



SCIENCE & TECHNOLOGY

Seals Help Researchers Study Antarctic Waters

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Japanese researchers placed electronic devices on seals in Antarctic waters to collect surprising information about the environment there.

The scientists said the seals can get to areas that are difficult for them to reach, especially during the difficult winter months in Antarctica.

Japan's National Institute of Polar Research started the research project in 2017. The team recently reported its results in a study in the publication *Limnology and Oceanography*.

Eight Weddell seals were fitted with the devices, which have **antennas** to send electronic signals. The 580-gram **monitoring** devices were attached to the animals' heads. They were designed to measure data such as water temperatures and sea salt levels.

Investigative teams on ships have difficulty reaching important research areas in Antarctica. These include areas along **continental shelf** formations where ice is attached to the **shore**, the National Institute of Polar Research said in a statement.

Nobuo Kokubun led the project. He told Reuters that the research also helps scientists follow the seals' behaviors and learn about their relationship to the environment.

"During the summer, we can go to Antarctica on **icebreakers** to **conduct** actual research activities, so that we can collect data there," Kokubun said. "But during the winter, such things cannot be done in so many places."

Since the seals are active year-round, Kokubun added, "I thought we should have them collect the data."

Information gathered from the seals showed that one of the animals traveled as far as 633 kilometers from Japan's Showa Station in Antarctica. Another dove to a depth of 700 meters.

Kokubun said the scientists learned from the data that warm seawater from the upper levels of the open sea reached Antarctica from March through the winter of 2017. The water flowed below the ice, bringing in sea creatures like Antarctic krill, an important food for seals.

Kokubun and his team plan to keep finding new ways to further examine the effects of climate change on Antarctic coastal areas. Next, he hopes to make the device small enough to fit on other animals at the South Pole, such as penguins.

"The **advantage** with penguins is that they come back to the same place and we can collect... data from them immediately," Kokubun said.

"Also, we can use the devices on a large number of penguins so they can cover a wide area," he added.

I'm Bryan Lynn.

Reuters and the National Institute of Polar Research reported on this story. Bryan Lynn adapted the reports for VOA Learning English.

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Words in This Story

antenna – *n.* a device used to send or receive communications signals

monitoring – *adj.* related to a device used to measure things and gather information

continental shelf – *n.* the area at the bottom of the ocean near the coast of a continent, where the sea is not very deep

shore – *n.* land along the edge of an area of water

icebreaker – *n.* a strong ship that can break passages through ice

conduct – *v.* to carry out

advantage – *n.* something (such as a good position or condition) that helps to make someone or something better or more likely to succeed than others
