



Northeast Canyons and Seamounts Marine National Monument

Deep in the oceans exist some of the world's oldest and most mysterious sea canyons and mountains, or seamounts.

What's New?

Working alongside the U.S. Fish and Wildlife Service, NOAA developed a Monument Management Plan to guide the Monument's stewards in caring for this special place. This Plan establishes the long-term vision and framework needed to provide proper care for the Monument's unique ecosystem, marine life, and natural and historical resources, as well as sets priorities and goals for managing the Monument into the future.

NOAA Fisheries and the U.S. Fish and Wildlife Service have prepared a final management plan and environmental assessment for the proper care and management of the Northeast Canyons and Seamounts Marine National Monument, as directed by Presidential Proclamations 9496 and 10287 (September 15, 2016; October 8, 2021).

The plan defines agency management roles and responsibilities and lays out the goals, objectives, and proposed management activities for the next 15 years. The plan includes an environmental assessment to evaluate the potential impacts of implementing the proposed management actions.

The goals and objectives in the plan are derived from the Presidential Proclamations, federal mandates, and public input. The plan ensures transparency on management activities and addresses priority management, research, and education needs to foster stewardship of the Monument's natural, historical, and cultural resources.

The final management plan and environmental assessment are accessible on USFWS [website](#).

The Monument management team received 12,219 written and verbal submissions during the 45-day public comment period on the draft management plan. These comments guided NOAA Fisheries and the U.S. Fish and Wildlife Service in the creation of the final management plan, and

will ultimately help us to meet our goals of protecting and conserving resources, managing environmental threats, and better understanding the Monument ecosystems.

Location and Size

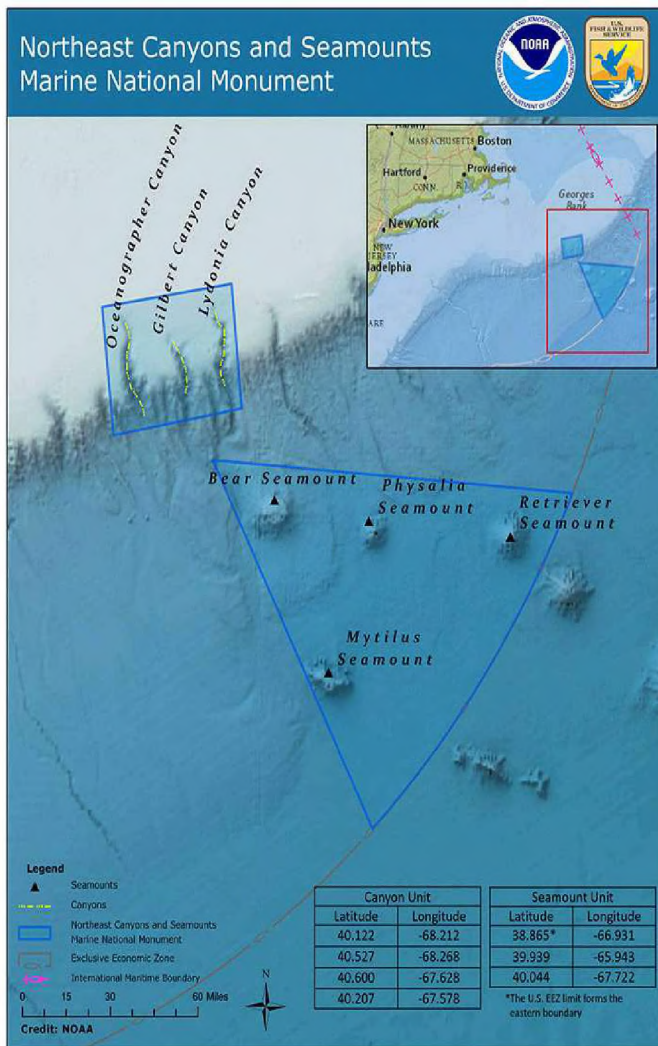
The Northeast Canyons and Seamounts National Monument consists of approximately 4,913 square miles (12,724 square kilometers) and is located about 130 miles east-southeast of Cape Cod. Approximately the size of Connecticut, the monument includes two distinct areas, one that covers three canyons and one that covers four seamounts.

These undersea canyons and seamounts contain fragile and largely pristine deep marine ecosystems and rich biodiversity, including important deep sea corals, endangered whales and sea turtles, other marine mammals and numerous fish species.

History

On September 15, President Obama designated the first marine national monument in the Atlantic Ocean, the [Northeast Canyons and Seamounts Marine National Monument](#), using his authority under the Antiquities Act of 1906. The area has been the subject of scientific exploration and discovery since the 1970s. This is the first and only national marine monument in the Atlantic Ocean.

After commercial fishing was removed from the list of prohibited activities within the monument by President Trump in 2020, President Biden again revised the prohibited activities for the monument to reinstate the prohibition on commercial fishing on October 8, 2021. All commercial fishing, other than for American lobster and Atlantic deep-sea red crab taken with fixed gear, is prohibited within the Monument as of October 8, 2021. American lobster and red crab fisheries are exempted from this prohibition until September 15, 2023, except where restricted under the New England Fishery Management Council’s Deep-Sea Coral Amendment (see the FAQs).



Map of Northeast Canyons and Seamounts Marine National Monument

On November 9, 2022, NOAA Fisheries published a [Notice](#) seeking comments ahead of drafting the Northeast Canyons and Seamounts Marine National Monument Omnibus Amendment to the Greater Atlantic Region's fishery management plans. We are developing this action under our Secretarial authority at section 305(d) of the Magnuson-Stevens Fishery Conservation and Management Act, in consultation with the Mid-Atlantic and New England Fishery Management Councils.

Management

The Department of Commerce and the Department of the Interior share management responsibility for the monument. The National Oceanic and Atmospheric Administration is responsible for managing activities and species within the monument under the Magnuson-Stevens Fishery Conservation and Management Act, the Endangered Species Act, the Marine Mammal Protection Act, and any other applicable Department of Commerce legal authorities. The [U.S. Fish and Wildlife Service](#) is responsible for managing activities and species under the National Wildlife Refuge System Administration Act as amended, the Refuge Recreation Act, the Endangered Species Act, Public Law 98-532, and Executive Order 6166 of June 10, 1933. The two agencies are working cooperatively on management.

NOAA Fisheries and the U.S. Fish and Wildlife Service have prepared a final management plan and environmental assessment for the proper care and management of the Northeast Canyons and Seamounts Marine National Monument. The final management plan and environmental assessment are accessible on USFWS [website](#).

NOAA Fisheries has also implemented a [final rule](#) to define the boundary coordinates of the Northeast Canyons and Seamounts Marine National Monument area to reflect the prohibition on commercial fishing in the Magnuson-Stevens Fishery Conservation and Management Act regulations, incorporating the Monument boundaries and commercial fishing prohibition into the Magnuson-Stevens Act regulations at 50 CFR 600.

Unique Features

These canyons and seamounts are home to at least 54 species of deep-sea corals, which live at depths of at least 3,900 meters below the sea surface. The corals, together with other structure-forming fauna such as sponges and anemones, create a foundation for vibrant deep-sea ecosystems, providing food, spawning habitat, and shelter for an array of fish and invertebrate species.

Because of the steep slopes of the canyons and seamounts, oceanographic currents that encounter them create localized eddies and result in upwelling. Currents lift nutrients, like nitrates and phosphates, critical to the growth of phytoplankton from the deep to sunlit surface waters. These nutrients fuel an eruption of phytoplankton and zooplankton that form the base of the food chain. Aggregations of plankton draw large schools of small fish and then larger animals that prey on these

fish, such as whales, sharks, tunas, and seabirds. Together the geology, currents, and productivity create diverse and vibrant ecosystems.

[Learn More](#) 

The Canyons

The Canyons Unit includes three underwater canyons -- Oceanographer, Gilbert, and Lydonia -- and covers approximately 941 square miles. The canyons start at the edge of the geological continental shelf and drop from 200 meters to thousands of meters deep.

In Oceanographer, Gilbert, and Lydonia canyons, the hard canyon walls provide habitats for sponges, corals, and other invertebrates that filter food from the water to flourish, and for larger species including squid, octopus, skates, flounders, and crabs. Major oceanographic features, such as currents, temperature gradients, eddies, and fronts, occur on a large scale and influence the distribution patterns of such highly migratory oceanic species as tuna, billfish, and sharks. They provide feeding grounds for these and many other marine species.

[Toothed whales](#), such as the endangered sperm whale, and many species of beaked whales are strongly attracted to the environments created by submarine canyons. Surveys of the area show significantly higher numbers of beaked whales present in canyon regions than in non-canyon shelf-edge regions. Endangered sperm whales, iconic in the region due to the historic importance of the species to New England's whaling communities, preferentially inhabit the U.S. Atlantic continental margin. Two additional species of endangered whales (fin whales and sei whales) have also been observed in the canyon and seamount area.



Anthomastus coral in Oceanographer Canyon.



The Seamounts

Sea Spider in Oceanographer Canyon

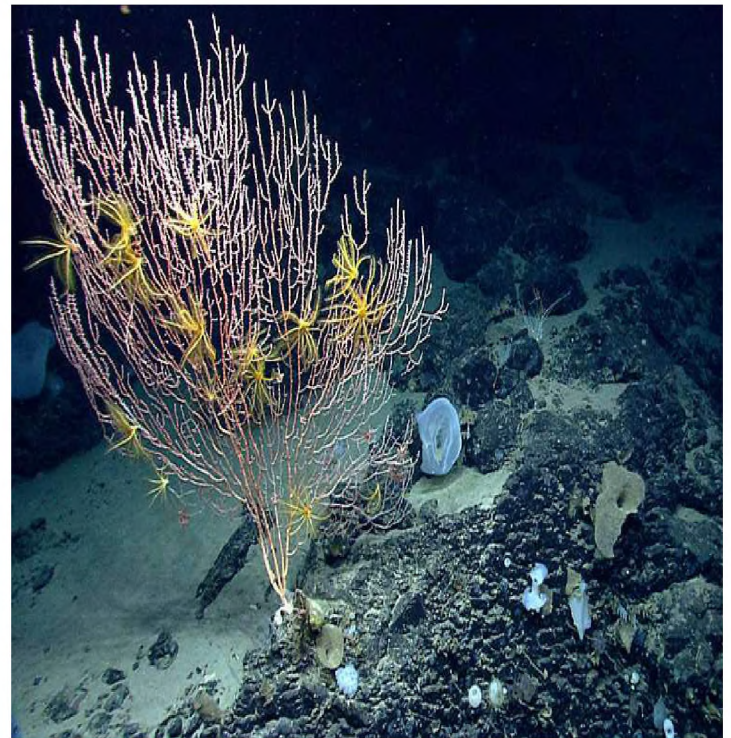
The New England Seamount Chain was formed as the Earth's crust passed over a stationary hot spot that pushed magma up through the seafloor, and is now composed of more than 30 extinct undersea volcanoes, running like a curved spine from the southern side of Georges Bank to midway across the western Atlantic Ocean. Many of them have characteristic flat tops that were created by erosion by ocean waves and subsidence as the magma cooled. Four of these seamounts -- Bear, Physalia, Retriever, and Mytilus -- are in the United States Exclusive Economic Zone. Bear Seamount is approximately 100 million years old and the largest of the four; it rises approximately 2,500 meters from the seafloor to within 1,000 meters of the sea surface. Its summit is over 12 miles in diameter. The three smaller seamounts reach to within 2,000 meters of the surface. All four of these seamounts have steep and complex topography that interrupts existing currents, providing a constant supply of plankton and nutrients to the animals that inhabit their sides. They also cause upwelling of nutrient-rich waters toward the ocean surface.

Geographically isolated from the continental platform, these seamounts support highly diverse ecological communities with [deep-sea corals](#) that are hundreds or thousands of years old and a wide array of other benthic marine organisms not found on the surrounding deep-sea floor. They provide shelter from predators, increased food, nurseries, and spawning areas. The New England seamounts have many rare and endemic species, several of which are new to science and are not known to live anywhere else on Earth.

The Ecosystem

The submarine canyons and seamounts create dynamic currents and eddies that enhance biological productivity and provide feeding grounds for seabirds; pelagic species, including [whales](#), [dolphins](#), and [turtles](#); and highly migratory fish, such as [tunas](#), [billfish](#), and [sharks](#). More than ten species of shark, including great white sharks, are known to utilize the feeding grounds of the canyon and seamount area. Additionally, surveys of leatherback and loggerhead turtles in the area have revealed increased numbers above and immediately adjacent to the canyons and Bear Seamount.

[Marine birds](#) concentrate in upwelling areas near the canyons and seamounts. Several species of gulls, shearwaters, storm petrels, gannets, skuas, and terns, among others, are regularly observed



Bamboo Coral from Mytilus Seamount

in the region, sometimes in large aggregations. Recent analysis of geolocation data found that Maine's vulnerable Atlantic puffin frequents the canyon and seamount area between September and March, indicating a previously unknown wintering habitat for those birds.

These canyons and seamounts, and the ecosystem they compose, have long been of intense [scientific interest](#). Scientists from government and academic oceanographic institutions have studied the canyons and seamounts using research vessels, submarines, and remotely operated underwater vehicles for important deep-sea expeditions that have yielded new information about living marine resources. Much remains to be discovered about these unique, isolated environments and their geological, ecological, and biological resources.

Frequently Asked Questions

Check out our [Frequently Asked Questions](#) about the Monument.



Octopus in Physalia Seamount

Last updated by [Greater Atlantic Regional Fisheries Office](#) on 05/31/2024