

From Penguins to Polar Bears

The Impacts of
Climate Change

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Polar Mammals

Sea ice is a critical part of the polar ecosystem. The ice serves as a habitat for many animals—large and small—in the Arctic and Antarctic. They rely on it to forage for food, to find shelter from predators, and to breed and to raise their young. However, polar sea ice is retreating at a precipitous rate due to climate change.

WHOI scientists are working on finding the answers to how this is affecting polar animals. Here is what we do know now:

Polar bears are among the most ice-dependent Arctic marine mammals. They depend on sea ice to move from one place to the next, to reproduce, and to hunt.

Seals are the main prey for polar bears. They congregate on and around the sea ice that covers the shallow waters of the rich and abundant continental shelf. Seal pups rely on the sea ice and under-snow lairs for shelter. Warmer temperatures cause the sea ice to break up early and leads to rain that melts their lairs, which threaten pups' survival.

Walrus can only forage in waters less than 100 meters (300 feet) deep. Between feeding excursions, they haul-out on the sea ice or land. Their numbers are affected by the distribution of sea ice over their shallow foraging habitat.

Humpback whales migrate each year. They typically mate in warm, tropical waters (May to June), migrate south (September to October), feed on krill in polar waters (November), and migrate north to their warmer breeding grounds (February to March). Migration is timed to their breeding cycle. They rely on favorable conditions in both their breeding and krill feeding grounds, which can be impacted by climate change.

What you can do

Share what you've learned. Tell your friends and family about the impact rising global temperature is having on Arctic and Antarctic species that rely on sea ice for their survival.

Reduce your carbon footprint. Make a commitment to changing your day-to-day activities to use fewer fossil fuels.

Support research. Get behind businesses, organizations, and politicians that are committed to climate change research and helpful solutions.



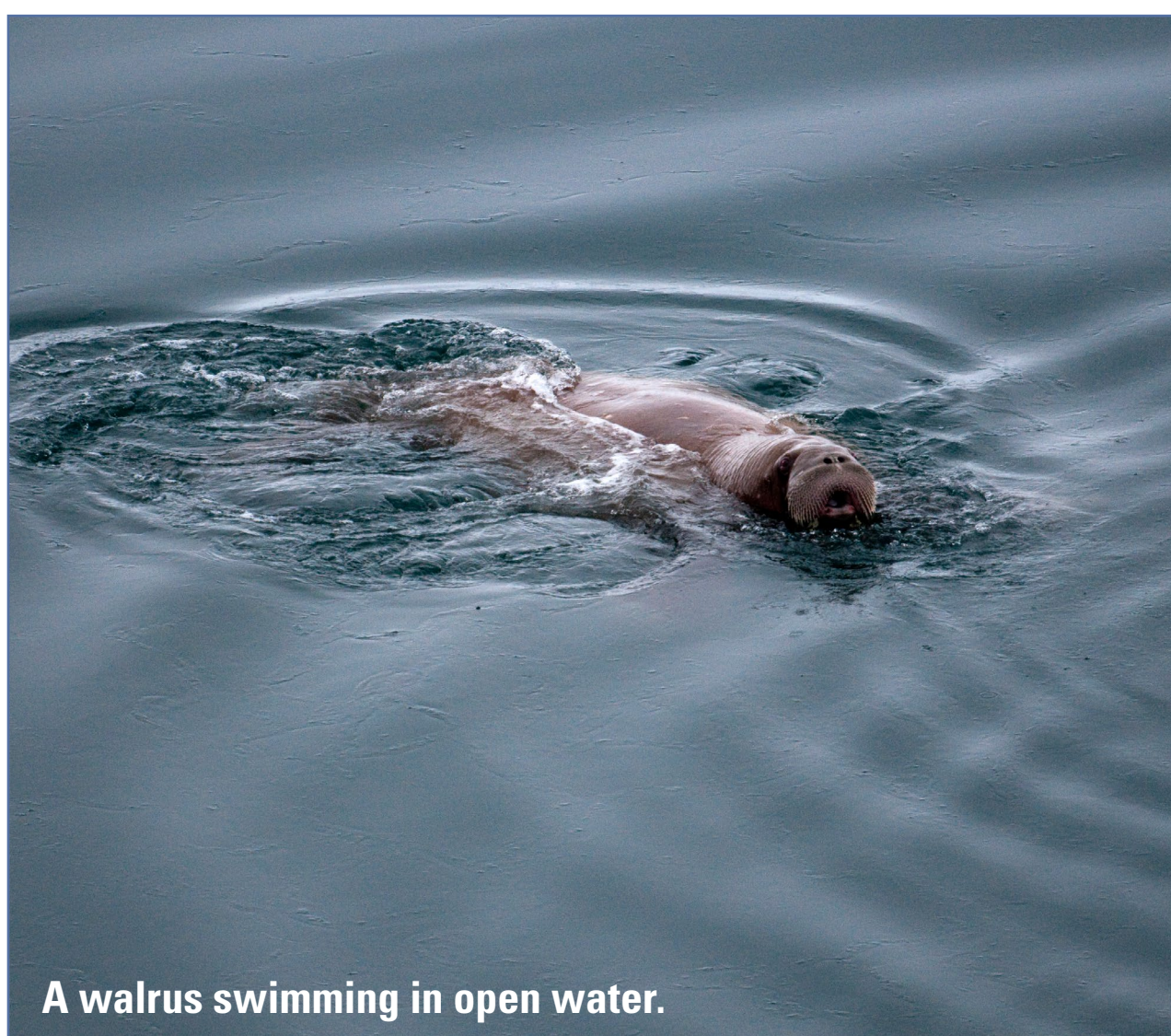
Woods Hole Oceanographic
Institution's Marine
Mammal Center



A Polar bear with her cub on the ice in the Arctic.



A lone Ringed Seal looking up from the ice.



A walrus swimming in open water.



Humpback whale