

## An unexpected but fruitful trip to La Reunion (2019/07/07 to 2019/07/12)

### The IndoCet Consortium

My trip to Reunion was unexpected and exciting. There I joined a larger community of cetacean biologists working in the Indian Ocean. This consortium is known as IndoCet and comprises researchers and conservationists from the Vanilla Islands (Madagascar, Réunion, Mauritius, Comoros, Mayotte, Seychelles) and the eastern and southern coasts of Africa. The primary goals of the IndoCet Consortium are to advance understanding of cetacean biology in the Southwest Indian Ocean and promote their conservation. IndoCet achieves these goals by:

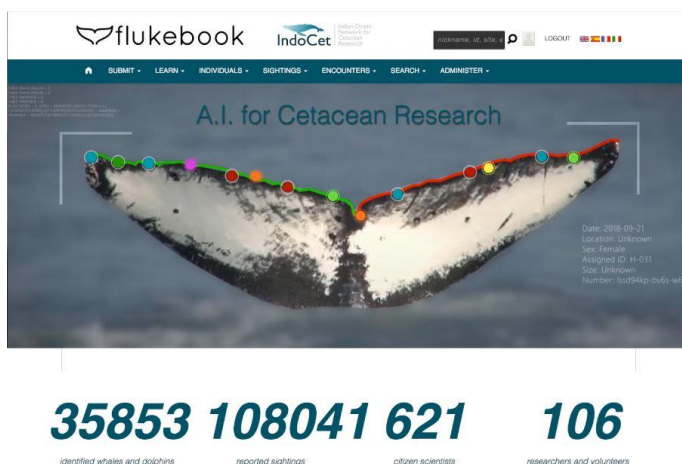


- helping research groups collaborate,
- advising range States about cetacean conservation and anthropogenic impact mitigation,
- providing training for biologists, conservationists and managers,
- developing citizen science, and
- promoting professional conduct codes and research ethics guidelines.

The meeting was arranged so we could introduce ourselves and organisations to the group and present information about our projects. We also spent time deciding how we could move forward as a consortium usefully and productively, noting avenues for regional collaboration. Humpback whale acoustics was one particular area for collaboration (and I have plenty of humpback whale song recorded) and capacity building with regard to strandings was another.

### Flukebook: Facebook for cetaceans

One of the main focal points for this meeting was an online matching platform developed by Wild Me (an NGO that offers software consultation on citizen science and wildlife research) called Flukebook. Flukebook is like Facebook for cetaceans. Researchers upload their identification photos (of whale flukes or dolphin's dorsal fins) and Flukebook uses computer vision, thanks to complex algorithms, to compare the pictures. The "computer" looks at every photograph in the database for that species and suggests potential matches. If the researcher finds a match, Flukebook lets you know which other researchers may have data pertaining to that individual (or who has data in a particular geographic location) and facilitates the process of data sharing.



So far Wild Me has developed algorithms for cetaceans like humpback whales and bottlenose dolphins but not yet for Sousa. However, at the meeting there were discussions about creating the algorithms for this important species. Even though there is not yet the automatic matching facility for Sousa, other features of Flukebook make it a sensible platform for us to use, like juxtaposing and labelling of photographs, and organising, searching

and sharing of data. Others in the region that have *Southern Ocean* in their areas (in Kenya, Tanzania, Madagascar and Mayotte) also see the value in using the Flukebook platform and it seems prudent to use common data fields and terminology across projects. (It would certainly facilitate data-sharing within the SouSA Consortium.)

### KwaZulu-Natal's WildOceans

It's funny how it works but one of the best outcomes of the meeting was a connection with WildOceans, an NGO based in Durban (directed by Dr Jean Harris). They are working to build marine research capacity, conduct scientific research, and encourage entrepreneurial conservation action. Their Strategic Manager, Rachel Kramer, presented a particularly interesting project that brings science, conservation, tourism and community together around the iconic humpback whale. I have met Rachel before and have even been to the WildOcean offices but somehow this trip cemented our connection and our potential to work more closely together.

### Innovation at the Shark Risk Management Centre

On my first day, I adventured from the university in St Denis to a neighbouring town, St Paul, to visit Reunion's Shark Risk Management Centre. Currently there is a 'shark crisis' on the island. Since 2011 there have been 30 shark attacks, 11 of which were fatal. That is incredibly high, a 400% increase in the rate – a similar number of attacks (26 of which 12 were fatal) occurred in the four decades prior to this one.

The government issued a decree in 2013 forbidding swimming and surfing in all but a few areas. (It was eerie when I walked on the beach and no one was swimming.) They began fishing for sharks officially in January 2014 in one area and expanded the operation 18 months later. Their fishing operation is quite different to ours and I plan to compare and contrast the two operations in greater detail. The main difference is that their fishing operation is far more targeted and localised with a much lower bycatch. Mid-2016 Reunion Shark Risk Management Centre was formed following the KwaZulu-Natal Sharks Board's model. One of the reasons I was very keen to meet with their staff is that they are using a variety of approaches to maintain bather safety and they have a focussed "Innovations" programme - finding and testing non-lethal methods to protect bathers.



I spent most of the day at their offices, they went out of their way to show me around and share information. Dr David Guyomard presented the details of their fishing operations and Michael Hoarau spent the afternoon telling me about the innovations programme and showed me their workshop. In many ways it was inspiring and helped me visualise a similar "innovations lab" in KwaZulu-Natal but in some ways it was a little discouraging because they've tested a few methods already and not found one that is ideal. But, the number of new innovations is increasing and finding non-lethal alternatives is a goal worth pursuing. Making a connection to the scientists was valuable and I hope it is the beginning of a useful collaboration.

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