

Habitat of elusive Northern squid documented by researcher

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New research is shedding light on the preferred habitat of the northern squid, *Gonatus fabricii* - a key but often overlooked species in Arctic marine food webs.

Squid, along with octopus and [bobtail squid](#) (*Rossia* spp.), play an important role as prey in Arctic waters for species such as narwhal, beluga, seals, cod and Greenland halibut. But, says Kathleen Gardiner, a PhD candidate in the Biological Sciences Department of the University of Manitoba and co-author of a paper in the online edition of *Polar Research*, little is known about their preferred habitats. Gardiner is remedying that gap by building broad distribution maps using data from other sources.

"I found every reference I could," says Gardiner, who examined international and national databases, museum collections, government reports and published articles.

Identifying the feeding and spawning grounds of [squid](#) is of particular importance right now because of the [changing climate](#). The Arctic Ocean is warming and the extent of sea ice is shrinking, exposing more water to light and heat. There are already indications that new species of squid are moving north.

Squid are a high-energy food source for many large marine species. Much of their body mass is liver (digestive glands), which are rich in lipids. A change in the number of squid in Arctic waters could have an

impact on species that rely on them as a food source. There is little information available about the temperature tolerance of cephalopods in the Arctic and the relationship to climate change.

Squid can be difficult to track. Some species are quick and can easily outswim [fishing gear](#). Other species are located in very deep water, which makes them difficult to find. Fortunately, there are better data for some that are regularly taken as bycatch by commercial fishers.

"No one knows if populations are up or down. We don't know what abundance levels are in the Canadian Arctic and much of the [Arctic Ocean](#)," says Gardiner.

She is hoping her work is the first step toward the development of habitat management policies. "Once we isolate the baseline data and find hot spots, breeding grounds and feeding grounds, we can protect these areas."

Provided by Arctic Institute of North America

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