



A team of scientists has set out on a six-week mission, funded by the Natural Environment Research Council, to explore the Indian Ocean's underwater mountains, or seamounts.

The scientists aboard the research vessel, the RRS James Cook, will study life thousands of metres below the surface.

In the third of her BBC Nature diary entries, Aurelie Spadone from the International Union for the Conservation of Nature, who is part of the team, describes the evidence she has seen of the far-reaching human impact on these deep sea habitats.

### “Start Quote



The fishing industry moves further away from the coasts and deeper into the ocean every day”  
Aurelie Spadone IUCN

We're now half way through the cruise, although there is still a long way to go before reaching Port Elizabeth (South Africa), which is our arrival port. We are now in the vicinity of a

seamount called Middle of What, the third of five scheduled stops on our itinerary.

Melville bank painted a very different picture to that of Coral seamount. Throughout our exploration of this site we have found evidence of human impact.

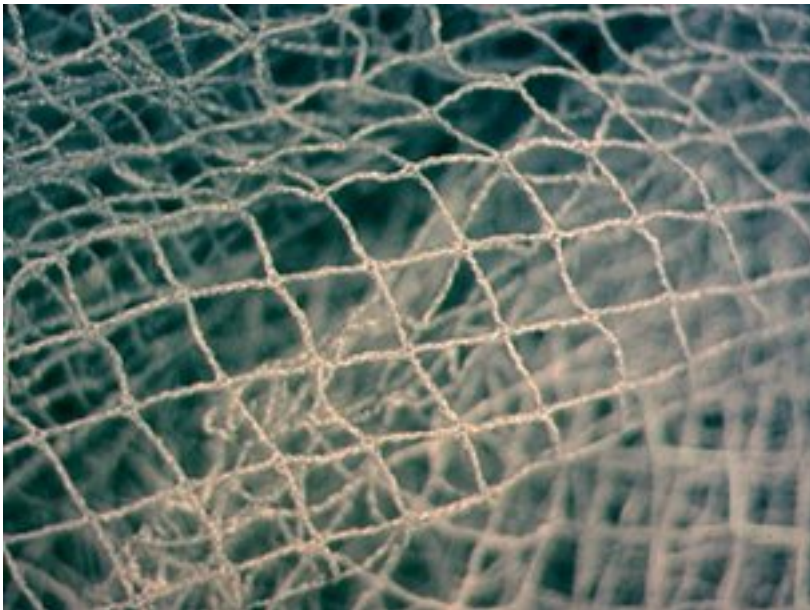
We saw lost lobster pots, drifting pieces of fishing longlines, broken trawl wires and even rubbish - mainly plastic bottles. All of these were floating around near the seabed like ghosts. They would often appear on the monitors displaying what our remote submarine's high-definition cameras were capturing from far below the vessel.

It was strangely impressive, but also frightening and depressing to see this gear appearing in the devastated landscape of the seamounts.

And all the detritus caused us a great deal of difficulty in completing our research dives.

Remote but spoiled

Incredibly, this area, despite being thousands of miles out into the ocean, has been heavily exploited by the fishing industry.



Fisheries use nets at up to 2,000m depth

Melville bank was fished in the late 1960s and 1970s, then more intensively between 2000 and

2002.

One fish in particular was the target species: the orange roughy, which can live up to 150 years and does not reproduce until it is 30-40 years old.

It is a solitary creature, but it forms big schools during the spawning period. Fishermen know this and take advantage of the situation, targeting these spawning schools. It is a real disaster for the fish population; many adults are removed.

Because seamounts attract so much life, and because coastal fish populations have been so depleted, these areas of the high seas attract the fisheries.

As shallow fish populations have become over-exploited, the fishing industry moves further away from the coasts and deeper into the ocean every day, using nets at 2,000m depth and trawling the seabed for fish.

Some deep-sea fishermen are aware of the problem and want to make their business sustainable.

One fisheries association, the SIODFA (Southern Indian Ocean Deepsea Fishers Association) declared on a voluntary basis some seamounts of the southern Indian Ocean as protected areas. This means that fisheries avoid these areas.

It is a positive move for deep sea habitats that helps to protect and conserve target species and their homes.

Unfortunately, globally, this is not the common practice. And the problem of unregulated fishing hampers these efforts amongst states and responsible fisheries.

It is also an ongoing threat to these fragile marine environments.

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