

Florida Options for Marine Conservation

Potential no-take marine protected areas

Fully protected marine reserves, where no harvesting is allowed, are heralded by scientists as offering the greatest ecosystem and biodiversity benefits. Such areas in Florida, while only covering less than 0.001 percent of Florida's waters, have shown to enhance lobster and game fish fisheries and are popular destinations for recreational diving and snorkeling. Examples of exciting opportunities for potential future fully protected conservation zones within Florida waters include the following:

Snapper Ledge (and similar environments)

Location: off Tavernier Key in the Florida Keys
Environment: shallow coral reef



Image courtesy NOAA

Snapper Ledge, a popular dive site off of Tavernier in the Florida Keys, is home to some of the most dense and diverse marine life populations in the area. Divers regularly report the presence of large schools of grunts, snappers, and many other species of fish, including parrotfish, rays, lobsters, and more. Divers report that marine life (especially snapper) is concentrated here.

One of the largest and healthiest Boulder Brain Corals (*Colpophyllia natans*) in the Upper Keys can be found on Snapper's Ledge. This site is reported as an exceptional location for both snorkeling and diving—a serious “must dive” site in the keys.

There is currently an effort seeking Sanctuary Preservation Area (SPA) status for Snapper Ledge, supported by local dive operations and conservation groups. SPA status is essentially a “no-take” zone. There are currently only 18 small SPAs in the Florida Keys National Marine Sanctuary (FKNMS). Many more shallow and threatened coral reefs there deserve SPA status.

Northern Keys Coral Reefs

Location: off Key Largo and Elliott Key in the Florida Keys
Environment: Shallow patch and barrier coral reefs and seagrass beds

An extensive range of shallow patch reefs, seagrass beds, and barrier reefs are found off Florida's upper Keys. In fact, more patch reefs are found here than off all the other Keys combined.

Northern Keys Coral Reefs

(continued)



Coral damaged by boat grounding off Key Largo.
Image courtesy Steven Lutz

Although this unique and threatened habitat lies under the management auspices of the John Pennekamp Coral Reef State Park, Biscayne National Park, and FKNMS, only a handful of fully protected areas are found, four small SPAs. The northern Keys coral reefs are adjacent to the large metropolis of Miami and experience intense fishing and use pressures. For example, approximately half of the shallow patch reefs show signs of boat grounding damage, smashed and scarred coral heads.

Stronger conservation measures, including no-take zones, are needed if we are to continue enjoying the natural wonders of this area.

Florida's "Green to Blue"

Location: off Cape Canaveral, central eastern Florida.

Environment: Mangroves, shallow corals, seagrass beds, extensive sand flats, and deep water corals



Image courtesy NOAA

This effort would extend the protections given the Merritt Island National Wildlife Refuge eastward into the Atlantic Ocean, essentially creating the first ever "green to blue" watershed conservation corridor that includes mangroves, seagrass beds, sandflats, and shallow and deep water corals.

Fish have been reported older, larger, and 2 to 13 times more abundant inside Merritt Island National Wildlife Refuge than in surrounding waters. An extended conservation zone would give these creatures the opportunity to thrive and multiply as nature intended, potentially benefiting fisheries along Florida's entire Eastern Atlantic coast.

Pulley Ridge



Image courtesy NOAA

Location: approximately 250 km west of Cape Sable, Florida, in the Southern Gulf of Mexico

Environment: “deepest” shallow water coral reef

Pulley Ridge may be America’s deepest coral reef. It is a submerged coastal ridge, beginning at its southern end west of the Dry Tortugas, and extending nearly 159 kilometers northward, at depths of 60-70 meters. The feature shows a surprising density and abundance of shallower-water corals, with large areas of up to sixty percent live coral coverage reported.

Pulley Ridge has been designated as a Habitat Area of Particular Concern (HAPC) and some fishing activities are restricted, but growing concern for this unique environment calls for additional protection.

The Florida Middle Grounds



Image courtesy NOAA & U. S. Fish & Wildlife Service

Location: Northeastern Gulf of Mexico

Environment: hardground habitat

The extensive shallow hardgrounds of the Southeastern Gulf are described as pristine coral areas and are intensively fished for both shrimps and reef fishes. The mid-shelf exposure, roughly 140 kilometers and at depths up to 60 meters, is considered the furthest north “coral reef” on the North American continental shelf.

The Florida Middle Grounds was designated a HAPC in 1984, which prohibits the use of any fishing gear interfacing with bottom. However, due to intense fishing pressure, further protections are warranted.

Southeast Deep-water Corals

Location: from Georgia to the Florida Keys in deep waters

Environment: deepwater coral habitat

An extensive range of deep water coral structures are found off Florida’s eastern coast and in Florida’s Gulf Stream. Deep water corals found here can grow to several

Southeast Deep-water Corals

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Image courtesy S. Ross et al., UNC-W

meters in diameter and 1–3 meters high. They also have been found to live for up to 700 years and build amazing structures up to 300 meters long and 50 meters high. Marine life associated with these structures includes deep water snappers, groupers, sharks, and the commercially important golden crab.

There is a current effort seeking HAPC status for Florida's deep water corals, supported by local marine scientists.

Deep sea coral reefs in this area (the Oculina Banks off central Eastern Florida) have been decimated by illegal bottom trawling. With the loss of their food and shelter, the inhabitants of these reefs either died or moved away, leaving behind a barren wasteland. Further protection for all of Florida's deep water corals is needed.

West Florida Lithoherms

Location: Southeastern Gulf of Mexico

Environment: Deepwater coral habitat



Structure and habitat forming deep sea coral *Lophilia pertusa*.

Image courtesy Steven Lutz

Recent deep sea explorations have discovered a unique concentration of perhaps hundreds of 5–15 meter-tall deep water coral pinnacles and structures (know as lithoherms) in one area of the West Florida shelf in water up to 500 meters deep. The structure forming deep water coral *Lophilia pertusa* was reported present.

Deep water corals are crucial habitat elements for seafloor species and are susceptible to destructive fishing practices. The West Florida Lithoherms deserve protection status.

St. Lucie Inlet

Location: South of Fort Pierce off Florida's Eastern coast

Environment: mangrove forest, beach dune, seagrass bed , and nearshore reef habitat



Image courtesy of NOAA

St. Lucie Inlet is an important coastal estuary, an area of salt and fresh water mixing that teems with marine life and wading birds. Near-shore Reefs provide vital habitat that supports a diverse fish community, including foraging habitat for the federally endangered green sea turtle. The area is popular with locals for snorkeling and scuba diving, swimming, sunbathing, fishing, and picnicking and wildlife viewing.

Current conservation measures include a State Park, where fishing and other extractive uses are allowed. Enhancing and expanding protections in the area would enhance wildlife viewing opportunities and potentially benefit nearby fisheries.

Threatened Corals of Broward and Palm Beach Counties

Location: off Lauderdale by the Sea to Port Everglades in Broward County and off Boca Raton to Jupiter in Palm Beach County

Environment: coral reef habitat



Staghorn coral forest off Broward County. image courtesy Cry of the Water

Palm Beach County is the northernmost home to Staghorn coral (*Acropora cervicornis*) in the United States. Elkhorn coral (*A. palmata*) occurs as far north as Broward County. Both species are rare and threatened, however reefs of the area suffer from a lack of any meaningful management strategy or structure.

Reefs here are several miles in length and show cover of up to forty percent of live coral, including many ancient corals hundreds of years old. Dense fish populations pack these reefs, which provide essential habitat for juvenile fish. This nursery will surely perish without protection.

Imminent threats to these reefs include the detrimental effects of unnecessary dredging and beach filling, ocean wastewater outfall, coral bleaching, and unregulated and unmanaged boat anchoring and large vessel groundings.

There are currently several conservation efforts seeking improved water quality, an end to dredging activities in the area, and the same level of protection given to the reefs as those in the FKNMS.