

## 16 Frances Langford Memorial Reef

Construction date: February to June 2005

Monitoring date: August 8, 2007

Location: Sirotkin permitted reef site

GPS coordinates: N27° 13.353 / W80° 01.046

### 16.1 History of the Frances Langford Memorial Artificial Reef

In the winter of 2005 nine barge loads of concrete and steel materials were deployed on the Frances Langford Memorial Reef in 150 feet of water within the Sirotkin permitted artificial reef site in Martin County, Florida. These materials came from the decommissioned Frank Wacha draw bridge that spanned the Indian River Lagoon in Jensen Beach. The new reef was named in honor of one of the local celebrities and benefactors, Frances Langford, who was a former actress. Frances Langford was a great supporter and benefactor for the Florida Oceanographic Society (FOS). FOS was the first non-profit environmental group in the area and Ms. Langford's support for the Society helped establish the FOS Coastal Science Center on Hutchinson Island.

### 16.2 Frances Langford Memorial Artificial Reef Orientation

Figure 42 shows a chart with the location of the Langford Memorial Reef. Maximum depth at bottom in sand = 151 feet; minimum depth at top of peaks = 133 feet. The Frances Langford Memorial Reef is comprised of approximately 3500 tons of concrete and steel bridge components. Some individual pieces are as large as 20' x 15' x 12' (the bridge tenders house) and are scattered in a general south to north orientation on the seafloor. The larger pieces have created a profile of between 20 to 30 feet above bottom. Many crevices have been created by the varied arrangement of slabs, piping, grating, guard railings, sidewalk sections, bascule sections, roadway spans, pilings, pile caps, rubble, and other bridge components of the old Frank Wacha Bridge.

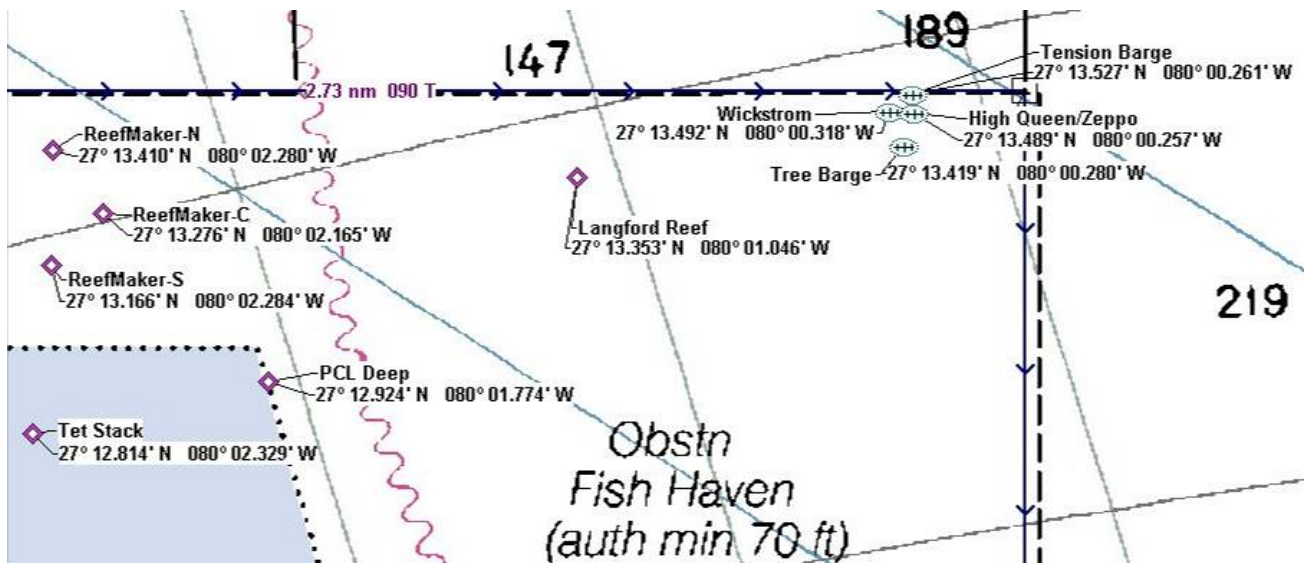


Figure 42. Chart showing Location of Langford Memorial Reef

Figure 43 shows representative photographs from the Langford Memorial Reef. Bridge pieces, a diver, and groupers are shown in the photographs, as well as colonies of hard stony white coral, *Oculina diffusa*.



**Figure 43. Langford Memorial Reef Photographs**

### 16.3 Reef Components Stability

The reef pieces appear to be stable, with only minor settlement and scour. The stacking of pieces provides interstices for habitat.

### 16.4 Fish Species and Abundance Findings:

Table 27 presents the fish species observed and documented during monitoring on August 8, 2007 and June 2, 2006.

**Table 27. Frances Langford Memorial Artificial Reef Fish Census**

Common Name	Scientific Name	Adult or Juvenile	2007	2006
Bank Seabass	<i>Centropristis ocyurus</i>	A	F	
Banks Butterflyfish	<i>Prognathodes aya</i>	A	S	F
Black Seabass	<i>Centropristis striata</i>	A	M	M
Blue Angelfish	<i>Holacanthus bermudensis</i>	A	F	S
Cubbyu	<i>Pareques umbrosus</i>	A	M	
Gag Grouper	<i>Mycteroperca microlepis</i>	A	M	M
Gray Triggerfish	<i>Balistes capriscus</i>	A	F	S
Greater Amberjack	<i>Seriola dumerili</i>	A	M	F
Reef Butterflyfish	<i>Chaetodon sedentarius</i>	A	F	
Scamp	<i>Mycteroperca phenax</i>	A	F	A
Sheepshead	<i>Archosargus probatocephalus</i>	A	F	F
Sheepshead Porgy	<i>Calamus penna</i>		F	
Southern Stingray	<i>Dasyatis americana</i>			S
Spotfin Hogfish	<i>Bodianus rufus</i>	A	F	
Tomtate	<i>Haemulon aurolineatum</i>	A	A	M
<b>Total Number of Species:</b>			13	10