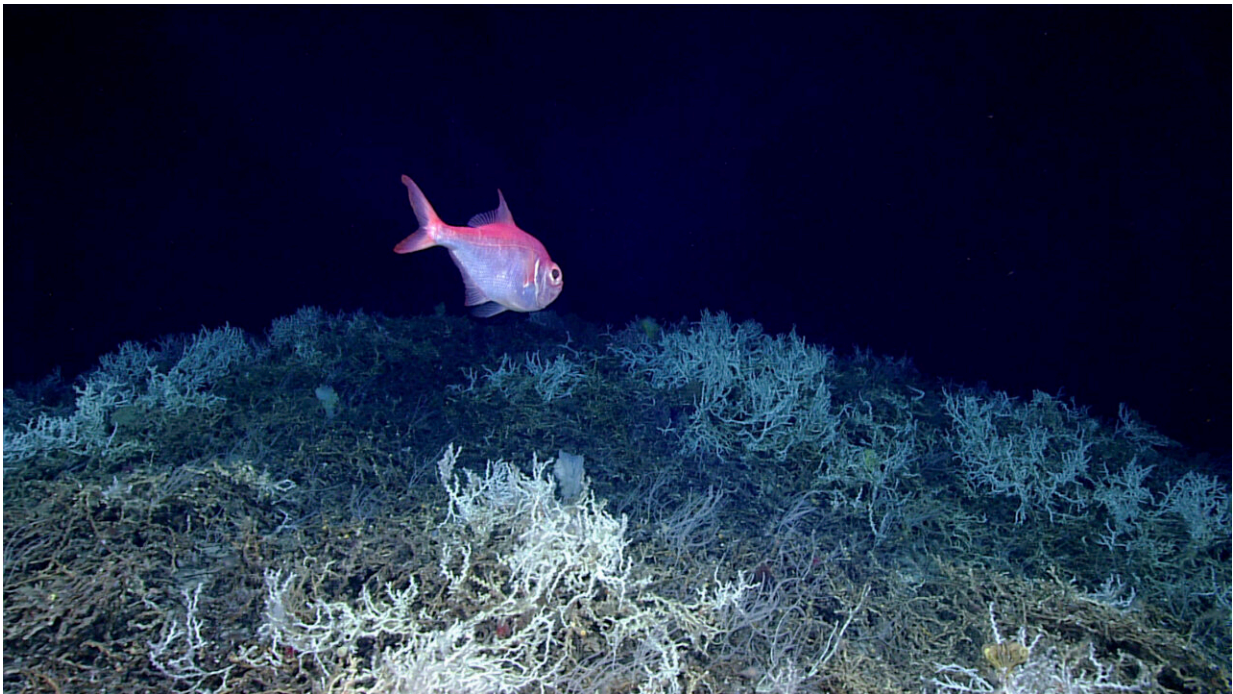


Largest deep-sea coral reef to date is mapped by scientists off the US Atlantic coast

January 18 2024, by Christina Larson



In this image provided by NOAA Ocean Exploration, an alfonsino fish swims above a thicket of *Lophelia pertusa* coral during a dive on a cold water coral mound in the center of the Blake Plateau off the southeastern coast of the U.S., in June 2019. In January 2024, scientists announced they have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. coast. While researchers have known since the 1960s that some coral were present off the Atlantic coast, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. Credit: NOAA Ocean Exploration via AP

Scientists have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. Atlantic coast.

While researchers have known since the 1960s that some coral were present off the Atlantic, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor.

The largest yet known deep coral reef "has been right under our noses, waiting to be discovered," said Derek Sowers, an oceanographer at the nonprofit Ocean Exploration Trust.

Sowers and other scientists, including several at the [National Oceanic and Atmospheric Administration](#), recently published maps of the reef [in the journal Geomatics](#).

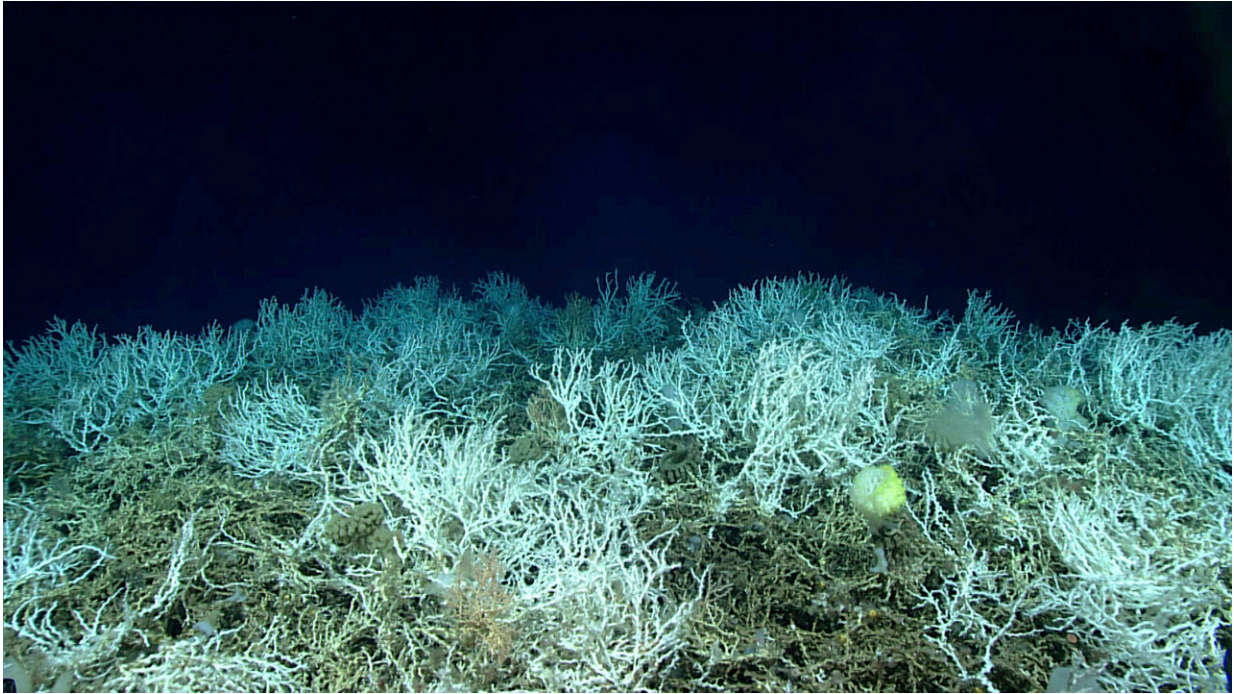
The reef extends for about 310 miles (499 kilometers) from Florida to South Carolina and at some points reaches 68 miles (109 kilometers) wide. The total area is nearly three times the size of Yellowstone National Park.

"It's eye-opening—it's breathtaking in scale," said Stuart Sandin, a [marine biologist](#) at the Scripps Institution of Oceanography, who was not involved in the study.

The reef was found at depths ranging from 655 feet to 3,280 feet (200 meters to 1,000 meters), where sunlight doesn't penetrate. Unlike [tropical coral reefs](#), where photosynthesis is important for growth, coral this far down must filter food particles out of the water for energy.



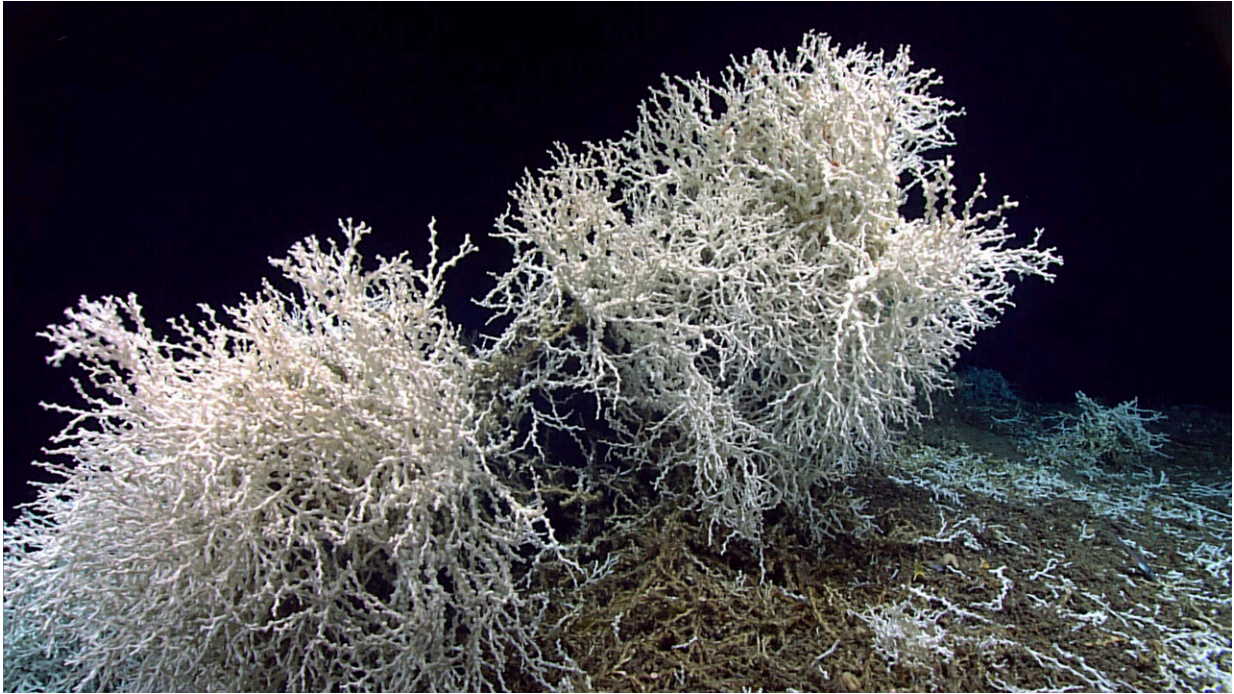
In this image provided by NOAA Ocean Exploration, a squat lobster perches on healthy *Desmophyllum pertusum* coral approximately 100 miles east of the Florida Atlantic coast in June 2019. Corals like these that make up the mounds along the Blake Plateau provide important habitat for a variety of marine life. In January 2024, scientists announced they have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. coast. While researchers have known since the 1960s that some coral were present off the Atlantic coast, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. Credit: NOAA Ocean Exploration via AP



This image provided by NOAA Ocean Exploration shows extensive, dense populations of coral at the Blake Plateau off the southeastern coast of the U.S., in June 2019. In January 2024, scientists announced they have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. coast. While researchers have known since the 1960s that some coral were present off the Atlantic coast, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. Credit: NOAA Ocean Exploration via AP



In this image provided by NOAA Ocean Exploration, an oreo fish swims above mounds of *Desmophyllum pertusum* coral, previously called *Lophelia pertusa*, found at the top of the crest of Richardson Ridge on the Blake Plateau off the coast of South Carolina in June 2018. In January 2024, scientists announced they have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. coast. While researchers have known since the 1960s that some coral were present off the Atlantic coast, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. Credit: NOAA Ocean Exploration via AP



In this image provided by NOAA Ocean Exploration, a few large thickets of *Lophelia pertusa* coral grow along the edges of large rock shelf overhangs at the Blake Plateau off the southeastern coast of the U.S., in July 2019. The white coloring is healthy, as deep-sea corals don't rely on symbiotic algae. In January 2024, scientists announced they have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. coast. While researchers have known since the 1960s that some coral were present off the Atlantic coast, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. Credit: NOAA Ocean Exploration via AP



This image provided by NOAA Ocean Exploration shows large amounts of *Lophelia pertusa* stony coral found at the top of the crest of Richardson Ridge on the Blake Plateau off the coast of South Carolina in 2018. Rubble of this species also appeared to form the mounds found in this region. In January 2024, scientists announced they have mapped the largest coral reef deep in the ocean, stretching hundreds of miles off the U.S. coast. While researchers have known since the 1960s that some coral were present off the Atlantic coast, the reef's size remained a mystery until new underwater mapping technology made it possible to construct 3D images of the ocean floor. Credit: NOAA Ocean Exploration via AP

Deep coral reefs provide habitat for sharks, swordfish, [sea stars](#), octopus, shrimp and many other kinds of fish, the scientists said.

Tropical reefs are better known to scientists—and snorkelers—because they're more accessible. The world's largest tropical coral reef system, the Great Barrier Reef in Australia, stretches for about 1,430 miles

(2,301 kilometers).

Sowers said it's possible that larger deep-sea reefs will be discovered in the future since only about 75% of the world's ocean floor has been mapped in high-resolution. Only 50% of U.S. offshore waters have been mapped. Maps of the ocean floor are created using high-resolution sonar devices carried on ships.

Deep reefs cover more of the ocean floor than [tropical reefs](#). Both kinds of habitat are susceptible to similar risks, including [climate change](#) and disturbance from oil and gas drilling, said Erik Cordes, a marine biologist at Temple University and co-author of the new study.

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