

# Cooperative Science Services, LLC Dolphin Tagging Research Project

October 2007



## Tag Recoveries Reveal Movements

With almost six years of research completed, monthly tagged fish recovery patterns are emerging. The primary result shows a clear northward migration pattern along the U.S. East Coast during spring and summer. It also provided the first insight into how fast dolphinfish travel during this migration.

In the winter and early spring (January through March) dolphin recoveries tend to come from the Caribbean Sea, Central Atlantic Ocean and Bahamas. Tag recoveries have occurred off the east coast of Florida in every month; however, 79% of all Florida recoveries are made in May and June. Off North Carolina, tagged dolphin have been recaptured from May through August with 79% of the recoveries made during June and July. In the Mid-Atlantic bight north of North Carolina, tags have been recovered July through October with 77 percent occurring during July and August.

This study has gathered a fair amount of data on dolphin traveling from Florida to North Carolina. Anglers off the Tar Heel State have reported the recovery of 28 dolphin tagged off Florida. While some fish have taken as long as 55 days to make the trip, others have made the trip in as little as 9 days. The distances traveled ranged from 418 miles (Satellite Beach to Wrightsville Beach) to 923 miles (Key West to Oregon Inlet). These fish traveled at average speeds ranging from 7.7 miles per day (mpd) to as fast as 93 mpd.

The travel characteristics for dolphin making this trip varied among the years (Table 1). The fastest average travel occurred in 2005 with the liberty period averaging 22.2, days which is 25% shorter than the overall average. Even though, the 2005 fish averaged the shortest distance traveled among the years, the average rate of travel, 30.5 mpd, was still 20% above the overall speed of travel. The slowest rate of travel was noted in 2006 when the average liberty was 32 days and the speed of travel was 23.4 mpd. When all years are combined it takes dolphin an average of 29.3 days to move from Florida to North Carolina, covering a distance of 751 miles at the rate of 25.6 mpd.

Table 1. Annual movement characteristics for dolphin traveling from Florida to North Carolina.

Year	Number Recaptured	Liberty (Days)	Distance (Miles)	Rate (Miles/Day)
2003	2	30.0	748	24.9
2004	3	30.7	901	29.3
2005	6	22.2	678	30.5
2006	9	32.0	750	23.4
2007	8	30.9	750	24.3

Travel variations were observed among the years, suggesting that the month tagged off Florida may influence dolphin movement behavior. Fish recovered off North Carolina were tagged during four months, April through July (Table 2). The table shows that

Sponsored In Part By:

**Marine Ventures**  
Foundation



# CSS Dolphin Tagging Newsletter

October 2007

Page 2.

fish tagged in May and June had very similar liberty periods varying less than half a day between the two years. But they also had the largest sample base. The one fish tagged in April that was recovered off North Carolina had the longest liberty, 55 days, while the four fish tagged in July had the shortest liberty period, less than half that of fish tagged in May and June.

Table 2. Average liberty periods by month tagged for Florida fish recovered off North Carolina.

Month Tagged	Number of Fish	Average No. of Days
Apr	1	55
May	9	31.9
Jun	14	32.3
Jul	4	15

The small sample sizes for fish tagged in April and July do not allow much confidence to be placed in them. But they raise questions. Was the April fish deliberately delaying his movement waiting on warmer water? Did the fish tagged in July had a strong urge to move northward right then? Additional recoveries of fish tagged in these months can answer these questions.

These data clearly show that dolphinfish found off Florida travel to North Carolina. While some fish may make the trip within one week, most dolphin will complete the 750 mile trip in one month. It is entirely possible that in years with abundant sargassum that the dolphin will travel northward faster because they orient to the grass mats and are swept along by the Gulf Stream which moves at 2 to 6 miles per hour. Without floating objects to hang around, dolphin likely spend more time swimming into the current to ambush baitfish. This instinct slows their ultimate progress northward. This would explain the observed travel rate of basically 1 mile per hour for the fish moving from Florida to North Carolina.

Florida fish do not stop at North Carolina. Four fish tagged off Florida have been recovered in the Mid Atlantic Bight as far north as Atlantis Canyon off Nantucket Island, Massachusetts. These fish were tagged in May and June. They were at liberty an average of 53 days during which they have moved 1,096 miles at an average of 20.7 mpd. The fastest fish covered 1,123 miles in just 23 days for an average speed of 48.8 mpd.

For more information on tag recoveries, visit [www.dolphintagging.com](http://www.dolphintagging.com) and click on "Map of Tags and Recaptures."

## Fishing Team Holds Fundraiser

The owners and crew of the Charleston, South Carolina, based sports fishing boat, *Summer Girl*, recently held a fundraising dinner in a rural South Carolina Lowcountry community for the Dolphinfish Research Program. John H. Smith, Jr., of Ritter, and Stevie Leasure, of Charleston, hosted the social at Smith's farm near Walterboro, South Carolina.

Most people do not equate rural farming/forestry communities with offshore fishing, but many residents of these rural areas are avid blue-water anglers. These fishermen own everything from 20-foot center console boats up to 70-foot state-of-the-art sportfishing machines. Their love of the sport and concern for the future of offshore big game fishing is just as strong as in any coastal fishing community.

A crowd of about 40 of their associates and fellow fishermen gathered to hear what has been learned about this great game fish by the research program. They also learned why this program is a study being carried out by the fishermen for the fishermen because of the cuts in fisheries management staff and funding.

At the conclusion of the event, Leasure and Smith presented the Dolphinfish Research Program with more than \$9,000 in donations to support the work of the study. This is the first fundraiser held specifically for this program, and it serves as a challenge to offshore fishermen in other areas who say they value offshore sports fishing.

Donations to the Dolphinfish Research Program are fully tax deductible. Checks should be made out to HH Reef Foundation/Dolphin Study and sent to the program's office in Charleston.



Mike Jackson (left) swaps fishing stories with Stevie Leasure (center) and John Smith, Jr. (right) during the fundraising dinner.

Supporting Dolphin Tagging Research  
Hilton Head Reef Foundation

[www.reeffoundation.com](http://www.reeffoundation.com)

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

# CSS Dolphin Tagging Newsletter

October 2007

Page 3.

## Send in Your Favorite Tagging Photos

The Dolphinfish Research Program would like to have your favorite photo of tagging dolphin or trophy dolphin that you have caught, especially those caught by women and children. These photos will be used in the newsletter and other publications of the program. High resolution digital images in at least 1mb file size should be e-mailed to the program at the e-mail address shown below. Please provide the names of all people in the pictures and a narrative about the scene.

### Research made possible by grants from

Marine Ventures Foundation,  
Jackson Hole, WY  
South Carolina Sea Grant Consortium,  
Charleston, SC  
Grady-White Boats, Inc., Greenville, NC  
Central Florida Offshore Anglers,  
Orlando, FL  
South Carolina Department of Natural Resources,  
Charleston, SC

### New 2007 Contributors

William P. Tuten, Round O, SC  
Rizer Chevrolet Company, Inc., Walterboro, SC  
Mitchell Construction Co., Inc, Walterboro, SC  
Haddrell's Point Tackle & Supply,  
Mt. Pleasant, SC  
Haddrell's Point Tackle & Supply West Ashley,  
Charleston, SC  
Hanckel Marine LLC, Charleston, SC  
Carpet Baggers Floor Covering, Charleston, SC  
White Wood, Inc., Walterboro, SC  
Richard B. Wood, Green Pond, SC  
Ian Padgett, Walterboro, SC  
Kathleen L. Causey, Walterboro, SC  
H & H Electrical Services LLC,  
Walterboro, SC  
Bootle Logging Company LLC,  
Walterboro, SC  
Jaxco Industries, Inc., Walterboro, SC  
John H. Smith, Jr., Walterboro, SC

### 2007 Financial Supporters

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  
Larry K. Hufford, Palm Bay, FL  
Lateral Line Foundation, Easton, MD  
Orlando Delgado, Miami, FL  
Jeff Martini, Little River, SC  
Greenville Salt Water Sport Fishing Club,  
Greenville, SC  
James Shannon, Isle of Palms, SC  
SC Saltwater Sportfishing Association,  
Charleston, SC  
Richard Rakovich, Seabrook Island, SC  
James Rose, Shelby, NC  
Bill Baugh, Ramrod Key, FL  
Mr. Timothy C. Heiser, Plantation, FL  
NC Coastal Conservation Association,  
Raleigh, NC  
William "Dusty" Walker, Hobe Sound, FL  
Leasing Services II, Inc., Shelby, NC  
Piedmont Offshore Sport Fishing Club,  
Winston-Salem, NC  
South Carolina Coastal Conservation Association,  
Columbia, SC  
Florida Coastal Conservation Association,  
Orlando, FL  
Joe McMurray, Shelby, NC

### For More Information, Contact:

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

