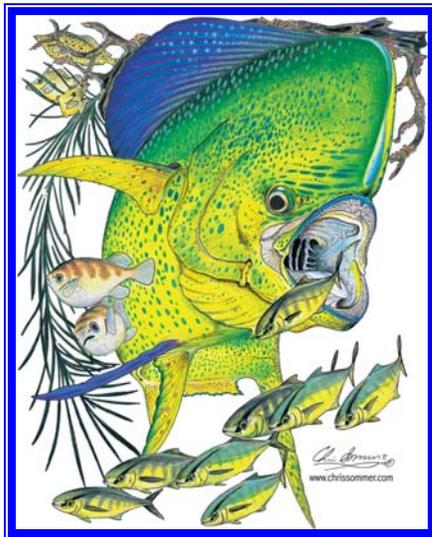


Cooperative Science Services, LLC Dolphin Tagging Research Project

June 2007



Yucatan Tagging Expedition

The research cruise to tag dolphin in the western Caribbean was carried out during the first two weeks of June. Fishing out of Isla Mujeres, Mexico, the crew of the sports fishing vessel *Makara* owned by Dr. Thomas McMurray succeeded in tagging 129 dolphin with standard external streamer tags. The cruise also deployed the fifth pop-off satellite tag ever placed on a dolphinfish and the first such tag used on dolphin in the Caribbean.



Crew members of the 2007 Yucatan Tagging Project (L to R) James Rose, McCain McMurray, Carter Johnson, Tom McMurray, Mate Billy Gerlach, Capt. Steve Unsell, Matt Ange, Joseph McMurray and Joe McMurray.

This important research was funded by a grant from Marine Ventures Foundation (MVF) of Jackson Hole, Wyoming, and by Dr. Thomas McMurray, owner of the sport fishing vessel *Makara*. The primary goal was to tag a large number of dolphinfish in the western Caribbean to see where the tagged fish would be recovered. The hypothesis being tested by the study is that these fish would move into the Gulf of Mexico and ultimately into U.S. territorial waters. This would show the dependence of the U.S. fisheries on a healthy population of dolphin in the Caribbean.

The dedication and hard work of the crew overcame the challenges that were encountered to make the research cruise a success in achieving its primary goal of marking a large number of fish. All of the crew worked overtime to ensure the cruise was a success. The weather presented the first challenge with most days requiring fishing in 3 to 6 foot seas and occasionally worse. As it turned out, the cruise coincided with the end of the season's dolphin run when small school fish, under 30 inches fork length, were scarce.

Sponsored In Part By:

Marine Ventures Foundation



CSS Dolphin Tagging Newsletter

June 2007

Page 2.

Larger fish required more time to bring to the boat and also required that they be tagged in the water, which is no small feat in itself. The skill of individuals to tag fish as they swam beside the boat improved quickly with practice. Because of their tendency to thrash violently while near the boat, each fish was released by cutting the leader near its mouth. This was done to reduce stress and potential injury to the fish.

The cruise also succeeded in deploying a pop-off archival satellite tag on a dolphin in the western Caribbean. This instrument has the potential to help define the water temperatures used by dolphin in the region, especially the upper limits for the species. It will also provide hard data on their use of the water column in these lower latitudes.

Two observations about the trip that stick in my mind were the high water temperatures and the color pattern of many fish. First, fishing was carried out in 82+ to 85+°F water but very few fish were caught in waters of 85°F or above. Also, many of the fish exhibited a color pattern that I had never personally seen but had just been made aware existed, a bright, solid blue body. This would be bordered below by a narrow band on the belly and anal fin of yellow or silver. The fish's tail or caudal fin, was typically yellow.

Now it is a waiting game to see if any of the marked fish are recaptured in U.S. waters. The second phase of the project rests with the fishermen. They will be the ones to recapture these tagged fish and it will be their recovery reports that will complete this valuable scientific study.



A western Caribbean dolphin exhibits the blue color phase commonly seen on fish in the area.



Microwave Telemetry's new X-tag is roughly half the size of its predecessor, allowing much smaller fish to be tagged.

Sponsor a Satellite Tag for 2008

The South Carolina Sea Grant Consortium in conjunction with the South Carolina Department of Natural Resources has approved funding for a small satellite tag study for 2008 that will involve dolphin and cobia. Funding will allow for the purchase of five of the Microwave Telemetry's new miniaturized pop-off archival satellite tag. Three of these smaller instruments will be attached to dolphinfish and two will be placed on cobia.

The new study will focus on tracking the movement of individual fish along the coast for up to six months. These long-term tracks could provide the first information on the movement pattern of fish traveling the eastern seaboard as well as routes used in the fall and winter to travel to southern waters.

While the three tags have the potential to add significantly to our knowledge about the life and behavior of dolphinfish, it is a very small sample with little room for instrument malfunction. The fish and instruments face many hazards (marine predators, fishermen, and freak accidents) that could jeopardize the receipt of data. This is why a larger sample base would help ensure that information on the long-term movement behavior would be acquired. Data already suggests that fish behave differently in different areas, so deploying these high-tech devices in as many different regions as possible would address whether regional behavior differences do exist.

For this reason I am asking fishing organizations, foundations and businesses to sponsor a satellite tag in an effort to increase the number of tags deployed. The sponsor would be able to designate where the tag would be deployed so long as they also provide the means to capture the fish for tagging. Also the tag and fish would be officially named after the sponsor and referred to as such in publications.

Sponsors are asked to cover all costs associated with purchase of the tag and acquisition of the data. The tag costs \$4,500 while the cost of satellite time runs another \$1,700. This brings the cost of sponsorship of a pop-off satellite tag to \$6,200 which is fully tax deductible through the Hilton Head Reef Foundation. The Dolphin Study will need to have the funds by January 1, 2008, to allow time for construction of the instruments.

Two fishing clubs and one fishing industry business have already stated an interest in sponsoring a tag to be deployed in their fishing area. Speak to your club, organization and business to join in this cutting-edge research project to help protect the dolphinfish stock.

For more information contact the CSS Dolphin Tagging Study office.

Supporting Dolphin Tagging Research
Hilton Head Reef Foundation

www.reeffoundation.com

A registered 501 (c) 3 non-profit organization.
Donations are fully tax deductible.

CSS Dolphin Tagging Newsletter

June 2007

Page 3.

2007 Tagging Activity and Tag Recoveries at Record Levels

A full report will appear in the July 2007 Newsletter.

Dolphin Study Tagging Progress by Zones, May 31, 2007

| Zone | Area | Southern Limit | Northern Limit | Number Tagged |
|------|-----------------|----------------|----------------|---------------|
| 1 | Bahamas | 22N | 28N | 294 |
| 2 | FL Straits | 23N | 25N | 12 |
| 3 | South Florida | 25N | 27N | 136 |
| 4 | Central Florida | 27N | 30N | 14 |
| 5 | North FL & GA | 30N | 32N | 47 |
| 6 | Southern SC | 32N | 33N | 153 |
| 7 | N. SC - S. NC | 33N | 35N | 9 |
| 8 | Northern NC | 35N | 36.5N | 0 |
| 9 | Virginia | 36.5N | 38N | 0 |
| 10 | N. Mid-Atlantic | 38N | | 0 |
| 11 | Gulf of Mexico | | | 0 |
| | Total | | | 656 |

New 2007 Contributors

**Marine Ventures Foundation,
Jackson Hole, WY
James Shannon, Isle of Palms, SC
SC Saltwater Sportsfishing Association,
Charleston, SC
Richard Rakovich, Seabrook Island, SC
James Rose, Shelby, NC
Bill Baugh, Ramrod Key, FL**

Your Financial Support Is Needed

The target budget for 2007 is \$56,600. This budget will provide funding to continue the existing tagging study along with expanding the study into new areas.

At this writing 85% of these funds have been received but the remaining \$8,500 is still needed to keep the program financially sound through the start of next year. Large expenses will be incurred early with the new satellite tag study.

I hope that you will give positive consideration to donating to the CSS Dolphinfish Research Program to ensure this important work continues. Donations to the Dolphin Tagging Study are fully tax-deductible, thanks to the help of the Hilton Head Reef Foundation. Contributions should be made out to the Hilton Head Reef Foundation (HHR Foundation/Dolphin Study) and sent to the address at right.

2007 Financial Supporters

**Grady-White Boats, Inc., Greenville, NC
Anonymous, Charleston, SC
Bailey Smith, Great Exuma, BA
Harry L. Johnson, Jr., Mt. Pleasant, SC
Antonio Gonzalez, Miami, FL
Capt. Robert Kerr, Davenport, FL
Tommy Lewis, Raleigh, NC
Sebastian Inlet Sportfishing Association, Inc.,
Melbourne, FL
Kate Astle, Portland, OR
Rock Boat Fishing Team, Weston, FL
Georgetown Landing Marina,
Georgetown, SC
Tailwalker Marine, Georgetown, SC
Capt. Jimmy Price, Supply, NC
Eric Frisch, Charleston, SC
Bryan Osterling, Melbourne, FL
Fred Cory, Raleigh, NC
Ben Mitchell, Ft. Lauderdale, FL
Northeast Florida Marlin Association,
St. Augustine, FL
Florida Sport Fishing Association,
Cape Canaveral, FL
Central Florida Offshore Anglers,
Orlando, FL
South Carolina Department of Natural Resources,
Charleston, SC
Larry K. Hufford, Palm Bay, FL
The Ocean Foundation, Washington, DC
Orlando Delgado, Miami, FL
Jeff Martini, Little River, SC
Greenville Salt Water Sport Fishing Club,
Greenville, SC**

For More Information, Contact

**Don Hammond
Cooperative Science Services, LLC
961 Anchor Rd.
Charleston, SC 29412-4902
Telephone – FAX (843) 795-7524
Email CSSLLC@bellsouth.net
Website www.dolphintagging.com**

