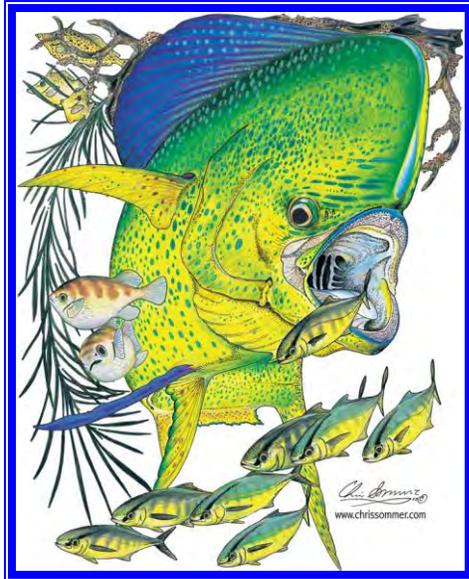


# Cooperative Science Services, LLC Dolphinfish Research Program

August 2015



## Tag Recovered Where?

On June 1, 2015, I started up my computer to find out what might have transpired in the world of dolphinfish and begin the day's work. The first thing I usually scan for is reported tag recoveries, and I saw that there were two. Because of the name associated with one of the reports I knew that fish was caught off Cape Hatteras. So I chose to open the report from the unknown reporter first. My eyes automatically went to the line showing location of recovery, and there was no information. I then scanned down the page to the line for comments, where my eyes must bugged out of my head, just as I burst into laughter.

The comment read: "I work in a Whole Foods Seafood Department in Omaha, Nebraska. I found a sliver of your tag in a mahi mahi fillet." Never had it crossed my mind that I would be getting a tag recovery report from Omaha, Nebraska.

Jon Birkel, who works in the seafood department of a Whole Foods grocery store found the tag in a fresh mahi (dolphinfish) fillet that came in May 29, 2015. Following the instructions on the tag, he learned that the DRP was the source of the tag. Visiting the DRP Web site, he filled out a tag recovery report and sent it in.

Here is a man who has never been offshore, who lives and works more than 800 miles from the nearest salt water, who has just recovered a dolphin tag. Jon has only done some fishing from a canoe in Iowa and Missouri and yet he is still able to provide useful information on an important oceanic game fish.

The fillet was identified on the May 29<sup>th</sup> shipping invoice as being from an Atlantic dolphin caught by hook and line. There was no additional information on where or the fish might have been caught. Since it was a fresh fillet, it was most likely caught within a week of May 29, 2015.

*Jon Birkel of Omaha, Nebraska, holds the remains of a dolphin tag that he recovered from a dolphin fillet, while he was preparing it for retail sale. Photo provided.*

At that time of the year the commercial fishery is largely centered off the Carolinas. Jon estimated the fillet to be 30 inches long, which would come from a fish about 46 inches in fork length that would weigh 26 to 31 pounds.

What we do know is that the fish was originally tagged off Cudjoe Key, Florida, on June 10, 2014, by Don Gates fishing aboard his boat *Killin Time II*. He measured the fish as being 22 inches in fork length at the time of release. Subsequently, this fish was likely at liberty for roughly 11 months, had traveled the full length of its migration route, possibly as much as 5,000 miles and had grown as much as 24 inches in length. This recovery is another example of a dolphin returning to the U.S. East Coast for its second visit, showing that releasing small fish one year can lead to bigger fish next year.

The DRP appreciates Jon's effort to report this important recovery.

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# Dolphinfish Research Newsletter

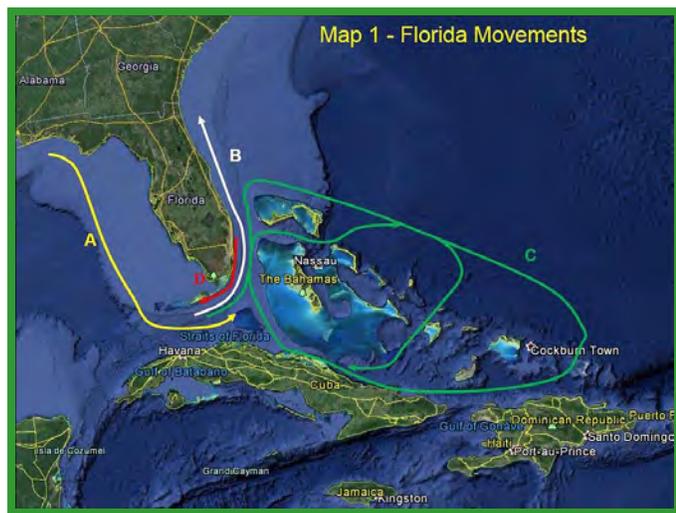
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## 2015 Tag Recoveries

Fourteen dolphin tags have been reported recovered in 2015 through the end of June. The first recovery came in March followed by six in May and seven during June. Utilizing the newly created movement description categories found on the DRP Web site to describe the movements, five different types of travel were exhibited by these fish. The diversity of the people reporting these tags is interesting. Boat captains led the way, reporting five recoveries, while anglers who caught the fish reported just four. Other members of a fishing party turned in two tags with a boat-mate sending in one. Two tag recoveries were reported by people who were not involved with the capture of the fish. This is an example of human curiosity, one of the driving forces in science. Curiosity is the primary reason behind most tag recovery reports.

The most frequently exhibited behavior was Florida in-state recoveries exhibiting a northward movement (map 1 line B). Six fish that were at liberty from one to 19 days displayed this behavior. All of the fish were tagged off the Florida Keys with two released in April and four in June. Speed of travel was highly variable, running from as slow as three miles per day (MPD) to 87 MPD. Rate of travel did not appear to be related to the month tagged since the fastest and slowest observed speeds occurred in June. A wide disparity in the rate of travel was found between the two fastest fish, which averaged 48.8 MPD, and the other four that averaged only 7.5 MPD.



Two dolphin tagged off Florida made it to Cape Hatteras, North Carolina, before being recaptured (map 2 and line B). A fish tagged off Cudjoe Key, Florida, made the 819 mile trip in 15 days, averaging more than 54

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

MPD. The other fish was most likely released off West Palm Beach in the spring of 2015 and traveled roughly 650 miles. The tagging report for this fish has not been sent in.

A fish tagged off Charleston, South Carolina, displayed a leisurely pace in its northward travel, map 2 and line C (green), to Virginia Beach, Virginia. It was recovered 42 days following its release 367 miles northeast of its release site. Traveling at an average rate of 8.7 miles per day, the fish showed a stark difference in its rate of travel compared to that of the south Florida fish that travel to Hatteras. This difference is likely caused by the fact that fish tagged on the west side of the Gulf Stream off South Carolina can be caught up for short periods in two semi-permanent-gyres that occur off the Carolinas. These rotating water masses can cause them to remain in one area while traveling in circles.



Now for the really interesting tag recoveries, those representing fish that were tagged in 2014 and recovered in the spring and summer of 2015 (map 4, lines A and B). A surprising number of tag recaptures, five, fell into this category. Composing 35.7 percent of the recoveries during the first six months of the year, it is the highest level recorded for these older fish in this study.

The first of these over-winter recaptures occurred in the middle of March 2015 when a fish released off Cudjoe Key, Florida, was recovered to the east of Harbor Island, Bahamas. Released in mid-August 2014, the fish was at liberty for seven months following the behavior described by map 4 and movement A. This is one of the rare recoveries where both the person tagging and the person recapturing the fish physically measured its length. In this case the fish had grown from 21 inches fork length to 39 inches, a growth of 18 inches in 30 weeks.

Three additional recaptures probably followed this route as well, since their recoveries were located far to the north of the Bahamas. Two of these recoveries were reported occurring off North Carolina and the third, the Omaha report, was for a fish most likely caught off one of the Carolinas based on the time frame of its harvest. The tagged fish whose fillet wound up in Omaha was tagged June 10, 2014, off Cudjoe Key, Florida, and was likely at liberty

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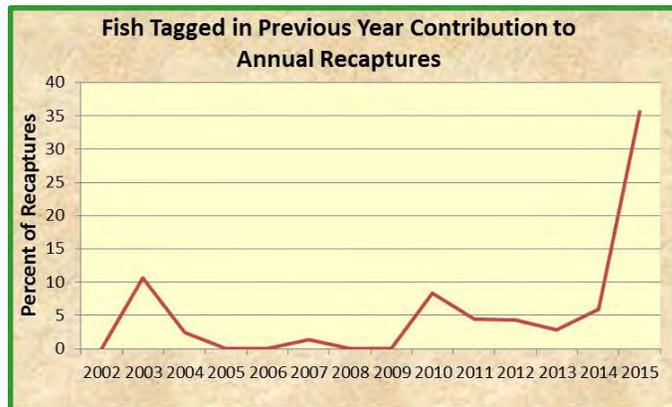


for approximately 350 days. A fish tagged October 27, 2014, off Ft. Lauderdale was recaptured 214 days later off Oregon Inlet, while a fish released off West End, Bahamas, on June 21, 2014, just 55 miles east of West Palm Beach, Florida, was recovered off Cape Lookout 328 days later. The fish recovered off Oregon Inlet was also one of those rare fish that was physically measured at release and recapture and showed a growth of 11 inches, growing from 18 to 29 inches in fork length.

One over-winter recovery that likely traveled by way of the Old Bahamas Channel (map 4 and line B) was a fish released July 14, 2014, off Miami, Florida, and was recovered off Sebastian Inlet, Florida. Sebastian Inlet is located about 25 miles north and 80 miles west of the north end of the Bahamas Bank, making it less likely that the fish could have crossed the Gulf Stream from the east side of the Bahamas quickly enough to be in position to be caught where it was.

The high incidence of these older fish returning to the East Coast and Bahamas in the first half of 2015 is surprising. This is especially true when you look at the long-term trend of these older fish in the recoveries reported yearly. (See the following figure.) During the first 13 years of this study these older fish composed an average of only 2.9 percent of the recaptures each year.

One piece of information that a mark and recapture program can offer is to identify the role that various age classes of fish play in each year's harvest. If this holds true for the dolphin study, then the role of older fish in the harvest has surged more than 12-fold over the average annual level and six-fold from 2014. So does this mean that there was a phenomenal survival and carryover of the



2014 spawn, resulting in lots more big fish, or was there a radical decline in the 2015 spawn survival, the schoolies? Angler reports and DRP data collections for 2015 do not indicate a phenomenal gaffer season, nor a good abundance of the young school fish. However, one thing that I have learned is not to rush to judgement of an annual dolphin fishery until the year is over.



*The days of big catches of dolphin such as this cart load ended the first week of June in 2015 for South Carolina anglers.*

## How has Your Fishing Year Been?

The DRP is interested in hearing from you, the fishermen, about your experience catching dolphin this year. Has your year been good or bad? Please e-mail your report to [CSSLIC@BELLSOUTH.NET](mailto:CSSLIC@BELLSOUTH.NET). Please include how many times you fished this year, the ports that you fished from, and the general size of the fish you caught.

We would like to hear from everyone who receives this newsletter. Your information would go a long way toward a better understanding of the movements and distribution of dolphin this year.

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*Dolphinfish are the mainstay of the blue water troll fisheries in the Gulf of Mexico, Bahamas, Caribbean Sea and South Atlantic Bight. As our research reveals new threats to the dolphin population in the western north Atlantic, we have to wonder how long the stock will be able to sustain the current level of fishing.*

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