

Bone-munching worms found on sea floor

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An undated handout photo released on November 1, 2011 by the Antarctic Ocean Alliance shows the sea floor in Antarctic waters. Scientists said Wednesday they had discovered two new species of a strange bone-devouring worm thriving in the mysterious waters that surround the Antarctic continent.

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The *Osedax* worms feed on the bones of dead whales that settle on the sea floor, fulfilling an important recycling role, said a study published in

the journal *Proceedings of the Royal Society B*.

The worms, named *Osedax antarcticus* and *Osedax deceptionensis*, were discovered by an international team of scientists probing the fate of whale bones and shipwrecks on the Southern Ocean floor.

The worms are a few millimetres long, each with four finger-like appendages attached to a central trunk.

Five other *Osedax* species had been known before the two Antarctic types were found.

While the team revelled in their discovery, they were struck by a distinct absence of wood-eating molluscs known as *Xylophaginae* commonly found on deep-sea sunken wood.

"Over the course of a year, we deployed and recovered a piece of [underwater equipment](#) called a deep-sea lander, laden with the most unusual cargo—large whale bones and planks of wood," said study co-author Adrian Glover of London's Natural History Museum.

"When we recovered the bones and wood we'd put on the sea floor, the results were obvious immediately: the bones were infested by a carpet of red-plumed *Osedax* worms... but the wood planks were untouched, with not a trace of the wood-eating worms.

"The wood was hardly degraded... after 14 months on the [sea floor](#)"—one of the least explored ecosystems on Earth.

The [apparent absence](#) of wood-munchers may be good news for marine archaeologists.

The Southern Ocean is home to many a shipwreck—including British

explorer Ernest Shackleton's pine and oak-built vessel Endurance, which was crushed by ice and sank in the cold waters on a 1914 expedition.

More information: Bone-eating worms from the Antarctic: the contrasting fate of whale and wood remains on the Southern Ocean seafloor , [rspb.royalsocietypublishing.org1098/rspb.2013.1390](https://rspb.royalsocietypublishing.org/doi/10.1098/rspb.2013.1390)

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