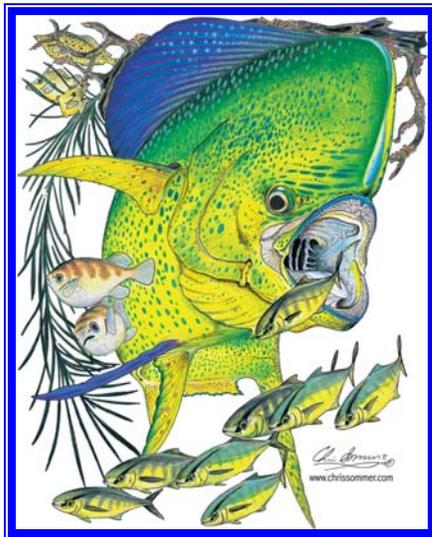


Cooperative Science Services, LLC Dolphin Tagging Research Project

September 2007



Overview of 2007 Tag Recoveries

To date, 65 of the 2,200+ dolphinfish tagged in 2007 have been reported recaptured. Not only is this a record number of recaptures in a single year, but it is also a record high recovery rate of 2.9%. As good as this is, it could be better because many recovered tags are never reported.

Area contribution to tagging and recovery rates.

Area	Number of Fish	Number Recaptured	Recovery Rate
Bahamas	348	7	2.011%
Florida East Coast	1266	46	3.633%
South Carolina	490	11	2.245%

Information generated by the recovery reports in 2007 has been outstanding. This year's information is helping to fill in many of the data gaps about their movements and may provide insight into additional behavior. Subsequently, there is far more information than can be presented within a single newsletter.

This issue will deal with dispersal patterns with information on where tagged fish showed up from each zone. Tag recoveries are based on numbers. Large numbers of fish tagged plus a high level of fishing effort equals tag recoveries. But from that point on you inject the unpredictable element, human nature, which determines whether the recovery will be reported and the quality of the information provided.

Anglers fishing off Florida principally during May and June recovered more than 57% (37 fish) of the tagged fish reported this year. North Carolina anglers reported the second highest share, 29% (19 fish) of the tag recoveries. Surprisingly, anglers fishing the Bahamas reported the third highest number of recoveries, 6 fish or 9% of all reported recaptures. The central section of the South Atlantic Bight, from just above St. Augustine, Florida, to 30 miles northeast of Charleston, South Carolina, zones 5 and 6, yielded 6% of the tagged fish recovered. So far, one tag report has come from the northern Mid-Atlantic Bight.

Movement Characteristics

Eleven tagged dolphin (16%) were recaptured within one day of being released. There were 34 tagged fish (51%) recovered within seven days of being tagged. A total of 33 fish (49%) were at liberty for more than 7 days before being recovered. Interestingly, as many dolphin were at liberty for 30 days or more as were recovered in one day or less, 11 (16%).

Distances traveled by the recaptured fish varied widely. The shortest distance traveled was by a fish in the Bahamas that was recaptured by the same boat that had tagged it just a few minutes prior. The longest movement from the release site was by a fish tagged off Marathon, Florida, that was recovered off Oregon Inlet, North Carolina, 855 miles to the northeast. Eleven tagged dolphin were recovered 600 or more miles away from their release site.

The rate at which the fish traveled varied from just 0.3 mile per day to 84 miles per day. The fastest travel rate

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involved a fish that moved from Miami to Jupiter Inlet, Florida, from one day to the next. If you think such fast movements are uncommon, think again. Seven other fish traveled at speeds averaging 50 or more miles per day and another 10 tag recoveries averaged 30 to 50 miles per day. Overall the recaptures had an average travel rate of 23.1 miles per day (mpd) or just less than 1 mile per hour.

These speeds and distances impressed me five years ago but not now. As I have learned the important role ocean currents play in their travel, I would not be surprised to see a fish move 150 to 200 miles in 24 hours. I say that because I just observed a satellite tag that is drifting off North Carolina travel 124 miles in 24 hours (5.1mph). Keep in mind that the tag does not have the benefit of a propulsion system.

Movement Patterns

Recaptures of fish tagged off Florida started early with the first fish tagged in the year (January 1) being recaptured nine days later, 24 miles to the north. Instate recoveries of these fish composed 80% of all Florida tags recovered. The fish that did not make it out-of-state had an average liberty of 6.5 days during which they moved 96 miles at an average of 14.7mpd. The 9 fish that were recovered out-of-state were at liberty an average of 35.6 days, moving 734 miles at an average rate of 20.6 mpd. Eight of these Florida fish were recovered off North Carolina. The other out-of-state tag recovery became the first Florida tag recovered off South Carolina.

Recovery locations of tagged fish by month.

Recapture Zone	Jan-Apr	May	Jun	Jul	Aug	Total
Bahamas	4	2	0	0	0	6
FL Keys	0	0	11	0	0	11
South Florida	2	3	12	1	0	18
Central Florida	0	0	7	1	0	8
N FL & GA	0	2	0	0	0	2
South Carolina	0	0	1	1	0	2
Southern NC	0	2	5	9	0	16
Northern NC	0	0	0	3	0	3
Virginia	0	0	0	0	0	0
Northern Mid-Atlantic Bight	0	0	0	0	1	1
Gulf of Mexico	0	0	0	0	0	0
West Central Atlantic	0	0	0	0	0	0
Caribbean	0	0	0	0	0	0
Total	6	9	36	15	1	67

The surge in tagging in the Bahamas paid big dividends with 7 recoveries. Five of these recaptures occurred in Bahamian waters. Unfortunately information on one fish was incomplete. Two of the in-zone recoveries were made within minutes to hours of their release. The other two in-zone recoveries were at liberty an average of 18 days, moving a distance of 53 miles with a travel speed of 2.9 mpd. The two out-of-area recoveries moved to the U.S. East Coast, one to Georgia and one to North Carolina. These fish were at liberty for an average of 54.5 days, moving an average of 699 miles at a rate of 12.8 mpd.

Recapture of fish tagged off South Carolina followed the typical northward movement of dolphin in the spring and summer. (Note, zone 5 is included here since anglers from South Carolina were responsible for all of the fish tagged in this area.) The one exception was the in-zone recovery of a fish recaptured just 3.4 miles SW from where it was released the day before. Anglers fishing off North Carolina recovered 9 of the 10 out-of-state recoveries. South Carolina fish recaptured off the Tar Heel State were at liberty an average of 12.1 days and had traveled 230 miles at an average of 18.9mpd. The other out-of-state movement was a recapture reported from Montauk, New York, of a fish at liberty for 26 days; it moved 692 miles at a rate of 26.6 mpd.

Noteworthy Movements

Several of the recoveries offered new information about dolphinfish movements. The first links between dolphin in the Bahamas' Tongue of the Ocean and the U.S. East Coast were recorded. A fish tagged off Chub Cay by the crew of Tom McMurray's boat, *Makara*, was recaptured 51 days later and 560 miles to the north, off Brunswick, Georgia, by Capt. Richie Dyal aboard the commercial fishing vessel *Seven Arrows*. The other recovery was a fish tagged in the Tongue of the Ocean by Mark Mitchell aboard the *Reel Gator* that was recovered by a charter boat off Cape Hatteras, North Carolina, and reported by Jim Lyons. The fish was at liberty for 58 days and traveled 837 miles north.

The first common dolphinfish to remain at liberty for more than a year was recovered in May 2007 off Brunswick, Georgia, by Capt. Richie Dyal aboard the commercial fishing vessel *Seven Arrows*. The fish was originally tagged in May 2006 off Miami, Florida, by Justin and Don Brown of Pembroke Pines, Florida, fishing aboard their boat, *Draggin Dreams*. Following a liberty for 371 days, the fish was recovered 372 miles north of its release site. The fish was not measured at release nor at recovery, so the growth is unknown. However, this recapture indicates that at least some fish visit the U.S. East Coast more than once.

For more information on the 2007 tag recoveries, visit www.dolphintagging.com and click on "Map of Tags and Recaptures."

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Who Has Tag Kit K045001- K045005?

A dolphin has been recovered off Cape Hatteras, North Carolina, bearing a tag from this sequence. Unfortunately the tag report card has not been sent in nor is there a record of who was given the tag kit. If you have these tags, please contact the Dolphin Study office using the address or contact information shown below.

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Losing a Tag Recovery

With only two to three tagged fish being reported recovered for every 100 fish marked, the loss of information from a recovery is painful and expensive. When you consider the amount of time and money spent to go fishing that allows these fish to be tagged, it is only good sense that anglers should make the effort to properly record the information and make a concerted effort to send in the information.

When a fisherman takes the time and makes the effort to report the recovery of a tagged fish, he fully expects to hear a full report on the fish. When he learns that nothing is known about his tagged fish, he is disappointed to say the least. The implications are that this angler will be less likely to report any future tagged fish that he might recover. This failure to report the tagging of a fish, has the potential to hurt other tagging programs.

Take the time and make that extra effort to return your tag report cards in a timely manner.

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