands Marine Protected Area. © Ruth H. Leeney.

What did your BRUVs fieldwork in Lüderitz involve?

The BRUVs field work involved waking up early in the morning and heading out to sea. We assembled our BRUVs while on the boat, attaching the metal legs to each frame, putting mashed sardines in each bait container and closing it up. We then lowered each BRUVs down to the seafloor. Once we had deployed all three BRUVs, the rest of our day involved driving the boat around the study area to pick up each BRUVs after it had been on the seafloor for 60 minutes, changing the memory cards, camera & light batteries, and redeploying the BRUVs again at a different location. We had to haul the BRUVs up to the boat by hand, without a winch on the boat to help us. That's not so bad when it's only in 7 metres of water, but requires a lot more effort in the places where we worked in water that was 30 metres deep! When we got home we then had to clean all our equipment, charge all the batteries for our cameras and lights, and start downloading and entering data from the day's work. This makes for long days of work that is at times both physically and mentally demanding!

What did you enjoy most about the BRUVs fieldwork?

What I enjoyed the most about the BRUVs field work is being at sea and deploying the BRUVs. With each deployment we did, it gave me a feeling of being closer and closer to seeing what goes on down under the waves. The whole process requires teamwork and concentration, and I enjoyed working with the entire team.

One of the shark species that has been recorded on the BRUVs several times already is the sevengill cowshark. © Aaron Gekoski.

And what did you find the most challenging about the fieldwork?

The most challenging activity would have to be downloading and entering data on the metadata sheet. After a long day at sea, you're exhausted and feeling nauseated, but the data entry requires extra attention and patience, to make sure that you enter the right values in the right places.

Do you feel you have learnt any useful skills from your experience in Lüderitz?

Yes I have, I have learned how to analyse the video footage we collected. The software even allows us to measure the length of the sharks we see in the footage. I also learned the value of value of teamwork: whenever there was a task to complete, there was always someone there to help you out.

What interesting things have you seen so far on the BRUVs footage?

I have seen a lot of dark shysharks on the footage - apparently they are not camera shy! They are one of Namibia's smallest shark species, totally harmless but beautifully patterned. I have also seen lots of crayfish, a biscuit skate, and a sevengill cowshark. We even saw seals on the footageu. I can't wait to go through the rest of the footage to see what we captured.

A dark shyshark from the coastal waters near Luderitz. © Andrea Klingelhoeffer.

What would you like the Namibian public to know about this kind of work and why it is important?

This kind of work is done to better understand our marine environment. It is only through this kind of research that we can come up with management plans for the amazing underwater habitats and species which are so important for the health of our ocean. It is important to protect this, so future generations of Namibians can enjoy and benefit from the sea.

But also, the footage we have collected is a great way to engage people because they can literally see for the first time what it looks like underwater, and they can see the different shapes and sizes and funny facial expressions of the different sharks and rays that live there.

The NaRaS project is the first project of its kind in Namibia. Its aims are to better understand the full diversity of sharks, skates, rays, and chimeras in Namibian waters, and to share information about these fascinating animals and their roles in ocean health, with the Namibian public.

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