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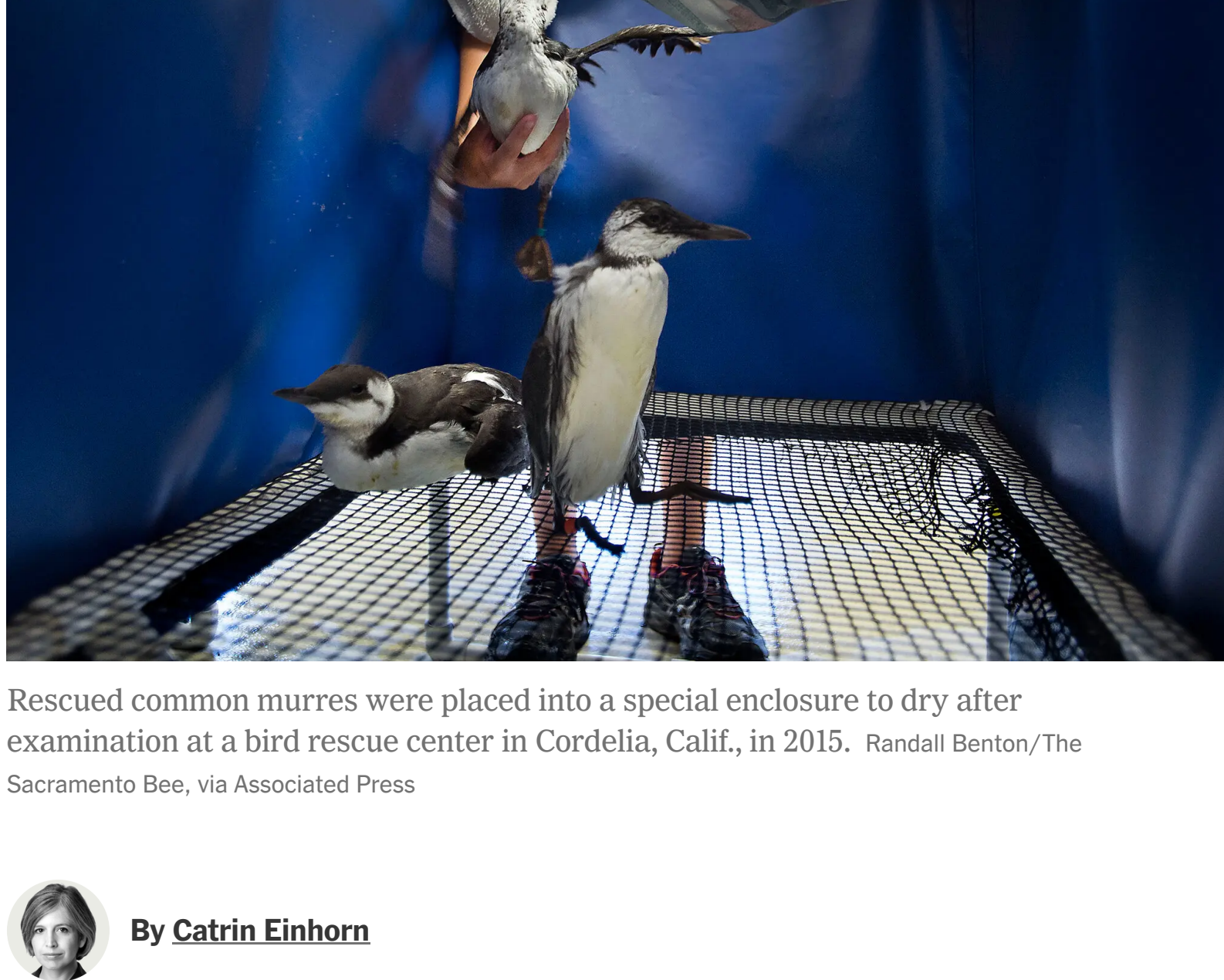
# Ocean Heat Wiped Out Half These Seabirds Around Alaska

About four million common murres were killed by a domino effect of ecosystem changes, and the population is showing no signs of recovery, according to new research.

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Rescued common murres were placed into a special enclosure to dry after examination at a bird rescue center in Cordelia, Calif., in 2015. Randall Benton/The Sacramento Bee, via Associated Press

By **Catrin Einhorn**

Dec. 12, 2024

The first evidence was the feathered bodies washing up on Alaskan beaches. They were common murres, sleek black-and-white seabirds that typically spend months at a time away from land. But in 2015 and 2016, officials tallied 62,000 emaciated corpses from California to Alaska.

Since then, scientists have been piecing together what happened to the birds, along with other species in the northeast Pacific that suddenly died or disappeared. It became clear that the culprit was an record-breaking marine heat wave, a mass of warm water that would come to be known as the Blob. New findings on its effect on murres, [published on Thursday in the journal Science](#), are a stark sign of the perils facing ecosystems in a warming world.

The Blob



A Warning From a California Marine Heat Wave

Dec. 1, 2024

“What we learned was that it was just way worse than we thought,” said Heather Renner, one of the study’s authors and a supervisory wildlife biologist at the Alaska Maritime National Wildlife Refuge.

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About half of Alaska’s common murres, some four million birds, died as a result of the marine heat wave, the scientists found. They believe it is the largest documented die-off of a single species of wild birds or mammals. The state is home to about a quarter of the world’s common murres, scientists say.

Murres were the victims of a domino effect of oceanic changes tied to the warm water, according to a [growing body of research](#). It affected marine life from plankton to humpback whales. Critically for the murres, it led to a collapse in the fish they depend on.

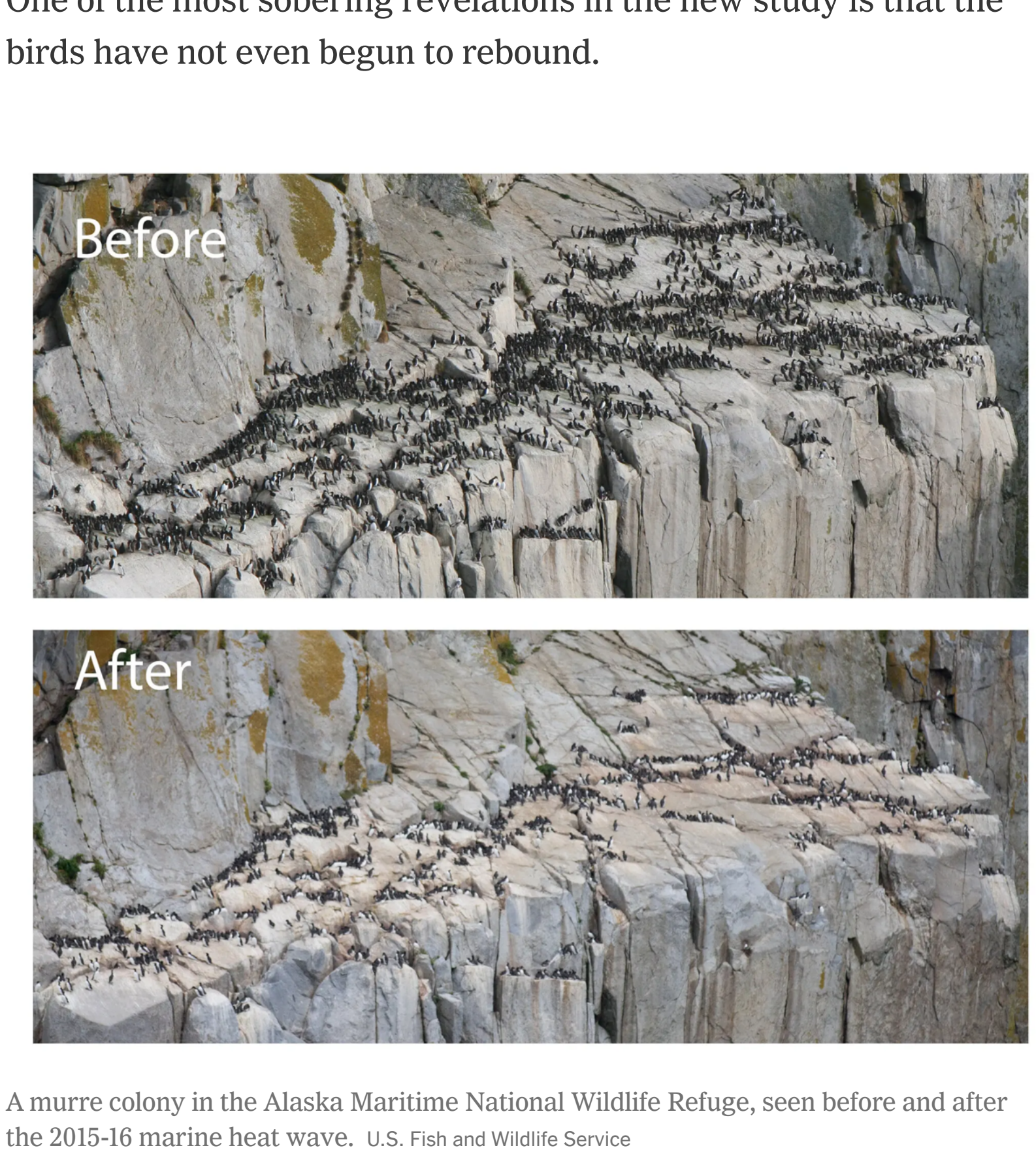
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One of the most sobering revelations in the new study is that the birds have not even begun to rebound.



A murre colony in the Alaska Maritime National Wildlife Refuge, seen before and after the 2015-16 marine heat wave. U.S. Fish and Wildlife Service

“If the foraging conditions are good, I think there’s hope,” Ms. Renner said. “Our fear is that events like this are predicted to become much more common, and we haven’t seen any signs of recovery at all yet, eight years after the event.”

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For decades, the world’s [oceans have absorbed more than 90 percent of the excess heat](#) produced as humans burn fossil fuels and destroy ecosystems like forests. That [heat has taken a severe toll](#) on coral reefs, kelp forests and other marine ecosystems. Last year and into this year, the [ocean's surface temperature shattered records](#).

For the murres, earlier mortality estimates from the Blob were lower. In 2020, a team of some of the same scientists estimated that [half a million to a million of the birds had died](#) in Alaska. But the new research uses a different and far more reliable method, leveraging earlier data to analyze before and after counts at 13 breeding colonies throughout the Gulf of Alaska and the Eastern Bering Sea. The authors then extrapolated those declines across the entire population.

“We saw exactly the same really clear signal at every single colony,” Ms. Renner said. “It wasn’t some of them, it was all of them.”

Avian flu has had huge impacts on some bird populations around the world, but researchers have not seen much to date in Alaska, Ms. Renner said, so it does not appear to be playing a major role.

Notably, while various species were pummeled by the Pacific marine heat wave, including some fisheries stocks, not all showed declines. That suggests the oceanographic changes created “pinch points” in the food web rather than, say, taking out all predators.

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Mark Mallory, a seabird biologist and professor at Acadia University in Nova Scotia who was not involved with the study, said the research highlighted the critical importance of long-term monitoring data in allowing scientists to understand the extraordinary changes underway on Earth.

The finding that murres, typically a resilient species, are not regaining their numbers, reminded him of what happened when people overfished Atlantic cod stocks off Newfoundland, which had once been thought virtually inexhaustible.

“Here we are decades after that catastrophic event, and that marine ecosystem has not recovered,” Dr. Mallory said. “It’s entirely conceivable to me that we are witnessing the early stages of a similar effect, caused by a different catastrophe, in these Alaskan waters.”

**Catrin Einhorn** covers biodiversity, climate and the environment for The Times. [More about Catrin Einhorn](#)

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