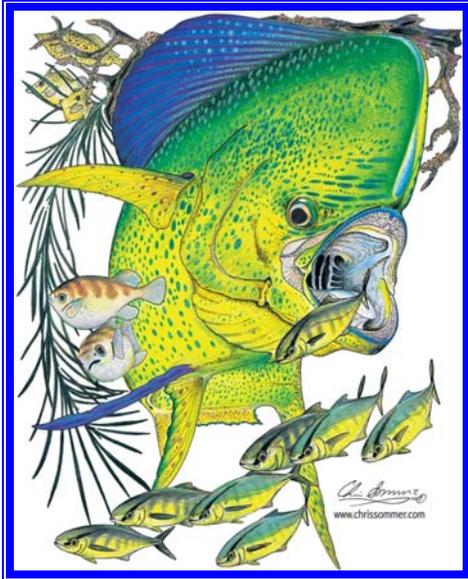


# Cooperative Science Services, LLC Dolphinfish Research Program

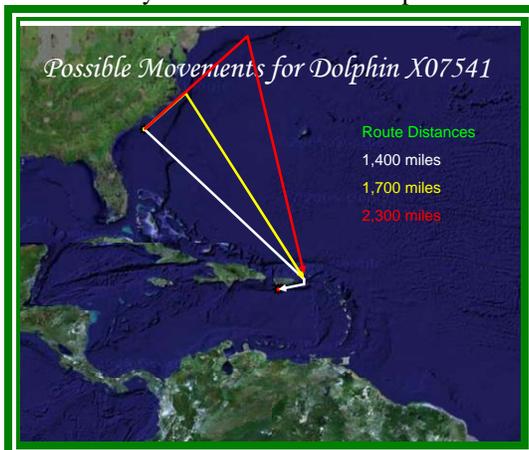
Made possible by a grant from Marine Ventures Foundation

April 2010



## Just Coincidence or Is It a Pattern?

Once again, I have the pleasure of presenting another story about an amazing movement by a dolphinfish. In studies of the behavior of wild animals, the first time a behavior is observed it can be dismissed as a possible random occurrence. When the behavior is observed for the second time it becomes far less likely to be a random act. A good example is the movement of south Florida dolphin into the northern part of the Mid-Atlantic Bight. The first recovery was a wow-moment but not proof that it was a common behavior. By the third, fourth, and fifth recoveries, the possibility that this behavior was a random act by individual fish was dispelled.



While we do not know what route the dolphin took on its journey to Puerto Rico, there are three routes that are highly probable.

We now have a second dolphin tagged off the U.S. East Coast and off Puerto Rico. And it is not just a recovery off any part of Puerto Rico or at just any time. This second recapture occurred on the same day of the year and within 19 miles of the first recovery. Coincidence? Maybe.

The first dolphin tagged off the U.S. East Coast to be recovered off SW Puerto Rico was a fish tagged in July 2005. Justin Brown and his father, Don, tagged the fish off Islamorada, Florida, and it was recovered 246 days later south of Guanica Bay, Puerto Rico.

This story had its start off Charleston, South Carolina, on August 7, 2009, when Billy Morrill of James Island, South Carolina, tagged a 19-inch dolphin while fishing aboard Scotty Mill's boat *Miss Pasco*. This fish was recaptured 231 days later in the Caribbean Sea off the southwest coast of Puerto Rico. Candido Pou of Coto Laurel, Puerto Rico, recovered the fish eight miles south of Guanica Bay on March 26, 2010, while fishing aboard the private boat *Sin Prisa*.

At the time of the recovery the fish was estimated to be 40 inches in fork length and weigh 20 pounds. This indicates an estimated growth of 21 inches during the 33 weeks of liberty or roughly 0.6 inch per week. This is virtually the same growth rate as estimated for the dolphinfish reported on in the March 2010 issue of this newsletter. However, the first East Coast dolphin recovery off Puerto Rico was estimated to have grown slightly faster, at 0.8 inch per week. These estimated growth rates are within the ranges reported by various scientific studies.

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The big question is what route the fish traveled to get to Puerto Rico. The old school science would be to draw a line from the release site to the recovery point. In this case the fish would travel southeast from Charleston, passing between Isla de Calebra and St. Thomas Island and then turning west to the recovery sight. This route would have the fish traveling roughly 1,400 miles or 6.1 miles per day on average.

Past history of dolphin tagged off the U.S. East Coast has clearly indicated fish tagged off Charleston travel north riding the Gulf Stream current when they leave the Palmetto State. This would suggest that the fish most likely went at least as far as Cape Hatteras, North Carolina, before turning east or southeast. Under this scenario, the fish would likely have traveled 1,750 miles during its liberty, covering an average 7.6 miles per day.

This fish could just as likely have traveled all of the way north to the Atlantis Canyon southeast of Montauk, New York, before turning east to southeast to begin its trek toward its wintering grounds. This route would take the fish to within 200 miles of Bermuda and extend the distance the fish traveled to more than 2,300 miles, requiring it to cover an average of 10.2 miles per day.

The rate of travel associated with each route is well within speeds already documented for long-distance travel by dolphin. Looking closer at these rates, you quickly realize it would only require the fish to move along the routes at rates ranging from 0.25 to 0.4 miles per hour. These swimming rates are certainly not a very strenuous level for these animals. If the sustained travel speed was bumped up to 1 mile per hour, the fish could have covered more than 5,500 miles during its time at liberty. This distance could have allowed it to move into the Eastern North Atlantic during its travels.



*When you tag and release a dolphin, you never know if it is going to be that one golden fish recovered in some distant body of water that reveals surprising new information about their movements.*

*Dolphin Tagging Progress by Zones, March 31, 2010.*

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22° N	28° N	7
2	FL Straits	23° N	25° N	5
3	South Florida	25° N	27° N	23
4	Central Florida	27° N	30° N	0
5	North FL & GA	30° N	32° N	2
6	Southern SC	32° N	33° N	0
7	N. SC - S. NC	33° N	35° N	0
8	Northern NC	35° N	36.5° N	0
9	Virginia	36.5° N	38° N	0
10	N. Mid-Atlantic	38° N		0
11	Gulf of Mexico			0
12	W Central Atlantic			45
13	Caribbean Sea			0
	Total			82

## Events Support Dolphin Research

The 2010 Dolphinfish Research Program will be the beneficiary of five special events planned by sports fishing organizations and businesses in Florida and the Carolinas. These events are intended to encourage anglers to tag more dolphin, aid in deploying three satellite tags, and generate financial support for this important research.

The kickoff event will be a cooperative effort on April 23 and 24 among the Central Florida Offshore Anglers out of Orlando, Florida, the Florida Sport Fishing Association of Cocoa Beach, Florida, and Sebastian Inlet Sportfishing Association of Melbourne, Florida. Terry Winn with the Orlando club, who is helping to coordinate the program to be held out of Ft. Pierce, Florida, says the event is intended to get two pop-off satellite archival tags purchased by the fishing clubs deployed, to encourage members of the clubs to tag more dolphin, and to provide financial support to continue the research.

The second event is a members-only tournament being held in Georgetown, South Carolina, on May 22. Sponsored by the Blue Water Fishing Club of Florence, South Carolina, the tournament is intended to get more members active in tagging dolphin with all of the proceeds from the event being donated to the research program. Dr. Eric Heiden of Florence, who is heading up the event, said that club members felt that it was time for their organization to do more to aid the research on dolphin.

**The Dolphinfish Research Program needs your financial support. No federal funds support this important research. This program exists because of private donations.**

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Also on May 22, the South Carolina Saltwater Sportfishing Association is hosting a Dolphin Days Tournament to encourage club members to tag more dolphin off Charleston and provide some financial support for the dolphinfish research. Scientific data will be collected on the dolphin that are kept. Length, weight and sex will be recorded for each fish along with a tissue sample collected for DNA analysis.

Bohicket Marina, located just south of Charleston, South Carolina, on Seabrook Island, will hold a special dolphin tournament on June 19. The event is intended to serve as a fundraiser for the Dolphinfish Research Program and to stimulate more tagging activity among local fishermen.

The Piedmont Offshore Sportfishing Club based in Greensboro, North Carolina has scheduled a competition on June 26 to assist the dolphin research effort. Their goal is to get a large number of dolphin tagged off Oregon Inlet, North Carolina, where few dolphin have been tagged. Participants will also attempt to catch a sufficiently large dolphin so that a pop-off satellite archival tag can be attached to track its movements.

The sports fishing organizations and businesses offering assistance to the 2010 dolphinfish research are not just serving themselves but all U.S. Gulf and Atlantic offshore fishermen. All offshore fishermen who want to ensure a healthy stock of dolphin in the future should become involved.

## Dolphinfish Research is Independent

As important as dolphin are to the U.S. and world's recreational fisheries, they have been neglected in the basic research of their life histories and harvest needed for management. Data currently available on dolphin in

### New 2010 Financial Contributors

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Larry & Kathleen Hufford,  
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Rex Thompson, Columbia, SC  
Tom Urban, Cudjoe Key, FL  
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U.S. waters cannot determine if the stock is healthy or in decline. Before the Dolphin Tagging Study, hard data did not exist to confirm the south-to-north spring/summer migration along the East Coast. No information is available on movements in other areas of the Atlantic and Caribbean other than what has been generated by this study.

The Dolphin Tagging Study is part of the Dolphinfish Research Program conducted by Cooperative Science Services, LLC, a private research company based in Charleston, South Carolina. The purpose behind the Dolphinfish Research Program is to carry out needed research on dolphinfish to ensure the future health of the stock.

Every angler who fishes for dolphin, every offshore fishing organization, and every business involved in offshore fishing should be supporting this study either by tagging fish or providing financial support. Donations do not have to be at the \$500 or \$1,000 level. Contributions of \$20, \$50 or \$100 do help. Please consider donating.

### For More Information, Contact

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