

# SC Dolphin Tagging Study

March 2004

## 2002 – 2003 Progress

The SC Dolphin Tagging Study is now entering its third year of researching the movements and migrations of dolphin-fish (mahi-mahi) found off the US east coast and in the Northern Caribbean. With over 1,700 dolphin tagged and 35 tagged-fish recovered, the project has been an overwhelming success.

Public support for this project, which focuses on the most popular bluewater gamefish, has been nothing short of phenomenal. Over 700 offshore anglers, most of them private boat owners, have volunteered to tag dolphin for the program. For the first time, anglers and sportfishing clubs from as far north as Nantucket, Massachusetts, as far south as Key West, Florida, and as far east as the Bahamas have volunteered to aid the research in to the dolphin's life history.

With a Shimano Tiagra 50 on a Star Standup Rod as incentive awards going to the individual angler, private boat and charter boat tagging the most dolphin in 2003, the tagging activity was serious and competitive among participants. The top five individual anglers tagged over 400 fish collectively, while the top five private boats tagged over 500 fish collectively.

Chester Kalb of Key West won the top private boat award having tagged 177 dolphin. Justin Brown of Pembroke Pines, Florida captured the top angler award by tagging 105 fish. Thirty-three percent of the dolphin recaptured in 2003 was tagged by these two individuals. Top charter boat honors went to Grady Williams' boat *Plumb Crazy* out of Charleston, South Carolina for tagging 29 dolphin.

The study's recoveries have answered many questions about dolphin behavior. Three recoveries clearly show that some fish will linger in an area for at least three weeks during their spring migration northward. Five recoveries shown that fish found off South Carolina's coast do move into the Mid-Atlantic Bight traveling at least as far north as Long Island, New York. Two recoveries confirmed that at least a portion of dolphin caught off Cape Hatteras, North Carolina in June are the same ones found in the Florida Straits and South Florida four to six weeks earlier.



The most remarkable movement documented by this study, was a dolphin tagged off the Florida Keys and recovered 93 days later off the New Jersey shore, 995 miles to the north. This is the farthest movement known documented for a dolphin in the Western North Atlantic. This distance is made particularly impressive by the fact that the fish started its trip as a 10-inch fork-length schoolie.

In 2002, an averaged of 38 days passed between the time of tagging and recapture with the fish having traveled an average of 266 miles to the north. Recoveries in 2003 were more abbreviated, with an average of 25 days of liberty before recapture with an average distance traveled of 233 miles northward.

The longest liberty so far in the study is 152 days from a dolphin marked off Charleston in May 2002. This fish traveled to the waters off Long Island, New York and was recovered near the end of October. At the opposite end, are two recoveries made within hours of when the fish were originally tagged showing that the fish will quickly return to actively feeding.

Speed of travel varied widely among the recoveries. The fastest traveler logged in 43.6 miles per day during a six-day sprint northward along the south Florida coast. In the opposite corner, a rather laid-back dolphin cruised along the South Carolina coast at an average rate of only 0.6 miles per day over a three-week period.

The two-year pool of dolphin recoveries shows an interesting harvest pattern developing. Anglers off Florida's coast have been responsible for the recapture of 48 percent of the tagged-fish recoveries. The second highest location for recovery was off North Carolina where 30 percent of the recaptures have occurred. Only three percent of the recoveries have come from the Georgia coast, while South Carolina has accounted for nine percent of the recaptured dolphin. Only 10 percent of the recoveries have been reported from the Mid-Atlantic Bight.



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Page 2

Tagging results in 2002 and 2003 provided much insight into the life of dolphin-fish, but the information generated by the study is raising as many new questions as it is answering about this magnificent gamefish. With the support of the numerous volunteers, the project hopes to see a record number of dolphin tagged in 2004. This will hopefully result in recaptures that provide important information that will ultimately contribute to better management of the stocks.

## Two Tag Recoveries Reported

The first report of a tagged dolphin recovery from Bahamian waters was received in March. With over 1,750 dolphin tagged off the US east coast versus 17 tagged in Bahamian waters, one would think this fish would be a long distance traveler. Wrong. The fish was recovered on January 31, 2004 by J. McDonald in the Tongue of the Ocean off Andros Island just 166 feet from where it had been released. It had been tagged just 15 days prior by Forrest Engle of Andros Island, Bahamas.

A dolphin tagged in the Florida Strait was the source of the second reported recovery. The fish had been tagged by Bill Baugh off Ramrod Key, FL on May 12, 2003. Recaptured off Tavernier Key by Kraig McClane of St. Augustine, FL, the dolphin had traveled 67 miles to the northeast during its nine days at liberty. This is Baugh's fourth tagged-dolphin to be recovered.

These two reports brings the number of recoveries for the South Carolina Dolphin Tagging Study to 36 as the program has entered its third year.



Over 1,550 dolphin have been tagged and released from Key West to Nantucket by sport fishermen during the first two years of this research into their movements and migrations.

## Enigma of the Florida Straits

A total of 524 dolphin were tagged in 2003 off the southeast coast of the Florida Keys below 25 ° North latitude. This is the largest number of fish marked in any of the 10 zones during 2003. Fish tagged in the Florida Straits last year also generated the highest number of reported tag recoveries: 15.

The recovery rate for fish tagged in the Florida Straits is 50 percent higher than for the project as a whole, 2.86 percent off the Keys as opposed to 1.91 percent for the overall study. Dolphin tagged in the Florida Strait during 2003 were recovered at a rate 2.2 times greater than fish tagged off the remainder of the US east coast (1.28 percent).

The higher recovery rate could be a result of the fact that the fish are being tagged at the start of their travel up the east coast which exposes them to harvest by US fishermen for the longest period. Additionally, the Florida Keys likely has the highest fishing pressure for dolphin along the entire east coast. These two factors combined could be responsible for the higher recovery rate.

The puzzle lies in the fact that all 15 of the Florida Keys recoveries involved the first 241 dolphin tagged. These were dolphin that were tagged prior to July 1 of 2003, while no recoveries have been reported from the 283 fish that were tagged after July 1.

The latter group of fish, found after July 1, are suspected to belong to a stock that inhabits waters of the western Caribbean and Yucatan Channel, and resides in the Florida Straits only in the summer and fall. They may travel as far north along the Florida coast as Jupiter or Stuart.

If these fish remain along the south Florida coast for a long period of time, then it stands to reason that some of the tagged fish should be recovered. This has not happened. So it leads to speculation that the dolphin tagged after July 1 are just passing through the area in route to other locations.

If they are just passing through, then we are interested to know where are they going. Are they entering the Santaren Channel along the Great Bahama Bank into the Old Bahama Channel and then using the Windward Passage around the east end of Cuba to return to the Caribbean? Or once in the Old Bahama Channel do they use the Mayaguana Passage around the south end of Acklins Island to reach the Atlantic? They could even use the Northwest Providence Channel between Great Bahama Island and Andros Island to reach the Northeast Providence Channel to access the Atlantic Ocean.

Maybe this is the year to unravel this mystery and you can help solve it by participating in the tagging study!

**For more information on the project, visit**  
<http://dolphintagging.homestead.com> or contact  
Donald L. Hammond  
Office of Fisheries Management  
Marine Resources Division  
SC Department of Natural Resources  
P. O. Box 12559  
Charleston, SC 29422  
Voice (843) 953-9847  
Email [hammond@mr.dnr.state.sc.us](mailto:hammond@mr.dnr.state.sc.us)