

8 Wickstrom Artificial Reef

Due to the deep depths and sometimes poor offshore conditions, this deep site is not always able to be monitored. Although not monitored in 2005, this site was monitored in 2006 and 2007. .

Construction date: January 21, 2003

Monitoring Date: September 3, 2007

Location: Sirotkin permitted reef site

GPS coordinates: N27° 13.492' / W80° 00.318'

8.1 History of the Wickstrom Artificial Reef

The Wickstrom was previously known as the Lady Lora, Tauros, and US Army FS 553. The ship is a 168-foot long coastal freighter that had been sitting idle in the Miami River for about 4 years. The vessel was purchased from Jones shipyard in Miami, Florida with funds from Karl Wickstrom, the founder and chief editor of Florida Sportsman magazine, and the Martin County Anglers Club. Martin County funded the transport, administrative and deployment costs of the project.

On Tuesday January 21, 2003 the Wickstrom was intentionally sunk in 188 feet of water in the northeast quadrant of the Sirotkin artificial reef site. The ship was deployed resting perfectly upright located approximately 400 feet north of the previously sunk Tree Barge. Water depths were from 186 - 189 feet surrounding the ship at the sand/shell bottom. The following depths were noted on the ship following its deployment:

- Top of masthead above bridge – 117 feet depth
- Top of wheelhouse – 138 feet depth
- Deck level at bow – 155 feet depth
- Deck level at stern – 162 feet depth

During deployment the ship had a list to port for several hours as the ship was flooded, but as it submerged completely it righted itself and sank, ending upright on the bottom. During the first underwater inspection in January 2003, it appeared that the ship hit the bottom with great force. This force was enough to break steel welds along the port side at deck level where the railing and barrier wall exist, and bend the wall to the east. Also at the bottom on the east (port) side, the hull steel plates have buckled slightly where the ship hit the sand/shell bottom.

8.2 Wickstrom Orientation and Components

The Wickstrom deployment was with the ship upright and the deck level, with no noticeable listing. The bow faced southerly at 190° and the stern faced northerly at 10°. Due to the 2004 and 2005 hurricanes, the ship is now completely broken in half just aft of the superstructure. The bow now faces SE at 120°, while the stern faces NW at 320°. The entire hull along the chine and keel has sawed into the limestone substrate approximately 6 feet deep. Scour exists along the length of the ship approximately 6-8 feet deeper than the surrounding natural sand/shell seafloor.

Photographs taken in 2006 (2007 photographs were poorer quality) of the Wickstrom are shown in Figure 16, which show the damages due to the hurricanes. The bottom two photos show the cutting into the limestone bottom that has occurred. The only other major change noted in 2007 was the falling over of the masthead, so that the highest point is now at a depth of 133 feet.



Figure 16. Wickstrom June 3, 2006 Photographs

8.3 Fish Species and Abundance Findings:

Fish census data from September 3, 2007, June 3, 2006, and August 18, 2004 are shown in Table 10.

Table 10. Wickstrom Reef Fish Census

Common Name	Scientific Name	Adult or Juvenile	2007	2006	2004
Baitfish (A Species Of Anchovy)	<i>Anchoa</i>	A	A		
Bank Seabass	<i>Centropristis ocyurus</i>	A	M		
Baracuda	<i>Sphyaena barracuda</i>	A			

Black Grouper	<i>Mycteroperca bonaci</i>	A	F	M	M
Black Seabass	<i>Centropristis striata</i>	A	M		
Bonito (Little Tunny)	<i>Euthynnus alletteratus</i>	A	M		
Cubbyu	<i>Pareques umbrosus</i>	A	M		
Gag Grouper	<i>Mycteroperca microlepis</i>	A			M
Goliath Grouper	<i>Epinephelus itajara</i>	A	F		
Gray Angelfish	<i>Pomacanthus arcuatus</i>	A	F		
Greater Amberjack	<i>Seriola dumerili</i>	A	M	M	M
Lesser Amberjack	<i>Seriola fasciata</i>	A			
Loggerhead Sea Turtle	<i>Caretta caretta</i>	A			
Red Snapper	<i>Lutjanus campechanus</i>	A			F
Round Scad (Cigar Minnows)	<i>Decapterus punctatus</i>	A	A		
Scamp	<i>Mycteroperca phenax</i>	A		F	
Snowy Grouper	<i>Epinephelus niveatus</i>	J		S	F
Southern Stingray	<i>Dasyatis americana</i>	A	S		
Spadefish	<i>Chaetodipterus faber</i>	A			
Spotfin Hogfish	<i>Bodianus rufus</i>	A	F		
Tomtate	<i>Haemulon aurolineatum</i>	A	M		
Warsaw Grouper	<i>Epinephelus nigritus</i>	A			S
Yellow Coney	<i>Cephalopholis fulva</i>	A		S	
Yellowtail Reefish	<i>Chromis enchrysur</i>	A	F		
Roughtongue Bass	<i>Holanthias martinicensis</i>	A	F		
	Total Number of Species:		15	5	6