

Deep sea corals create oases of special habitat along our coast, and they are extremely vulnerable to certain kinds of fishing such as bottom trawling and dredging. In this region both corals and fisheries are managed by the South Atlantic Fishery Management Council. In 2004 the Council responded to the irrefutable data provided by scientists and identified areas of coral that would be closed to bottom trawling and other activity that disturbs the seafloor. The boundaries were updated in spring of 2006 to reflect recent research. However, the Council has yet to formalize these designations and the threat to these corals remains.

Oceana strongly supports the South Atlantic Fishery Management Council taking action to confirm its recognition of the importance of deep-sea corals to the marine ecosystem. We urge the council to take the management steps necessary to protect the corals from damaging activities, especially destructive trawling and dredging. Oceana looks forward to the success of the South Atlantic Fishery Management Council in taking this next important step in development and execution of the Council's carefully researched and prepared Fishery Ecosystem Plan. Oceana believes this first step will prove to be a clear demonstration that the health of the deep sea ecosystem will be reflected in a healthy and sustainable fishing community.

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DEEP SEA CORAL ECOSYSTEM OF THE SOUTHEAST

Deep sea corals are found in oceans around the world some at depths of more than five and a half kilometers below the ocean's surface. These reefs are an important part of the deep sea ecosystem and often create vital habitat for a myriad of fish and invertebrate species. The deep sea corals off the Atlantic coast of the US form a virtual oasis of corals, sponges, crabs, lobsters, sea stars, and fish. Deep sea corals lack the sun dependent algae that shallow water coral possess and can grow to be meters tall and hundreds of years old. Deep water reefs, like shallow tropical reefs offer refuge and important habitat to many species of fish, including many commercially important species. These reefs are not only a vital element of the surrounding ecosystem, but also represent a largely untapped resource of natural products with enormous potential. Deep sea coral reefs are incredibly slow growing and fragile consequently their destruction can mean their total disappearance.



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NORTH CAROLINA

Cape Lookout Lophelia Banks and Cape Fear Lophelia Banks:



Lophelia

In the 1960s live coral colonies up to 50cm in diameter were observed off the North Carolina coast. It was estimated that over 200 coral mounds up to 146m in height existed in this area alone. More recently three reef complexes have been explored.

These reefs, including Cape Fear and Cape Lookout Banks occur at depths of 370-450m on the western edge of the Blake Plateau and are 80 to 100m tall.

These reefs are the northernmost deep reefs in the eastern US. Since they represent the end of a significant zoogeographic region they are likely to contain unique biotic resources that do not occur anywhere else. They appear to be different to many of the more southerly occurring deep reefs and are some of the best developed *Lophelia pertusa* (a hard, white reef building coral) reefs ever discovered in the eastern Atlantic. The Cape Fear Banks rise nearly 80 meters over a distance of about 0.4 kilometers and include some of the most rugged habitat in the area. The main mound covers a distance of approximately 1km of sea floor. The Cape Lookout reefs contain the most extensive coral mounds off of North Carolina.

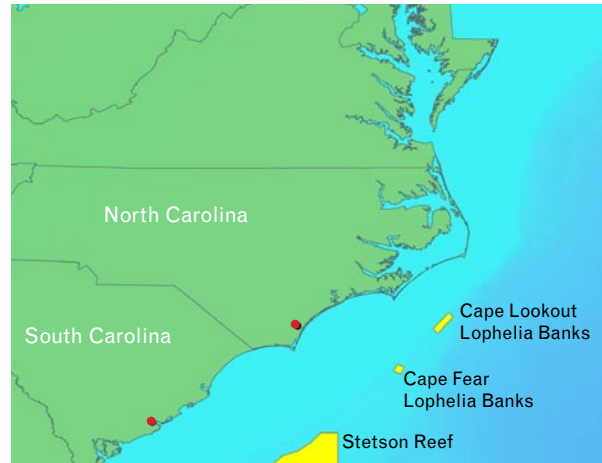
The tops and sides of the mounds of both the Cape Fear and Cape Lookout banks are covered by densely growing Lophelia coral. *Enallopsammia profunda* (a white, stony, reef building coral) is also dominant on many of the mounds. Over 54 species of fish have been observed on the Cape Lookout Banks.

Many of the species identified were found to rarely occur off the reefs, if at all. Some of the most common species identified on these reefs include red bream, roughy, codling, rattail, and hake. Over twelve fish species have been observed on the Cape Fear reefs

and it has been suggested that these reefs contain the greatest numbers of large fish off North Carolina. This is the only area off North Carolina where wreckfish have been observed. Many species of invertebrates, including crabs and brittle stars are also present within the Cape Fear and Cape Lookout reefs.



Snowy Grouper



SOUTH CAROLINA

Stetson Reef:



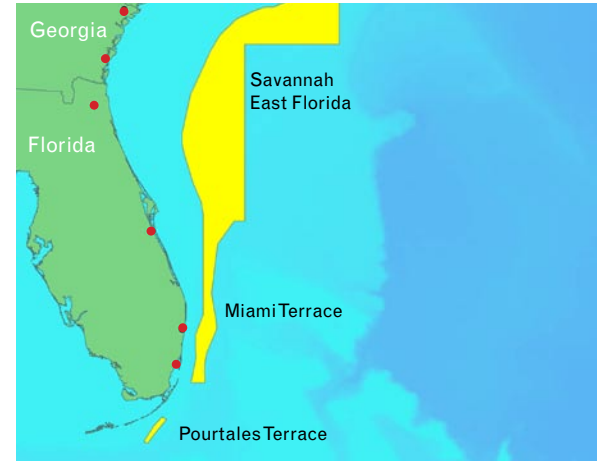
Yellow *Enallopsammia stony coral*

Hundreds of pinnacles occur along the Blake Plateau approximately 120 nautical miles (138mi) from Charleston at depths of 640-869m. It has been suggested that over 200 coral mounds occupy this 6174km² area. One of the peaks, named Stetson Peak by Reed *et al* in 2006, was

estimated to be nearly 152m tall in 822m of water. This represents one of the tallest Lophelia mounds known.

Covering the peaks are live bushes of Lophelia coral, sponges, sea fans, and black coral. Live coral colonies of up to 50cm in diameter occur in the area. *Enallopsammia* is the dominant species in all areas although Lophelia is concentrated on the tops of the mounds. Fish and an abundance of brittle stars, sea urchins, hydroids, sea anemones and soft corals have been identified in this area.

Stylasterid corals and solitary cup corals are abundant. Squat lobsters and bathyal swimming crabs can be found amongst the coral outcroppings. Ten species of fish have been found to rely upon these reefs including red bream, roughy, codling, rattail and hake.



GEORGIA

Savannah East Florida:



Lophelia with bathyal swimming crab

sponges and sea fans. Coral colonies measuring 30-50cm in diameter cover approximately 10 percent of the sea floor in this area.

The reef system supports large populations of massive sponges, including large plate-shaped sponges, stalked fan-shaped sponges, sea fans and small macroinvertebrates as well as over ten different fish species. Some of the fish that are present on these reefs include swordfish, rattail fish, blackbelly rosefish and sharks (*Squalus* spp.).



Hexactinellid sponge

FLORIDA

Savannah East Florida:



Pink *Anthomastus*

East Florida Lophelia Pinnacles: It is estimated that over 40,000 coral lithoherns could be present in this region of the Straights of Florida and the Blake Plateau. Nearly 300 coral mounds from 15 to 152 meters in height have been found off Jacksonville. South of St. Augustine there are mud mounds

that are topped with one meter tall thickets of lophelia coral and off Cape Canaveral are some small colonies (< 30cm) of Lophelia and *Enallopsammia* that are growing on slopes of dead coral rubble. The coral mounds in this region range from 100 to 1000m in length. Live coral on some of these reefs was radiocarbon dated and found to be 700 years old, and some dead coral was found to be 28,170 years old. These reefs are important to over twelve species of fish including blackbelly rosefish, chimaera, codling, goosefish, dogfish, hagfish, rattail, cutthroat eel, and wreckfish.

Miami Terrace:

The Miami Terrace is off southeastern Florida and it provides habitat for an array of marine life, from commercially valuable groupers to intricate sponges. A rock ridge along the eastern edge of the terrace is topped with lophelia coral, stylasterid hydrocoral, bamboo coral, black coral and a myriad of sponges and soft corals. Lophelia reefs also occur along the base of the terrace at depths of approximately 670m. Twenty fish species have been identified at this site, including dense aggregations of wreckfish, shortnose greeneye, conger eel, red dory, blackbelly rosefish, codling, dogfish, rattail, skates, sharks and jacks.

Pourtales Terrace:



Purple soft coral

This terrace parallels the Florida Keys for 213km and acts as important habitat covering 3429km² at depths of 200 to 450m. The peaks of some of these mounds are covered with thick layers of stylasterid corals, along with dense and diverse communities of sponges, octocorals, and fish. Thirty species of fish have been identified at

this site. Numerous sinkholes occur along the outer edge of the Terrace the bottoms of which can be 600m deep and up to 600m in diameter, making them some of the largest in the world. Sinkholes provide habitat for various hard and soft corals, sponges, anemones, urchins, starfish, crustaceans and gastropods.