



Where I work Greg Rouse

Photographed by the
Schmidt Ocean Institute.

I had sea worms on my mind during a March expedition through the Ningaloo Canyons off the northwest coast of Australia. Cruising aboard the RV *Falkor*, a research ship operated by the Schmidt Ocean Institute in Palo Alto, California, I was hoping to collect and sequence new deep-sea worm species. Everyone on board knew they were in for surprises, but nobody could have imagined the creature that suddenly appeared on our screen one day.

Here, in a moment of pure excitement, I'm standing with Nerida Wilson, a marine biologist at the Western Australian Museum in Perth and the expedition's chief scientist. Kaycee Handley, a master's student in Macquarie University in Sydney, is sitting in rapt attention. The *Falkor's* remote submersible had just spotted a massive siphonophore, a colonial organism related to corals, sea anemones and jellyfish. We're still working on modelling the creature, but it's clearly well over 100 metres long, much longer than any animal previously recorded.

The screen shows the submersible's robot arm using a suction tube to collect a

sample from the siphonophore. We're still sequencing the DNA to confirm the species. The description of the organism will be the first paper to come out of this cruise.

I also found my worms, including a new species of 'green bomber' that sheds glowing spheres to distract predators, and a new species of squid worm (genus *Teuthidodrilus*), so named because it has ten 'tentacles', including two for feeding.

As an Australian working in California, it was gratifying to be doing fieldwork in my home country. The oceans off Australia are an undiscovered world, and I'd hoped to be on the entire month-long cruise. But I had to go back to my laboratory halfway through, when the coronavirus began interrupting travel.

The *Falkor* is an amazing ship with an amazing crew. It offers a wonderful combination of science and outreach. I felt privileged to be on board.

Greg Rouse is a marine biologist at the Scripps Institution of Oceanography at the University of California, San Diego. **Interview by Chris Woolston.**