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## The resilience of deep-sea benthic communities to the effects of sedimentation

*Tēnā tātou katoa, whakatōrea te pūtaiao, kia kimihia ai e te rangahau tika!*



22 JUNE 2020

### Final voyage ROBES III

The ROBES team was at sea again on the Chatham Rise in June onboard *Tangaroa*.

This third (and last) voyage gathered a variety of samples and data to monitor changes from previous disturbance events in 2018 and 2019. The time series is important to understand both temporal and spatial variability in natural conditions, as well as changes in the environment and faunal communities that may not be immediately obvious from a single survey.

The ROBES voyage was also joined by NIWA's Pou Ārahi - Māori Development Leader, Lee Rauhina-August (see sheet 8).

### Water sampling



The Conductivity-Temperature-Depth (CTD) rosette system collected salinity, temperature, & dissolved-oxygen data to characterise oceanographic conditions.

### Camera work

Seabed animal communities & bottom sediment type were observed using the Deep Towed Imaging System (DTIS). DTIS was towed along transects imaged in 2018 and 2019 and enables us to monitor changes from previous disturbance events.

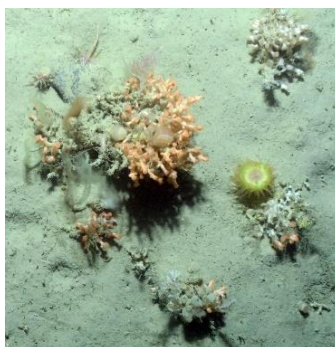


Using DTIS footage to identify the type of ocean floor and animals.



### Beam trawl

Coral samples were collected to further investigate effects from sedimentation in laboratory tanks back at NIWA, as well as undertake genetic studies.



### Mud

A lot of mud samples were taken to describe changes in the infauna-animals living under the sediment surface. Samples were used to carry out various experiments looking at physical changes with sedimentation, and measure ecosystem function.



### Mooring

This mooring deployed in 2019 was retrieved. The image shows numerous hydroids living on the mooring buoys after just a year. Water, current, and sediment trap samples were collected to determine natural changes throughout the year.



*Ngā mihi ki ngā kaimahi katoa me te waka Tangaroa! Thanks to all involved!*