

# Atlantic snails are increasing dramatically in size

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These snails are feeding on barnacles on the Maine shoreline. Credit: Jonathan A. D. Fisher

A Queen's University biologist has discovered that the shell lengths of snails in the northwest Atlantic Ocean - an important member of the Atlantic food chain - have increased by 22.6 per cent over the past century. Until now, this significant change in the marine ecosystem has gone unnoticed.

"We found a dramatic increase in size, which could affect the entire intertidal food chain," says Jonathan Fisher, Queen's Postdoctoral Fellow and the leader of the study. Growing larger shells is a major way for the [snails](#) to avoid predators, he explains. Previous and continuing research has also found that large snails tend to prey on mussels and barnacles and

spend less time resting between feedings, compared to small snails.

The findings will appear online this week in the journal [Proceedings of the National Academy of Sciences](#).

The team used museum collections from the Academy of Natural Sciences of Philadelphia as a base for their data. They measured the shells from 19 lots of shells gathered between 1915 and 1922, and compared them with samples from the same 19 locations today. The increase in size was striking however, the researchers are unsure exactly why the snails are growing so large, so rapidly.

"Many documented environmental changes between these time periods could affect snail survival or growth rates," Dr. Fisher suggests. "We're finding fewer predatory fish now, which would allow the snails to grow." The temperature of the water today is warmer than 100 years ago, which could also account for faster growth of the snails, he adds.

"But regardless of the factors that contributed to the size increase, the marine landscape is changing dramatically on a historic timescale. That's what is really important here," says Dr. Fisher.

Source: Queen's University

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