



Left: Alex Rogers

Above: New Stichopathes species, 200–300m depth © www.nektonmission.org

DEEP TROUBLE

Oliver Tickell meets a marine biologist with tales of woe and wonder from the sea

It was in 2015 that oceans researcher and campaigner Alex Rogers first experienced the full visual impact of ocean plastic pollution. “I was diving in Honduras in 2015 at Utila in the Bay Islands and there were all these beautiful coral reefs, but as we came around the island we were faced with a raft of rubbish stretching out as far as you could see: plastic bottles, expanded polystyrene, fibreglass, every kind of human waste you could imagine... I have never witnessed such a huge quantity of debris. It was horrific.”

Not that it was his first brush with ocean plastic. That had come three years earlier, when he and his team were exploring seamounts in the Indian Ocean between Madagascar and Antarctica. “We were taking samples from deep-sea corals and sediments at depths of up to 1,500 metres, in

one of the most remote places in the world, and we were finding all these plastic fibres. My initial reaction was, ‘Fantastic – here’s my next paper!’ But a microsecond later I was thinking, ‘But it’s terrible – if this stuff is here, it must be everywhere.’”

But while marine plastics are indeed a horrific and truly global problem, they are by no means the only human assault on the health of our oceans and their wildlife. Indeed they aren’t even the most serious. “The number one problem for the oceans has to be climate change,” says Rogers, “because of the sheer scale and scope of the disruption it threatens – to ocean chemistry, ocean circulation, ocean ecosystems, polar sea ice and ice caps, and the knock-on effects on the planet as a whole. And these changes will be completely irreversible over human timescales.”

Next comes over-fishing, and destructive fishing: entire ecosystems hoovered up by industrial fishing fleets, and seabeds trashed by trawling. One example: “In the 1960s Russian and Japanese fleets discovered huge stocks of fish over seamounts in the Pacific – the Emperor Seamounts chain – and just started hauling them in without even knowing what was there. The stocks crashed. Soon New Zealand, Australian and EU fleets began deep-sea trawling. One population after another was collapsed, with huge damage to habitats.

“They went for them with bottom trawlers gouging up the seabed and with massive impacts on target species like orange roughy, which grows very slowly, does not mature until it’s 30 or 40 years old, and lives up to 150 years with a very low level of natural mortality. A whole industry ramped up incredibly quickly with no scientific research to even show what was there, or the population dynamics. Finally the science has caught up, but not fast