

### 5.3 American Custom Yachts Tower Reef

- Location: Sirotkin Reef
- Materials: Steel
- Maximum Depth: 187 feet
- Reef High Point: 152 feet
- Year Created: 2008
- Monitoring Date: 02/13/2011
- Total Cost: \$4,500 (MCAC 50% and Martin County 50%)

#### 5.3.1 History of the American Custom Yachts Tower Reef

This artificial reef is one of four almost identical steel towers that were constructed by Harbor Branch Oceanographic Institution for the United States Navy. The Navy planned to deploy these towers in an unspecified location and use them for submarine acoustic and navigation exercises. However, the towers were never used for their originally intended purpose and became available for Martin County's artificial reef program. Funding was provided by Martin County and the Martin County Anglers Club in the amount of \$4,500 for the deployment of each tower. The deployment of the tower was performed using a barge that was securely moored at two points to ensure the tower was located at its permitted coordinates within the Sirotkin reef site. Figure 11 shows the location of the American Custom Yachts Tower in the Sirotkin Artificial Reef area.

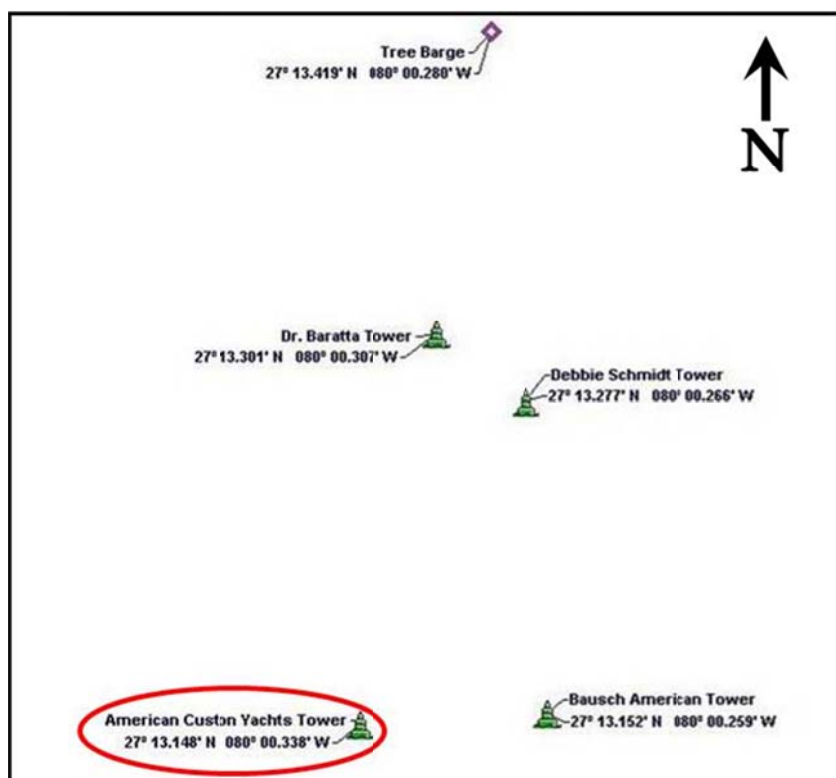


Figure 11. Sirotkin Reef sites showing the American Custom Yachts Tower location.

### 5.3.2 Structural Summary

The maximum seafloor depth at this artificial reef site is about 187 feet and the tower is 35 feet tall. The rope and barrels float upward about 90 feet from the top of the tower and may be as little as 70 feet beneath the surface in a mild current. The seafloor at this site is quite firm and composed of a shell/coarse sand mixture and appears to provide a solid base for the heavy tower, as scouring is not significant around the tower's three feet. The photographs in Figure 12 are from the monitoring dive and show general conditions of the reef and some of the species observed during the dive.



Figure 12. American Custom Yachts Tower 2009 & 2011 photographs.

Identification of species in the photographs shown above in clockwise order from the upper-left photograph are (1) greater amberjacks, (2) greater amberjack, (3) black & bank seabass and juvenile snowy grouper, and (4) Rich Meeker with black seabass around brackets.

### 5.3.3 Biological Survey Results

A total of 8 fish species were observed and consisted mainly of seabass and jacks. Black and bank seabass were common around the tower feet and greater amberjacks patrolled the tower legs and mast. Vast schools of unicorn filefish were observed around the rope and barrels above the tower. Invertebrate biomass on the artificial reef was already well established with barnacles, hydroids, tunicates, tube worms and numerous small colonies of *Oculina* coral. Table 10 and Table 11 present the fish and benthic species observed during 2010.

**Table 10. American Custom Yachts Tower Artificial Reef fish species census.**

Family/Common Name	Species	2010		2009	
		Abundance	Size	Abundance	Size
<b>Serranidae</b>					
Bank seabass	<i>Centropristis ocyurus</i>	M	J & A	M	A
Black seabass	<i>Centropristis striata</i>	M	J & A	M	A
Snowy grouper	<i>Epinephelus niveatus</i>	S	J	S	J
<b>Carangidae</b>					
Almaco jack	<i>Seriola rivoliana</i>			M	A
Amberjack	<i>Seriola dumerili</i>	M	J & A	M	A
<b>Chaetodontidae</b>					
Bank butterflyfish	<i>Chaetodonaya</i>			F	A
<b>Balistidae</b>					
Unicorn filefish	<i>Aluterus monoceros</i>			M	A
Gray triggerfish	<i>Balistes capriscus</i>	F	A		
<b>Ephippidae</b>					
Atlantic spadefish	<i>Chaetodipterus faber</i>	M	A		
<b>Sparidae</b>					
Sheepshead porgy	<i>Calamus penna</i>	F	A		
<b>Bothidae</b>					
Gulf flounder	<i>Paralichthys albigutta</i>	S	A		
	<b>Total</b>	<b>8</b>		<b>7</b>	

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 11. American Custom Yachts Tower Artificial Reef benthic species census.**

Common Name		Scientific Name
<b>Echinoderms</b>	Common arbacia sea urchin	<i>Arbacia punctulata</i>
<b>Cnidarians</b>	Hydroids	Unidentified species
<b>Ascidians</b>	Overgrowing Tunicates Mottled Encrusting Tunicate	<i>Didemnidae</i> <i>Distaplia bermudensis</i>

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<b>Annelida</b>	Tube worm	Unidentified species
<b>Scleractinia</b>	Large ivory coral	<i>Oculina varicosa</i>
<b>Crustaceans</b>	Sessile barnacles	<i>Balanus trigonus</i>
<b>Mollusca</b>	Octopus (either common or Caribbean)	<i>Octopus sp.</i>

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