Scientists learn more about narwhals by recording their sounds

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A narwhal being captured and tagged for the study. Photo by: S. Blackwell

Narwhals have become popular recently. They are whales that are known as "unicorns of the sea." The males have a long tusk that comes out from their head like a horn.

These little whales have gotten attention in the last few years. The creatures were once unappreciated Arctic Ocean animals. They have become plush toys and the topic of funny songs. One tune is about a narwhal eating a bagel.

People love them, but scientists still don't know as much about the whales as they would like. It is mainly because the animals live among cracks in the ice in a harsh part of the world. It is very hard to get to them there. However, scientists were recently able to tag a group of the whales with a new type of device. It allowed them to get recordings of the animals' noises. They use clicks, whirs and buzzes to hunt and communicate.

The scientists wanted to get information on narwhal communication to provide a base for future study. The Arctic Ocean is warming. Ice is crumbling as the Earth's climate heats up. This global warming comes from burning fossil fuels like oil, gas and wood. Burning them creates greenhouse gases, which cause global warming.

How Will Human Noise Affect Narwhals?

Many areas where narwhals live will be open to human activities as the Arctic warms. It is expected there will be more oil exploration, shipping and tourism. Scientists want to understand how the noise from humans will affect the whales.

For the new study in the journal PLoS One, scientists looked at the narwhals of Scoresby Sound in Greenland. It is an island between the North Atlantic and Arctic oceans. Scientists tagged six narwhals with a device called Acousonde.

In previous studies of narwhals, scientists used underwater microphones. Those picked up all of the sounds in the ocean, but did not give details for individual animals. Other types of tags last only a few hours. The new device, however, can stay attached to a narwhal's back for three to eight days. Then the recording device comes off. It floats to the surface where scientists can get it.

The team collected 533 hours worth of narwhal sounds. They came from narwhals named Thora, Helge, Frida, Freya, Eistla and Balder.

Alan Burdick at the New Yorker reports that the recordings show how the whales use sound. The animals tend to make clicking and buzzing sounds while in the deep sea, about 700 to 2,000 feet down. They buzzed quite a bit in one sea inlet. It appeared they were using sound to hunt shrimp and fish. The noises might help them find the smaller animals.

Narwhals Live In Isolated Areas

Narwhals made squeaky, whistling calls when they were close to the surface. Those were probably to communicate with other narwhals. In some cases several narwhals were recorded calling at once.

Susanna Blackwell of Greeneridge Sciences is the lead writer of the study. Greeneridge Sciences produces the acoustic tag. The study shows some of the history of the whales. Blackwell said the "pack-ice environment that is narwhals' home for much of the year" has kept them isolated, even from scientists. The new tools allow scientists to take a ride for days on a narwhal, she said.

The next step will be making noises like those of human activity. Scientists want to see how the whales react, reports JoAnna Klein at The New York Times. Crews use air guns to search for oil and gas under the seabed. The blasts from the guns are believed to damage the ears of sea animals. The noise can prevent them from communicating with one another.

Narwhals are used to the loud sounds of icebergs breaking off into the ocean. It's possible that they will just ignore the air gun blasts. Then again, the blasts might limit their ability to hunt.

More information is needed. It will allow people to make "decisions to make sure that we have narwhals in the future," Blackwell says.