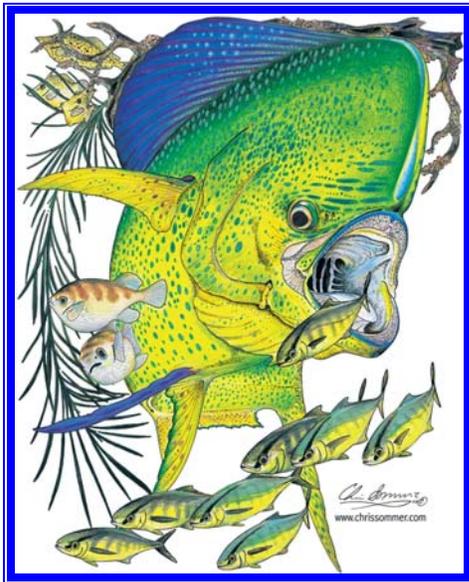


Cooperative Science Services, LLC Dolphinfish Research Program

Made possible by a grant from Marine Ventures Foundation

December 2009



Thought-Provoking Recaptures

Three reports of tagged dolphinfish being recovered off Florida's east coast were received since the last newsletter. This brings the number of dolphin reported recaptured this year to 50 fish. Two of the recaptures spanned long time periods but their recovery sites were not far from their release point when the time at liberty is considered. The third fish recovered was at liberty for a short term but exhibited a different movement.

The short-term tag recovery began off Ft. Pierce, Florida, on October 14, 2009, when Ron Semko of Melbourne Beach, Florida, tagged and released the fish. The dolphin was at liberty for 12 days before being recaptured by Arthur Orlandi of Stuart, Florida, during a fishing trip off his hometown. The fish was recovered 12.6 miles south-southeast of its release point. While this fish did exhibit a net southerly movement, the distance traveled is too short to demonstrate a deliberate southerly migration.

The other two recaptures have several similarities. Each was at liberty for at least four months and were recovered less than 250 miles from their release sites. The first recovery involved a fish tagged June 21, 2009 by Cindy Stone while fishing with Don Gates on his boat *Killin Time* off Marathon, Florida. Richard Wood of Wellington, Florida, recovered the fish on November 11, 2009 off Palm Beach, Florida, during a charter fishing trip aboard the *Reel Lucky*. The recapture location was 207 miles north-northeast of where the fish was released 143 days earlier.

Bryan Alcox provided the tagged fish in the second long-term tag recovery during a July 17th fishing trip off

Ft. Pierce, Florida, on the *Gin Line*, owned by Bill Bird of Orlando, Florida. This fish was recovered 231 miles south-southwest of its release site, off Bahia Honda Key, Florida, by Capt. Jason Long aboard the charter boat *Best Bet*. The fish had been at liberty for 120 days.

If these two fish traveled the direct routes referenced, they would have averaged traveling at 1.4 and 1.9 miles per day respectively. This is a leisurely rate that would have subjected the fish to an extremely long exposure to the intense fishing pressure exerted on dolphin in this area. Compare this to the 124 dolphin tagged and recovered off east Florida from 2002 through 2007 that averaged traveling at the rate of 24.6 miles per day. Such a major difference between the direct, point-to-point, travel and the long-term average speed suggests that the fish did not confine their movements to these narrow stretches of the Florida Straits but had likely traveled to other areas.

Considering the average daily travel speed for dolphin off the east coast of Florida and the extremely heavy fishing pressure that exists in the Florida Straits, it is unlikely that the fish remained in this area. Using the average speed of travel observed for dolphin tagged off Florida, these fish could have traveled as much as 2,900 and 3,400 miles respectively within their time at liberty. Even at the much slower travel rate of 6.5 miles per day exhibited by international recaptures of tagged dolphin, these fish would have traveled 780 and 930 miles respectively. Using these distances as a frame of

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reference, a movement that carried these fish around the Bahamas Bank and back into the Florida Straits via Cay Sal Bank would be a very plausible route.



Possible travel routes for dolphin tagged and recovered off Florida following liberties of four months or more.

The fish from Ft. Pierce likely traveled north beyond the tip of the Bahamas Bank before it turned east crossing the Gulf Stream. It ultimately turned southward, traveling to the lower end of the Bahamas Bank where it used one of the many channels connecting the Atlantic with the deep trench separating the Bahamas and Caribbean islands. Turning west in this oceanic channel, the fish would ultimately enter the Florida Straits by way of Cay Sal Bank. In this scenario, the Ft. Pierce fish could have traveled 1,140 miles, averaging 9.5 miles per day.

The dolphin tagged off Marathon would have traveled northward immediately after release but could have taken a shorter route by cutting through the Bahamas Bank using the Northwest Providence Channel. Then with the fish following a similar route to that of the Ft. Pierce fish, it could have moved 1,300 miles before reaching Palm Beach, Florida, where it was recovered. This would have the fish traveling at an average daily speed of 9.1 miles.

These hypothetical distances and speeds of travel are well within the capabilities of dolphin as shown by many tag recoveries over the years but these routes are only speculative. It would not be out of the question for these fish to have traveled to North Carolina before beginning their southerly travels. This would have them traveling in excess of 3,000 miles, a daunting distance but not impossible.

These recaptures indicate that dolphin undergo movements/migrations of varying lengths and can make multiple visits to Florida's east coast within a single year. For more information on dolphin movements, visit <http://dolphintagging.homestead.com/Map.html>.

Recent Financial Supporters
Capt. Bill Parker, Hilton Head, SC

Dolphin Tagging Progress by Zones, Nov. 30, 2009.

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22° N	28° N	257
2	FL Straits	23° N	25° N	421
3	South Florida	25° N	27° N	230
4	Central Florida	27° N	30° N	17
5	North FL & GA	30° N	32° N	14
6	Southern SC	32° N	33° N	68
7	N. SC - S. NC	33° N	35° N	25
8	Northern NC	35° N	36.5° N	4
9	Virginia	36.5° N	38° N	3
10	N. Mid-Atlantic	38° N		12
11	Gulf of Mexico			9
12	W Central Atlantic			15
13	Caribbean Sea			5
	Total			1080

New Miniature Satellite Tag Announced

Microwave Telemetry Inc. has announced the newest addition to its line of pop-off satellite archival tags (PSAT) used for monitoring fish and other aquatic and marine animals. The new E tag will be roughly half the size of the original PSAT and should be available late in 2010.

This newest tool for monitoring and tracking marine animals begins a new chapter in the hi-tech world of fisheries research. The device will allow placement on fish of 15 to 20 pounds in size, opening up the use of PSATs on many new species of fish. Dolphin in this size class are far more representative of the species in the recreational fishery than the 30-pound fish required for the previous PSAT instruments.

Dolphin in the 15-to 20-pound size class are ten times more available than are the 30-pound trophy fish, making it much easier to catch a fish large enough to carry the tag. It will also permit the use of a simpler attachment method, allowing the fish to be tagged without removal from the water.

The Dolphinfish Research Program is planning a new PSAT study that will attempt to deploy these hi-tech instruments at strategic points along the U.S. East Coast and Bahamas. This study will require the full support of sports fishing clubs, businesses and individuals to provide financial support to purchase the instruments as well as logistical support to deploy them.

The new study will allow the sponsors purchasing a PSAT to determine where it will be deployed contingent upon the sponsor providing the vessel support to deploy the tag in that area. More information about this study will be announced next year.

Your donations to the Dolphin Study are Fully Tax-Deductible
Make checks out to:
HH Reef Foundation/Dolphin Study

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Year-end Incentive Awards



Through the generosity of **Shimano Fishing Tackle** and the **Don Coffey Company** and **Star Rods** and the **Sea Striker Fishing Tackle Company**, the Dolphin Tagging Study can offer four year-end awards. A Shimano TLD50 2 speed on a standup Star Rod will be awarded for the most dolphin tagged by a private boat, charter boat, individual angler, and for the boat tagging the most dolphin in areas other than off the east coast of Florida.

These incentive awards are important to the success of the program. Winners of these awards each year typically account for as much as 40 to 50 percent of the total fish tagged each year. While I believe these individuals would still be tagging dolphin, I do not think they would be putting forth the same effort. So, if you run into a Shimano or Sea Striker representative please thank him for his company's loyal support of the Dolphinfish Research Program.

Mail in Your Tag Cards

All tag cards must be in the CSS office by January 8, 2010, to be counted toward the 2009 year-end awards. Because the tagging activity is down in 2009, competition in several of the categories is close, so get your cards in to make sure all of your tagging effort gets counted.

Happy Holidays and Thank You

I wish to extend a heartfelt thanks to all who have made 2009 a success. This program's continuing achievements are the result of the fishermen tagging fish, anglers reporting tag recoveries, outdoor writers and news media reporting on the research, and especially those who provided financial support. This has been a hard year for everyone and yet the research program had its second-highest number of tag recoveries in a year.

The weak economy coupled with the high unemployment has caused people to have less time and money to go fishing. It has also reduced the money fishermen have to donate in support of fisheries research. This year has seen a drop in participation and financial support, but it has not seen a decline in fishermen's

interest in the program. Since this program operates on soft money (anglers' disposable income) it is only natural for it to follow the economic climate. I have faith that next year will be better.

I hope that you and your family have a safe and joyous holiday season.

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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
Web site www.dolphintagging.com