

THE HEAT IS ON

Species feeling the effects of climate change



Atlantic Puffin

Fratercula arctica

Region:

Northeast

Area affected:

Gulf of Maine

Climatic change:

Warming oceans

Impact:

Food web changes

ABOUT THIS SPECIES

With their brightly colored bills and penguin-like appearance, Atlantic puffins are one of the most readily recognized and beloved of seabirds. They can dive up to 200 feet deep into the ocean to prey on schools of small fish and marine invertebrates. Puffins breed in colonies on cliffs and islands along the coasts of Canada, Greenland, Iceland and Scandinavia and were recently reintroduced to former strongholds along the coast of Maine. Pairs are monogamous and will often return repeatedly to the same nest site, usually a burrow that they dig in a grassy spot or a natural crevice in rocky areas. Each season they lay a single egg, and both parents share incubation and feeding duties. Atlantic puffins reach breeding age at around four or five years and can live up to three decades.

DESCRIPTION OF IMPACT

In the Gulf of Maine, the southern extent of their breeding range, puffins rely on a food web characterized by phytoplankton specialized to live in the Gulf's very cold, nutrient-rich waters. These plankton feed an assortment of puffin prey—herring, hake, capelin, sand lance and other small, slender fish that thrive in cold water. The past decade has brought alarmingly warm waters to the Gulf from marine heat waves and intense storms. These weather conditions have become more extreme, and 2021 brought catastrophic results for nesting colonies. The fish species that puffins usually feed their young moved to cooler waters located too deep and far offshore for puffins to catch. **As a result, around 90% of nesting puffins on one offshore island in Maine failed to raise a chick. The chicks that did survive were on average 40 to 50 percent smaller than they should be when they leave the nest.**

References

Bever, F. 2021. Climate change is causing problems for puffins. National Public Radio. <https://www.npr.org/environment/2021/10/12/1043991519/climate-change-puffins-maine>

Natureserve Explorer. Atlantic Puffin (species profile). <http://explorer.natureserve.org>



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