

Cement Barge

The Cement Barge was deployed in January 1984 in the Donaldson Permitted Area approximately 3.5 miles East Northeast of the St. Lucie Inlet and sits upright in 60 feet of water. It is now 21 years old.

It is called the “Cement Barge” because it was deployed with several Rinker/Cement Mixer barrels on top of it that during deployment rolled off and settled on the Northeast side of the barge. Most of them remain in that same area to this day.

The Cement Barge is collapsing in on itself. Most of the top and a significant portion of the side panels are missing making it one of the most heavily degraded Steel Barges in this area. We are of the opinion that this is due to the poor condition it was in prior to deployment. One positive side to this is that it makes it very easy for large fish and divers to penetrate the interior of the structure. For this reason, many of us on the F.O.S. Dive Team consider the Cement Barge to be the best or at least the most interesting barge to dive in Martin County. It is so heavily encrusted it is virtually a Benthic Garden and an Underwater Macro Photographers dream come true. The Painted Bulb Tunicates are spectacular!! It also attracts a huge number of bait and predatory fish. The Goliath Grouper here are big enough to scare you and this is the only Barge where we have actually seen schools of large Tarpon, though not during this particular event.

The F.O.S. Dive Team is anxious to dive the Cement Barge again to see what effect Hurricanes “Frances” and “Jeanne” had on it’s already degraded hull.

Florida Oceanographic Society Research Dive Team
Florida Fish & Wildlife Conservation Commission Monitoring Grant

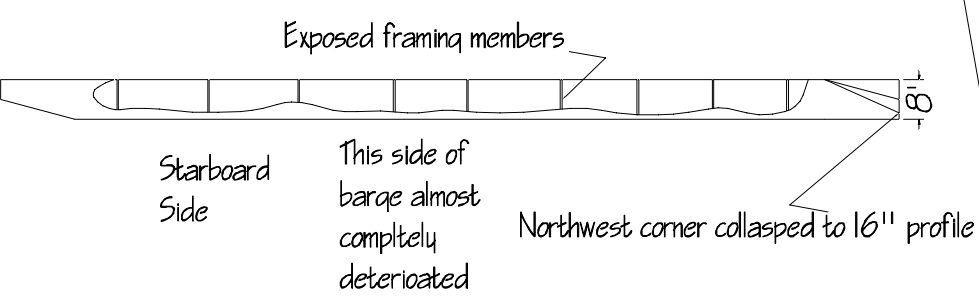
"Artificial Reef Stability Assessment Survey"
Martin County Florida

"The Cement Barge"

Date of Survey: April 24, 2004

Research Divers: Merle Stokes, Frank Evans, Ken Flerx, Mike McGinnis

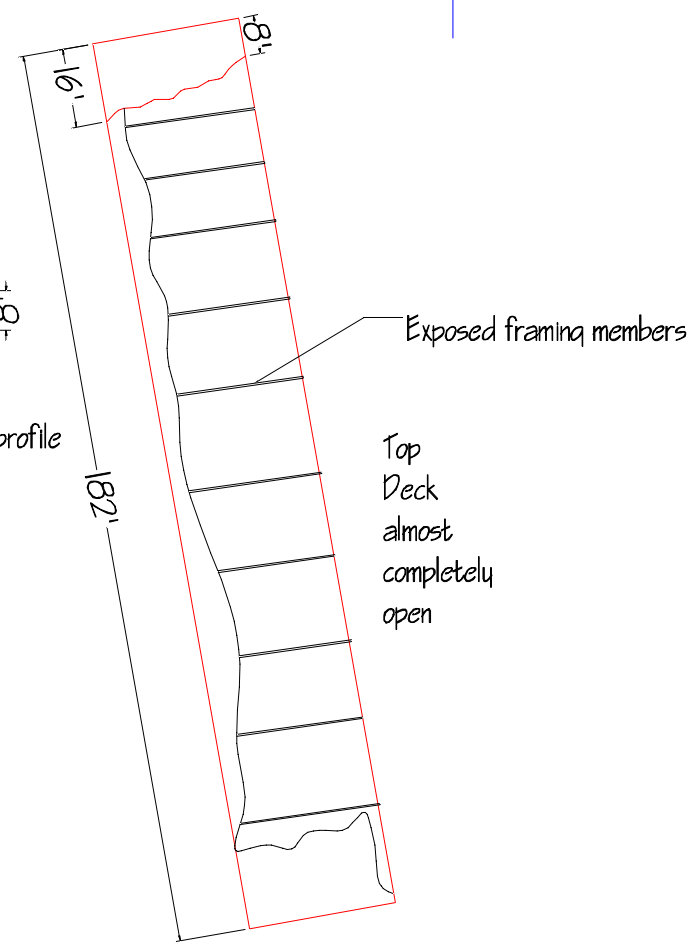
Reef Material: Steel Barge
Orientation: North and South
Bottom Composition: Sand and Shell
General Condition of Material: Fair
Collapse: 3/4 of steel decking has collapsed. Approximately 16 feet of material South of the Bow has buckled and now has a 16 inch profile.
Scattering: Minimal scattering. All reef material has settled into this same general area.
Disintegration: The areas that have collapsed are also highly disintegrated and corroded.
Additional Observations: The Cement Barge is in a state of near continuous collapse. Pieces of it move with the current and surges. It is heavily encrusted with Benthic organisms.



Starboard Side

This side of barge almost completely deteriorated

Northwest corner collapsed to 16" profile



Exposed framing members

Top Deck almost completely open

"Cement Barge" Mapped
04-24-04
Drawn by BS 11-27-04

Cement Barge

Survey Date: 24 April 2004

Benthic species listed below were identified using digital still images. Professionally trained divers spent 30 minutes on the Cement Barge photographing benthic invertebrates and macroalgae. All species were documented (to lowest recognizable taxon) and verified using reference guides. Some of the most relevant guides for the Martin County area include: 1) Littler and Littler's Caribbean Reef Plants: An Identification Guide to the Reef Plants of the Caribbean, Bahamas, Florida and Gulf of Mexico, 2) Hendler, Miller, Pawson and Kier's Echinoderms of Florida and the Caribbean: Sea Stars, Sea Urchins, and Allies, and 3) Paul Humann's Reef Creature Identification: Florida Caribbean and Bahamas. Documented organisms were also placed in one of the following abundance classifications for long-term analysis: Single (1), Few (2-10), Many (11-100) or Abundant (>100).

<u>Benthic Species Identified</u>	<u>Abundance</u>	<u>Comments</u>
Green Algae		
<i>Caulerpa brachypus</i> (attached & drift)	Abundant	Low relative density all over reef.
Red Algae		
<i>Rhodymenia</i> sp.	Abundant	
<i>Asparagopsis</i> sp.	Many	Scarlet red tufts of algae approximately 2 cm tall.
Sponges		
Tube sponge	Few	
Encrusting sponges	Many	
Vase sponge (<i>Ircinia campana</i>)	Single	
Worms		
Bearded fireworm (<i>Hermodice carunculata</i>)	Single	
Cnidarians		
Branched hydroids	Abundant	
Feather hydroids	Abundant	
Regal sea fan (<i>Leptogorgia hebes</i>)	Single	
Crustaceans		
Caribbean spiny lobster (<i>Panulirus argus</i>)	Single	
Bryozoans		
Yellow calcified bryozoan	Few	
Crinoids		
Unidentified crinoid	Single	
Sea Cucumbers		
Chocolate chip (<i>Isostichopus bationotus</i>)	Single	
Tunicates		
Bulb tunicates (<i>Clavelina</i> sp.)	Single	
Compound tunicates (<i>Eudistoma</i> spp.)	Many	
Solitary tunicate	Single	Similar to <i>Styela</i> spp.

