

Flower Garden Banks National Marine Sanctuary  
Mooring Drilling Cruise Report  
M/V SPREE  
July 28–30, 2008

An important part of managing and protecting the reefs of the Flower Garden Banks National Marine Sanctuary (FGBNMS) is to maintain the moorings that allow boats to tie up and access the sanctuary. The FGBNMS is a no anchor zone, as designated through our sanctuary regulations, as well as through the International Maritime Organization.



*M/V Spree sits on a mooring at the FGBNMS. Image credit: Russ Wilkins*

The National Marine Sanctuary Foundation funded this effort, using funds received from Rowan Companies, Inc., as part of a settlement agreement that included monies designated to restore, protect, preserve, and improve the natural resources of the FGBNMS.

## Participants

Captains Frank and Melanie Wasson, owners and operators of the M/V SPREE were contracted by the FGBNMS to conduct a cruise to drill new U-bolt locations for mooring buoys at Stetson Bank, and East and West Flower Garden Banks. Several U-bolts were in disrepair and needed replacement.



*Back Row (l to r): Pete Bryant, Capt. John Camp, Wayne McBee, Kevin Buch, David Snyder, Ian Riddington, Tracy Hamburger, Colm O'Reilly, John Rhodes, Zachary Hileman. Front Row (l-r) Kenny Cruise, Gregg Tatum, G.P. Schmahl, Capt. Frank Wasson, Melanie Wasson.*

Steve Harbin and Mel kept us well fed.

Flower Garden Banks participants were on hand to advise and observe:

G.P. Schmahl – Sanctuary Superintendent  
Emma Hickerson – Research Coordinator  
Tracy Hamburger – Marine Operations Officer

## U-Bolt Replacement

A hydraulic drilling rig owned by FGBNMS was used to conduct the work. The hydraulic pump sat on the stern deck of the M/V Spree during operations. Hydraulic hoses ran forward to the bow, and over the side.



*Hydraulic drill rig sitting in one of a pair of holes drilled into dead coral at West Flower Garden Bank for Buoy #3. The new U-bolt sits in the background next to the old U-bolt, which has been twisted and broken. Coral cores which have been removed during the drilling process are also visible. The weight belts are used by the drillers to provide extra downward weight during the drilling process.*

A specially fabricated drill bit with large teeth was used for Stetson Bank due to the nature of the claystone. A diamond tipped drill bit was used for the drilling at East and West Flower Garden Banks. The drill bits are about 4 inches in diameter.

Divers were deployed off the bow, carrying the drill and bits to the target location. Teams were deployed in 20 minute shifts during the drilling



*Frank Wasson (right) and David Snyder (left) drilling at Stetson Bank Buoy #2. The specialized drill bit can be seen in the foreground.*

Paired U-bolt holes, approximately 6 feet in length, were drilled into the claystone at Stetson Bank Buoy #2, and about 3 feet into dead coral heads at West Flower Garden Bank #5 and #3, and East Flower Garden Bank #2, at sites selected by sanctuary staff.

After the paired holes were drilled, cement was premixed and loaded up into long PVC tubes, which were carried down by divers. The tubes were uncapped, and cement was poured into the holes around the U-bolt that had been placed into the drilled holes.

### **General Observations**

Sea conditions were reasonable, temperatures were about 84F, and there was relatively little current. There was good visibility at all banks.

A whale shark (about 20 feet in length) cruised by the boat at Stetson Bank on July 28, but was only seen from the deck...unfortunately the divers doing their safety stop were looking the wrong direction!



*A queen parrotfish supervises Tracy Hamburger as she pours cement around a newly placed U-bolt on West Flower Garden Bank.*

A loggerhead sea turtle was observed taking a breather on the surface at Stetson. Several small dusky sharks were also noted by divers. Two manta rays visited G.P. and Tracy on their reconnaissance dive at the East Flower Garden Bank.

Emma Hickerson photo and video documented the activities.

Thanks goes to the terrific drilling team, as well as the Captains and crew of the Mighty M/V SPREE.