

SAYA DE MALHA DAILY

A Newsletter by Dominique and François



N°10, 10th November 2022

Where are we ?

East of Saya de Malha, Box 3
10.12° South 62.09° East
Sunny, Calm Seas, Wind 9.14 Knots
Air Temperature 27°4,
Water Temperature 26°7



What do we know ?



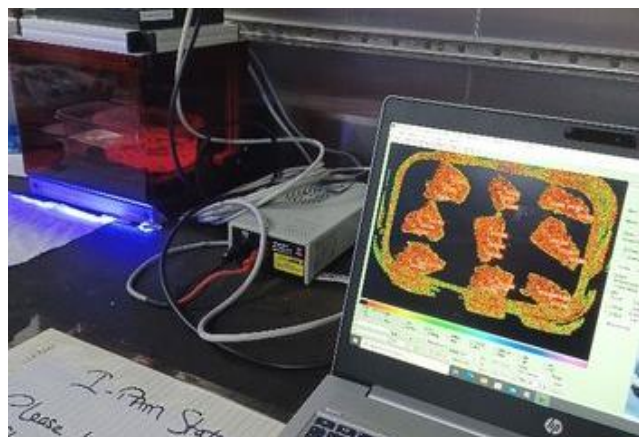
Coral Reef

In the shallower waters of the Saya de Malha Bank corals form small clumps to reefs up to 100m long and elevated just 1m-2m above the surrounding sea floor or occur as scattered individuals or small clumps amongst seagrass beds. Observations indicate that unlike other areas of the Indian Ocean coral communities were very mixed rather than being dominated by a few taxa. Coral diversity observed by scuba divers and by the ROV is high.

What's on ?

What about the climate?

Prof Ranjeet Bhagoli and his team have set up a lab experiment on board the ship to measure corals and red coralline algae tolerance to increased sea temperature. The idea is to identify those species likely to adapt to changing sea temperature as a result of climate change. The team has set up tanks at temperatures from the ambient temperature of 26° to 32° and are taking measurements at regular intervals during the day. The specimens are then scanned and analyzed. The team also collect water samples from the CTD which they concentrate through filtration to collect micro algae, an important component of phytoplankton. The filters are then scanned and photosynthesis measured by chlorophyll a concentrations. Combined with other parameters, it provides an indication of primary productivity. The experiment does not in itself reflect the real life increase of water temperature over time as a result of climate change, nor natural variations but still provide interesting insights of what the future hold for coral adaptation and the ocean primary productivity and the survival of animal species which feed on phytoplankton.





Le portrait



Mfundo Lombi, engineering technician and Darrel Anders, scientific technician

Mfundo was born in 1978 on the east coast of South Africa. Darrel was born in 1978 in Cape town. Darrel was passionate about the marine world from a very young age exploring rock pools on family camping holidays. Following a range of marine related jobs, he finally specialized in physical oceanography. Mfundo was curious about marine engineering. Both employed by the Ministry, their job on the ship is to operate and maintain the ship scientific instruments which monitor temperature, salinity, currents' velocity and the single-beam echosounder as well as data recording and to ensure they are operational at all times. They also control the use winches deploying scientific sampling gear and support the scientific teams as required. This expedition is a first and very

different from the polar missions they usually do. "Working with scientists, innovative projects and open access to data collected is really great" said Mfundo. "Meeting new people with different backgrounds is the best. In the end we are all the same". "Bringing people's experience and knowledge to other countries we visit in the region is also important" Says Mfundo.

Did you know ?

Some organisms use floating objects, also called flotsam and jetsam, to travel across the ocean. the Cirripeds, a group belonging to the crustaceans, despite looking like bivalves, use coconuts or plastic debris for transport. they feed on plankton which they catch in their long bristles.



The Catch of the Day

Not unique but so beautiful!
-Harlequin Shrimp, *Hymenocera* sp.
-Nudibranchs, *Goniobranchus* sp. and *Phyllidiella* sp.

