

Deep Connections

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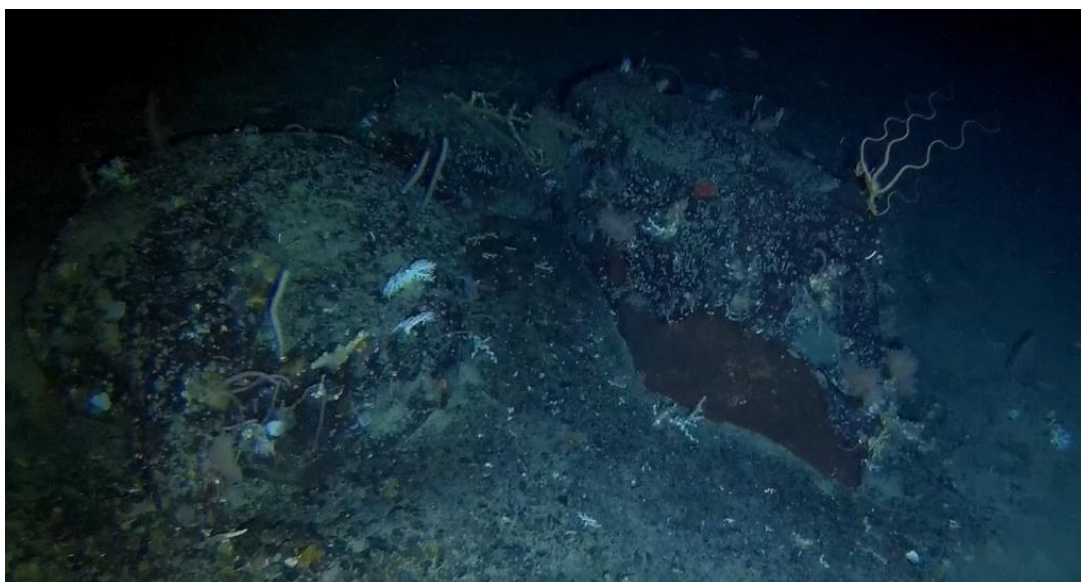
First published 1st July 2021

Over the past six months the Vulnerable Marine Ecosystems Project has been collaborating with researchers and fisheries to deepen our understanding of vulnerable marine ecosystems (VMEs) occurring throughout The Falkland Islands Conservation Zone (FCZ). To assess the vulnerability of the VME “sea pen meadows”, sea pen tissue samples from different locations around the FCZ have been sent to our collaborative partner, Professor Stuart Piertney at The University of Aberdeen. At the university, a genetic analysis of the tissue samples will be undertaken to estimate connectivity between populations. Understanding how well connected populations are helps scientist determine how vulnerable a particular population may be. Regionally rare or isolated species or populations can be particularly vulnerable because if they are lost from an area, there are no nearby neighbours to reoccupy the habitat.

Adding to this work, fisheries observers from The Falkland Islands Fisheries Department working with the CFL Hunter, are continuing to collect sea pens and a draft VME observer guide, describing VME indicator taxa groups is currently being trialled.

Back in the office, over 1500 images from the longline camera and legacy sources have been annotated. Image details including location, depth, substrate and species observed have been logged. The image data has been used to characterise the communities occurring on the seafloor and identify VMEs occurring within the FCZ.

The next stage will be to combine the known locations of VMEs with environmental data and perform predictive mapping of VME distributions.



Drop-stones form oasis's in the deep-sea soft sediments, larger drop-stones become colonised by a variety of species to form a ‘coral garden’.

Image taken with the specially adapted CFL deep-water longline camera at a Water depth ~ 1200 m

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Stony corals can form structural complex frameworks on which other soft corals, hydro corals and sponges grow.
Image taken with the specially adapted CFL deep-water longline camera at a Water depth ~ 1200 m.

The VME Project is supported by Consolidated Fisheries Ltd and The Falkland Islands Fisheries Department.

