



Unicorns Of The Sea Share Their Secrets

(NAPS)—With the help of Inuit hunters, geophysicists recently recorded the various sounds of narwhals as they summered in a Greenland fjord. The recordings help scientists better understand the soundscape of Arctic glacial fjords and provide valuable insight into the behavior of these shy and mysterious creatures, according to the researchers.

Narwhals are difficult to study because they are shy and spend most of their time in deep water. They tend to summer in glacial fjords around Greenland and Canada, but scientists



Credit: Evgeny Podolskiy.

An Inuit hunter in a kayak at the mouth of Bowdoin Fjord during a whale hunt in July 2019.



Credit: Evgeny Podolskiy

Boat approaching Bowdoin.

often have trouble getting close enough to study them. Inuit hunters familiar with the narwhal can get closer to the animals without disturbing them. So, in July 2019, researchers accompanied several Inuit whale-hunting expeditions in northwest Greenland to study the narwhals in more detail. Using underwater microphones attached to small boats, the researchers captured narwhal social calls and foraging sounds.

In combination with sightings, the recordings show that narwhals get closer to glacier ice than previously thought for this area and the animals forage for food in summer.

“Their world is the soundscape of this glacial fjord,” said Evgeny Podolskiy, a geophysicist at Hokkaido University, and lead author of a new study detailing the findings in the American Geophysical Union’s (AGU) *Journal of Geophysical Research: Oceans*. “There are many questions we can answer by listening to glacier fjords in general.”

Getting Close

Podolskiy and his colleagues had been working in Greenland fjords for several years, studying the sounds made by melting glaciers. “I realized working in the area and not paying attention to the elephant in the room—the key

endemic legendary Arctic unicorn just flowing around our glacier—was a big mistake,” he said.

The researchers tagged along on several Inuit hunting expeditions, placing microphones underwater and recording the baseline sounds of the fjord. They captured several types of sounds made by narwhals, including social calls or whistles, and clicks used for echolocation, the biological sonar used by other animals to navigate and find food. The closer narwhals get to their food, the faster they click, until the noise becomes a buzz like that of a chainsaw. This terminal buzz helps the narwhals pinpoint their prey. “If you approach and target these fast fish, you better know precisely where they are; you need to gather this information more frequently,” Podolskiy said.

Researchers found narwhals come roughly within half a mile of a glacier calving front, despite the fact that these areas are some of the noisiest and most dangerous places in the ocean. “There is so much cracking due to ice fracturing and bubbles melting out... it’s like a fizzy drink underwater,” Podolskiy said.

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