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<http://news.nationalgeographic.com/2016/10/ross-sea-marine-protected-area-antarctica.html>

# World's Largest Marine Reserve Created Off Antarctica

New 598,000 square-mile protected area is more than twice the size of Texas, and will protect everything from penguins to whales.

Obama Creates Connecticut-Size Ocean Park, First in Atlantic

which is now

A Fish Called Obama—Newly Discovered Species Named for President

| PHOTOGRAPH BY PAUL NICKLEN, NATIONAL GEOGRAPHIC CREATIVE

By Brian Clark Howard

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A remote and largely pristine stretch of ocean off Antarctica received international protection on Friday, becoming the world's largest marine reserve as a broad coalition of countries came together to protect 598,000 square miles of water.

The new marine protected area in the Ross Sea was created by a unanimous decision of the international body that oversees the waters around Antarctica—the Commission for the Conservation of Antarctic Marine Living Resources—and was announced at the commission's annual meeting in Tasmania. The commission comprises 24 countries, including the United States, and the European Union.

South of New Zealand and deep in the Southern (or Antarctic) Ocean, the 1.9 million square-mile Ross Sea is sometimes called the "Last Ocean" because it is largely untouched by humans. Its nutrient-rich waters are the most productive in the Antarctic, leading to huge plankton and krill blooms that support vast numbers of fish, seals, penguins, and whales.

Watch *Before the Flood* on National Geographic channels on October 30 at 9 pm ET/10 CT, or [online for free](#).

Some 16,000 species are thought to call the Ross Sea home, many of them uniquely adapted to the cold environment. A 2011 study in the journal *Biological Conservation* called the Ross Sea “the least altered marine ecosystem on Earth,” citing intact communities of emperor and Adelie penguins, crabeater seals, orcas, and minke whales.

The sea's remoteness has meant it has largely escaped the heavy fishing and shipping pressure that has impacted so much of the world's ocean, although rising prices for seafood and the low cost of fuel have made some fishermen eye the waters as potential new grounds in recent

years. Some fishing already occurred there for Antarctic toothfish, a predatory fish that is sold as the highly prized Chilean sea bass.

Emperor penguins slice through the cold waters of the Ross Sea.

PHOTOGRAPH BY PAUL NICKLEN, NATIONAL GEOGRAPHIC CREATIVE

But fishing will no longer be allowed in 432,000 square miles of the new reserve (some toothfish fishing is expected to proceed in a specially designated zone in the remainder of the protected area). The new protection will go into force on December 1, 2017.

The newly protected area “shows that the world can successfully cooperate on global environmental issues,” says Enric Sala, a marine biologist and National Geographic Explorer-in-Residence who leads the Pristine Seas project.

“The Ross Sea is probably the largest ocean wilderness left on our planet,” he says. “It is the Serengeti of Antarctica, a wild place full of wildlife such as emperor penguins, leopard seals, minke whales, and killer

whales. It's one of these rare places where humans are only visitors and large animals rule.”

Krill forms the basis of a rich food chain in the Ross Sea.

The marine protected area was created based on a proposal from the U.S. and New Zealand. It comes a few months after Barack Obama expanded a national monument around Hawaii, creating a 583,000-square-mile "no-take" zone that at the time was the biggest in the world.

Environmental groups and several countries had pushed for protections for the Ross Sea for decades. Over the past few years, two holdout nations emerged: China and Russia, which expressed concerns about putting too much ocean off limits to fishing or other uses, including the possibility of seabed mining.

But 500 prominent scientists signed a letter urging protections for the Ross Sea. China changed tack last year, and Russia came on board this



week, in a display of what Sala called “global environmental leadership.”

Russia's support comes just a few months after the country announced a major new expansion of protected areas in the Arctic.

Russian President Vladimir Putin has announced that 2017 will be a special Year of Ecology for the country, punctuated with action on the environment.

U.S. Secretary of State John Kerry had previously told National Geographic that the Ross Sea was among the issues he discussed with Russia earlier this year, during talks over the human rights crisis in Syria.

Emperor penguins are known for their long march to the sea, timed to the seasons.

PHOTOGRAPH BY PAUL NICKLEN, NATIONAL GEOGRAPHIC CREATIVE

“Certain seas like the Ross Sea ought to be closed [to fishing],” Kerry told National Geographic.

Chris Rich, the deputy director for oceans, environmental, and science affairs with the State Department, said his agency is “very happy” with the new agreement. Protection of the Ross Sea is something Kerry has worked towards for years, including during his time in the Senate, Rich says.

The Ross Sea is a place of “fish with antifreeze in their blood, penguins that survive the equivalent of a human heart attack on each dive, and seals that must use their teeth to constantly rake open breathing holes in the ice,” scientist Cassandra Brooks wrote during an expedition there in 2013.

*Look for the upcoming show Continent 7, about efforts to explore and better understand Antarctica, from National Geographic channels.*

*Correction: An earlier version of this story stated the area as 598 million square miles, when it is actually 598,000 square miles.*

*Laura Parker contributed reporting to this story.*



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