

# Corner, North, & South Barges

These three Barges were probably the first Steel Barges to be legally sunk as part of Martin County's Artificial Reef program sometime in 1971/1972. They were all deployed within months of and in relatively close proximity to one another in the Ernst Permitted Area in 70 feet of water. All three barges were approximately the same size but their condition prior to deployment is not on record. They are now approximately 34 years old.

Records show that approximately 75,000 tires were deployed with these barges and many of them can still be seen scattered or partially buried around the area.

## **Corner Barge:**

The Corner Barge was so named because its position from the other two barges puts it in a "Corner" of the Ernst Permitted Area. It sits upright in 70 feet of water.

This site was heavily dived as a spearfishing site by some members of the F.O.S. Dive Team from 1988 thru 1991 and they remember it as being intact and in good condition during that time.

Now it is heavily broken up and collapsed. There is heavy scouring of sand under the length of the South side of the barge and a sand berm on the North side. The East end of the structure is more intact than the West probably because it is still structurally supported by the sea floor.

## **North Barge:**

The North Barge is so named because it is the Northernmost barge in this triangle of barges.

Much like its sister barges, the North Barge was a popular spearfishing site for some of the members of the F.O.S. Dive Team in the late 1980's thru early 1990's. They recall it being upright, heavily encrusted, and intact with some swim through holes in the cargo area.

During the Monitoring event of 2004, it was noted that the North Barge is still relatively intact but has undergone some noticeable collapse and scattering over the years. There are still numerous tires scattered on and around this site as well.

As a point of interest, the Evans Crary bridge rubble lies approximately 75 feet West of the North Barge. It makes for an interesting dive between the two sites. Most of the larger fish seem to be more attracted to the Evans Crary rubble than the barges.

### **South Barge:**

The South Barge is so named because it is the southernmost corner of this triangle of barges. It sits off by itself approximately 760 feet from the North Barge and 500 feet from the Corner Barge.

From the late 1980's thru the early 1990's, members of the F.O.S. Dive Team Reported the South Barge to be mostly intact with a few holes large enough for a diver to penetrate the interior of the barge.

As of the Monitoring event of 2004, the South Barge is probably in the worst shape of any of these three barges. It has broken in half and there is so much collapse and scattering it barely resembles a steel barge any more.

In spite of the poor condition of the material, there is still quite an extensive amount of Benthic growth and a thriving ecosystem. During this monitoring dive, there were dozens of Spanish Dancers "Aplysia morio" that were either swimming around or participating in a "Mating Chain". Pictures were taken of this and also of what appear to be Egg Clusters. Not sure if the two are related. For reasons unknown, this was the only Artificial Reef site in this area where this was observed.

# Florida Oceanographic Society Research Dive Team

Florida Fish & Wildlife Conservation Commission Monitoring Grant

## "Artificial Reef Stability Assessment Survey"

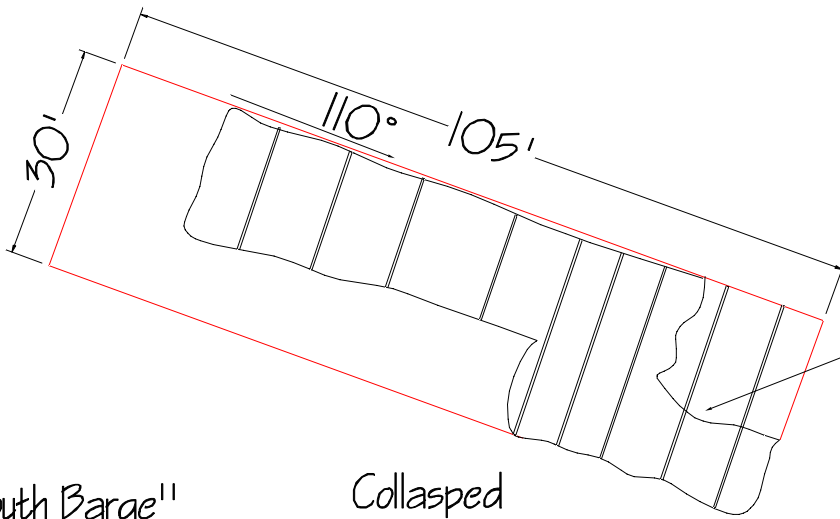
Martin County Florida

### "South Barge"

Date of Survey: July 24, 2004

Research Divers: Fran Krawetz, Laura Herren, Merle Stokes, Wayne Turner

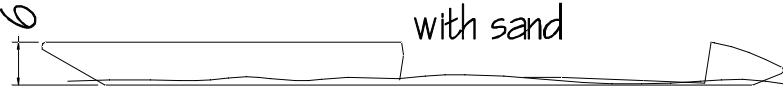
|  |
|--|
| <b>Reef Material: Steel Barge</b>  |
|  |
|  |
| <b>Orientation: East and West</b>  |
|  |
|  |
| <b>Bottom Composition: Sand, Shell, &amp; Silt</b>   |
|  |
|  |
| <b>General Condition of Material: Poor</b>   |
|  |
|  |
|  |
| <b>Collapse: 85% of the Deck has collapsed.</b>  |
| A 30 foot section on the South side has fallen out.  |
|  |
|  |
| <b>Scattering: Pieces of the Hull have scattered somewhat but they remain in the general area.</b>       |
|  |
|  |
|  |
| <b>Disintegration: Extreme. This barge is in pieces.</b>   |
|  |
|  |
|  |
| <b>Additional Observations: What's left of the South barge is heavily encrusted with Benthic growth.</b> |
|  |
|  |



Deterioated decking, structural members collapsed into sand

"South Barqe"  
 Mapped  
 07-24-04  
 Drawn by BS  
 11-28-04

Collasped  
 decking and  
 structural  
 members into  
 compartment  
 with sand



## South Barge

Survey Date: 24 July 2004

Benthic species listed below were identified using the roving diver technique. Professionally trained divers spent 35 minutes hovering over the South Barge looking specifically for benthic invertebrates and macroalgae. All species were documented (to lowest recognizable taxon) on an underwater slate and verified at the surface using reference guides. Some of the most relevant guides for Martin County's reefs 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 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>                       |
|---|------------------|---------------------------------------|
| <b>Green Algae</b>                                |                  |                                       |
| <i>Codium</i> sp.                                 | Many             |                                       |
| <i>Codium decorticatum</i>                        | Few              |                                       |
| <i>Caulerpa brachypus</i> (attached)              | Many             | Low density, but sprawling.           |
| <i>Caulerpa prolifera</i>                         | Few              |                                       |
| <i>Caulerpa racemosa</i>                          | Many             |                                       |
| <i>Halimeda discoidea</i>                         | Few              |                                       |
| <b>Brown Algae</b>                                |                  |                                       |
| <i>Sargassum</i> sp.                              | Few              |                                       |
| <i>Spatoglossum</i> sp.                           | Few              |                                       |
| <b>Red Algae</b>                                  |                  |                                       |
| <i>Halymenia</i> sp.                              | Few              |                                       |
| <i>Rhodymenia</i> sp.                             | Abundant         |                                       |
| <i>Botryocladia</i> sp.                           | Few              |                                       |
| <i>Galaxaura</i> sp.                              | Few              | Possibly <i>G. obtusata</i> .         |
| <b>Sponges</b>                                    |                  |                                       |
| <i>Ircinia</i> sp.                                | Few              |                                       |
| Orange encrusting sponge                          | Many             |                                       |
| <b>Worms</b>                                      |                  |                                       |
| Feather dusters                                   | Many             |                                       |
| Bearded fireworm ( <i>Hermodice carunculata</i> ) | Single           |                                       |
| <b>Gastropods</b>                                 |                  |                                       |
| <i>Aplysina morio</i>                             | Many             | In mating chains.                     |
| Unidentified gastropods                           | Few              |                                       |
| <b>Crustaceans</b>                                |                  |                                       |
| Arrow crab ( <i>Stenorhynchus seticornis</i> )    | Few              |                                       |
| <b>Cnidarians</b>                                 |                  |                                       |
| Anemone   | Many             |                                       |
| Branching hydroids                                | Abundant         |                                       |
| Feather hydroids                                  | Abundant         | Associated with <i>Rhodymenia</i> sp. |
| <b>Bryozoans</b>                                  |                  |                                       |
| Yellow calcified bryozoan                         | Many             |                                       |
| Encrusting bryozoans                              | Few              |                                       |



Florida Oceanographic Society Research Dive Team  
FPL Artificial Reef Fish Census Database

| Species                 | Species Abund | Species Number | Species Method | Species Area | Species Size | Date      | County | Latitude | Longitude | (F) Temp | (F) Depth | # Of Dive | Participating Divers | Bot Time Min | (F) Vis | Photo | Video | Reef Name | Reef Materials | Years Reef Age | Reef Tons | Reef Ft/Prt Sq Ft | Reef Relief (Ft) | Deploy Date |
|-------------------------|---------------|----------------|----------------|--------------|--------------|-----------|--------|----------|-----------|----------|-----------|-----------|----------------------|--------------|---------|-------|-------|-----------|----------------|----------------|-----------|-------------------|------------------|-------------|
| 1                       | 2             | 3              | 4              | 5            | 6            | 7         | 8      | 9        | 10        | 11       | 12        | 13        | 14                   | 15           | 16      | 17    | 18    | 19        | 20             | 21             | 22        | 23                | 24               | 25          |
| Barracuda, great        | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Butterflyfish, Reef     | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Chromis, Deep water     | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Damselfish              | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Grunt, Tomtate          | M             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Snapper, Vermilion      | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Pogy, Sheepshead        | S             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Scorpionfish            | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Chromis, Deep water     | M             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.399 | 8003.256  | 70       | 70        | 1         | FOS-lh               | 35           | 50      | yes   | yes   | Corner    | Steel barge    | 33             |           |                   | 5                | 1971        |
| Barracuda, great        | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.305 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Blenny, Seaweed         | M             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.305 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Chromis, Deep water     | M             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Grunt, Tomtate          | A             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Hamlet, spp             | A             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Jack, Bar               | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Pogy, Jolthead          | F             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Porkfish, spp           | S             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Wrasse, Slippery Dick   | S             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Cubbyu                  | S             | N/A            | RD             | N/A          | N/A          | 6/19/2004 | Martin | 2709.395 | 8003.312  | 68       | 70        | 3         | FOS-cb/fe            | 30           | 35      | yes   | yes   | North     | Steel barge    | 33             |           |                   | 4                | 1971        |
| Blenny, Seaweed         | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Blenny, Saddled         | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Blenny, Rosy            | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Blenny, Hairy           | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Damselfish, Beau Gregor | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Grouper, Gag            | S             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Grunt, Bluesstriped     | A             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Grunt, Tomtate          | A             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Hogfish, Spanish        | S             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Jack, Bar               | F             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Parrotfish,             | F             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Pogy, Sheepshead        | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Pogy, Saucereye         | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Pogy, Silver            | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |
| Pogy, Pinfish           | M             | N/A            | RD             | N/A          | N/A          | 6/24/2004 | Martin | 2709.312 | 8003.225  | 72       | 70        | 3         | FOS-fk/ms            | 35           | 15      | yes   | yes   | South     | Steel barge    | 33             |           |                   | 5                | 1971        |

