

5.9 Ballantrae Anglers Artificial Reef

- Location: Sirotkin Reef – NE Quadrant
- Materials: Concrete box culverts, jersey barriers, bridge pilings, misc. chunks
- Maximum Depth: 187 feet
- Reef High Point: 181 feet
- Year Created: 2009
- Monitoring Date: 9/8/2010
- Total Cost: \$21,125 (FWC 87% & Martin County 13%)

5.9.1 History of the Ballantrae Anglers Artificial Reef

In March of 2008 Sea Rover Services was hired to perform an initial site bathymetric and dive survey of several areas in the NE corner of the Sirotkin Reef Site to gather data needed to apply for a FWC construction grant for deepwater artificial reefs. This \$60,000 Grant was awarded to Martin County's Engineering Department in the Fall of 2008. The funds allocated for the Ballantrae Anglers Club Reef from the FWC grant in addition to monies from Martin County totaled \$21,125. Materials of opportunity were collected and stored and planning of deployment of the new concrete reefs continued until summer of 2009. The materials were deployed during three separate deployments between August 18th and August 24th. During three deployments over 1,500 tons of material was loaded onto a large ABS certified barge operated by McCulley Marine Service and placed within the Sirotkin permitted artificial reef area. Of the 1,500 tons approximately 500+ tons (1 barge load) were utilized to construct the Ballantrae Anglers Club Reef. Figure 23 shows the location of the Ballantrae Anglers Reef in the Sirotkin permitted artificial reef area.

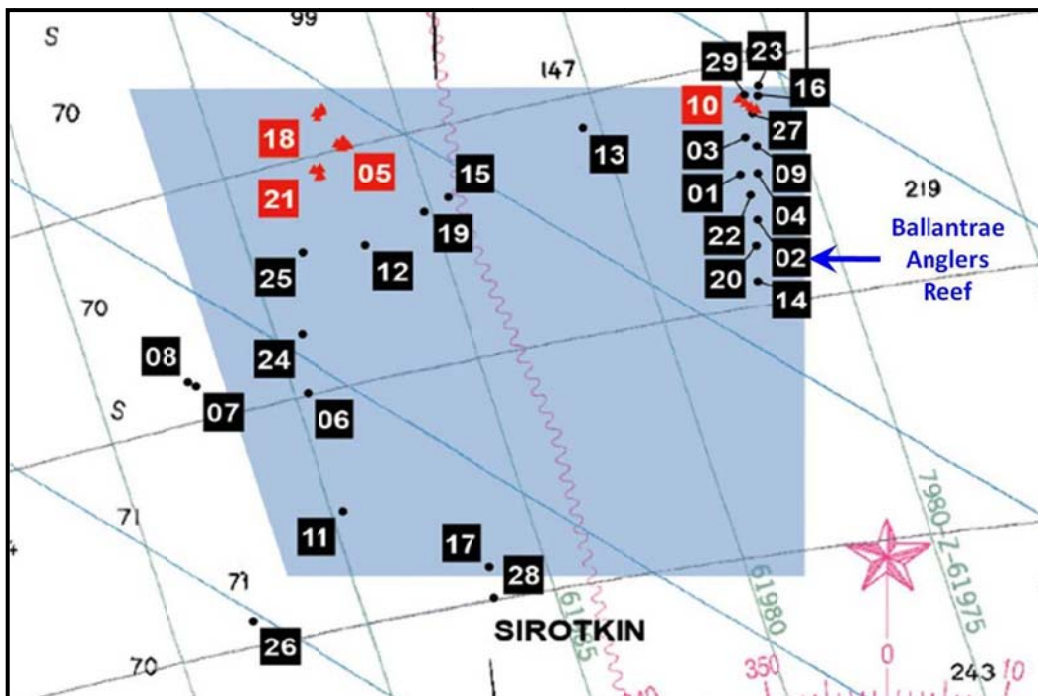


Figure 23. Chart view of Sirotkin Reef showing the Ballantrae Anglers Reef location.

5.9.2 Structural Summary

This reef is comprised of several hundred pieces of concrete, railroad ties, box culverts, pilings, bridge railings, jersey traffic barriers, slabs, and smaller concrete chunks. When deeper reefs are built from deploying from the surface from an anchored barge some scattering occurs. The longer piling type shapes, on occasion, sail through the water column as they sink rapidly towards the seafloor. Therefore, there are some pieces laying on the seafloor a short distance (less than 75 ft away) from the main mound.

At this depth scouring is not a problem because of all the firm stable substrate and minimal effect from wave energy found here. However During the deployment many of the pieces did land on top of each other and formed a low mound with an approximate 6 ft profile. 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 24. Ballantrae Anglers Reef 2010 photographs.

Identification of species in the photographs shown above in clockwise order from the upper-left photograph are (1) no fish in this photo, (2) Kerry Dillon collecting data, (3) warsaw grouper, and (4) bank seabass.

5.9.3 Biological Survey Results

Fish species consisted mainly of seabass and amberjacks. Numerous black and bank sea bass and Greater Amberjack were observed around the reefs components. A large (approx. 70 lb) Warsaw Grouper was observed and photo documented on the site and seemed very curious with the divers monitoring efforts. Table 22 and Table 23 present the fish and benthic species observed during 2010.

Table 22. Ballantrae Anglers Artificial Reef fish species census.

Family/Common Name	Species	2010		
		Abundance	Size	Comments
Carangidae				
Amberjack	<i>Seriola dumerili</i>	M	A	
Serranidae				
Bank seabass	<i>Centropristis ocyurus</i>	M	A	
Black seabass	<i>Centropristis striata</i>	A	J & A	
Warsaw grouper	<i>Epinephelus nigritus</i>	S	A	~70 lb
Sparidae				
Sheepshead porgy	<i>Calamus penna</i>	F	A	
	Total	5		

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 23. Ballantrae Anglers Artificial Reef benthic species census.

	Common Name	Scientific Name
Echinoderms	Rock Boring Urchin	<i>Echinometra lucunter</i>
Crustaceans	Sessile barnacles	<i>Balanus trigonus.</i>
Others	Unidentified type of sponge	