

5.10 Pirate's Cove Artificial Reef

- Location: Sirotkin Reef
- Materials: Conc. boxes, pipe sections, bridge railings, culverts, slabs, pilings
- Maximum Depth: 187 feet
- Reef High Point: 172 feet
- Year Created: 2009
- Monitoring Date: 9/8/2010
- Total Cost: \$21,125.00 (FWC 87% & Martin County 13%)

5.10.1 History of the Pirate's Cove Artificial Reef

In the fall of 2008 the FWC awarded a \$62,068 grant to Martin County's Engineering Department. Materials of opportunity were collected and stored until summer of 2009. Three bargeloads of material, approximately 500 tons each, were deployed on the Sirotkin site to create 3 new reefs. One of these reefs was the Pirate's Cove reef. The funds allocated for the Pirate's Cove Reef from the FWC grant in addition to monies from Martin County totaled \$21,125. On August 24, 2009 the Pirates Cove Reef was built successfully in 187 ft of water and since has become another fine deepwater artificial reef offshore Martin County, Florida. On Sept. 8, 2010 a large steel sign with concrete bases was placed on the reef with the name Pirate's Cove Reef.

Pirate's Cove Resort & Marina is a locally operated facility in the Manatee Pocket section of Port Salerno, Florida. Many of the guests at the resort and sport fishing fleet in the marina have fished the waters of Martin County for decades. A generous donation to support the efforts of both the MCAC fund and the Martin County Artificial Reef Program was received by Pirate's Cove in exchange for the naming rights to the new reef. Figure 25 shows a chart with the location of the Pirate's Cove Reef.

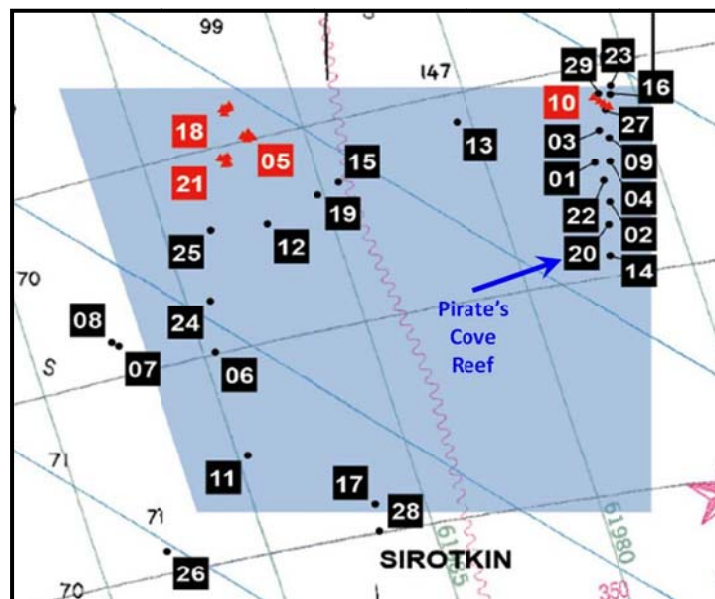


Figure 25. Chart view of the Sirotkin Reef showing the Pirate's Cove Reef location.

5.10.2 Structural Summary

This reef is comprised of several hundred pieces of concrete: large baffle boxes, pilings, bridge railings, culverts, slabs and smaller concrete chunks. During the deployment several of the large baffle boxes landed on top of each other greatly increasing the overall profile of the reef. Many other components landed in a similar fashion and resulted in a high mound with a 15 ft profile. When deeper reefs are built from deploying from an anchored barge some scattering occurs. This seemed not to be the case with this reef, although there are a few pieces laying on the seafloor a short distance (< 50 ft) from the main mound. The footprint of the site is generally round and occupies about ½ acre of seafloor. At this depth, 187 ft, scouring is not a problem because of all the firm stable substrate and minimal wave energy at these depths. No settling or loose components were observed. The photographs in are from the monitoring dive and show general conditions of the reef and some of the species observed during the dive.

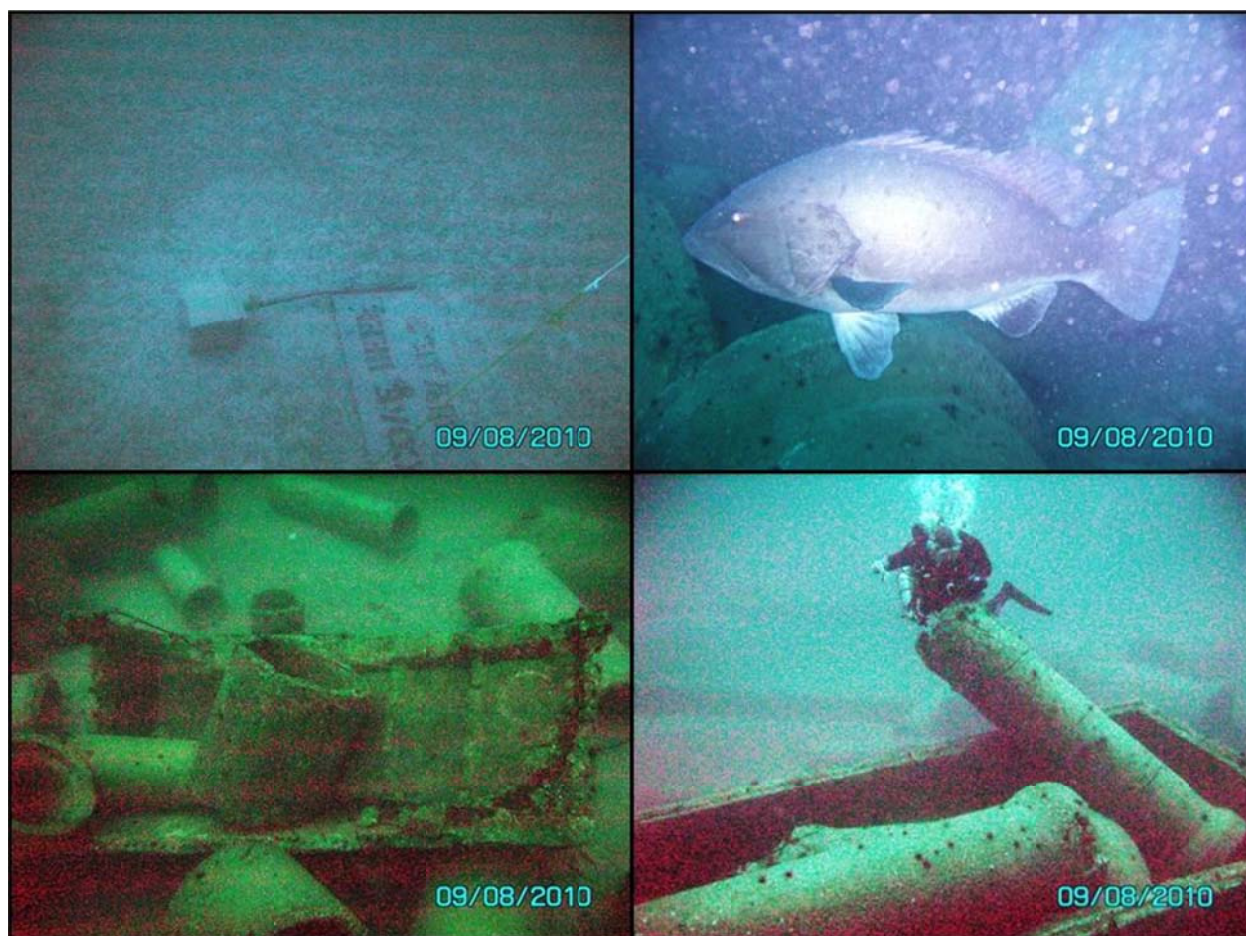


Figure 26. Pirate's Cove Reef photograph from 2010.

Identification of species in the photographs shown above in clockwise order from the upper-left photograph are (1) no fish in this photo, (2) warsaw grouper (estimated >60lbs), (3) sea urchins and Kerry Dillon, and (4) no fish in this photo.

5.10.3 Biological Survey Results

Nine fish species were noted and consisted mainly of sea basses, pinfish, yellowtail reeffish and amberjacks. As on the Ballantrae Reef a Warsaw grouper was identified during monitoring. This Warsaw grouper was approx. 60 lb. As typical of this species around divers it was very curious with our activities and would approach closely within 5 ft. of us during the dive. Table 24 and Table 25 present all the fish and benthic species observed during 2010 at this site. As is often seen on the deeper than 130 ft deep sites less total species are documented but more quantities of each species is evident. The deeper sites still have 100s to 1000s of individual fish just less species diversification than at the shallower artificial reef sites.

Table 24. Pirate's Cove Artificial Reef fish species census.

Family/Common Name	Species	2010		
		Abundance	Size	Comments
Carangidae				
Amber jack	<i>Seriola dumerili</i>	M	A	
Elasmobranchs				
Dusky shark	<i>Carcharhinus obscurus</i>	S	A	6 ft @ 70 ft depth
Pomacentridae				
Yellowtail reeffish	<i>Chromis enchrysurus</i>	M	J & A	
Serranidae				
Bank seabass	<i>Centropristis ocyurus</i>	M	A	
Black seabass	<i>Centropristis striata</i>	A	J & A	
Snowy grouper	<i>Epinephelus niveatus</i>	S	J / A	
Warsaw grouper	<i>Epinephelus nigritus</i>	S	A	~60 lb
Sparidae				
Pinfish	<i>Lagodon rhomboides</i>	M	A	
Sheepshead porgy	<i>Calamus penna</i>	F	A	
	Total	9		

Abundance Key: S=single, F=few (2-10), M=many (11-100), A=abundant (>100)

Size Key: A=adult, J=juvenile, A/J=intermediate

Table 25. Pirate's Cove Artificial Reef benthic species census.

	Common Name	Scientific Name
Echinoderms	Rock Boring Urchin	<i>Echinometra lucunter</i>
Poriferans	Encrusting Sponge	Unidentified species
Crustaceans	Sessile barnacles	<i>Balanus trigonus.</i>
Other	Encrusting Bryozoans	Unidentified Species