

# SC Dolphin Tagging Study

March 2005

## 2004 Tag Recoveries and the Stories Told

The essence of a mark-recapture study is the collection of stories told by those animals recovered. In 2004 the study collected 39 such stories on the dolphin fish including one on a pompano dolphin. Tagged dolphin recaptured in 2004 had an average freedom period of 42 days and were recovered an average of 227 miles from their release site.

The 2004 liberty periods (length of time between tag and release and recovery) ranged from less than one day to 313 days, or 10.3 months. Four tagged fish recovered were out longer than 3 months and another four were at liberty from 2 to 3 months. Only 14 of the tagged fish recaptured were at liberty for less than 7 days. The 2004 recaptures had an averaged liberty period nearly twice as long as the liberty periods in 2003 (23 days) and 10 percent longer than the 2002 liberty periods (38 days).

The distances between the tag release sites and the recovery points ranged from 0.4 mile to 923 miles. Five of the tagged fish recoveries were made over 500 miles from the original release site. Six other tagged fish were recaptured between 300 and 500 miles from their release point. The average distance between the release and recovery sites, 227 miles, is only 5 miles further than the 2003 average distance of 222 miles and 44 miles less than the 2002 average of 271 miles.

While the 2004 recoveries included a new speed of travel record for a tagged dolphin of 130 miles in one day, they also included the highest incidence of low movement. Nine of the tagged dolphin recovered were recaptured 25 miles or less from their release site. These fish were at liberty from less than one day to 70 days. On the average, these dolphin were free for 21 days and were recovered only 12 miles from their release site. Such recoveries could indicate that dolphin will take up short term residences along their route during their spring/summer migration.

Where the tagged dolphin are recaptured is an important part of these stories. Florida fishermen recovered 38 percent (15 fish) of the total number of tagged fish recaptured in 2004. Most of these fish had been tagged off the Florida Keys. Fishermen in North Carolina recovered the largest portion, 41 percent (16 fish), of the tagged fish that were recaptured. Most of the dolphin recovered in North Carolina were tagged off South Carolina, 62 percent, with another 25 percent having been tagged off south Florida.

Nine of the total tag recoveries reported for 2004 came from fishermen in the mid-Atlantic Bight, zones 8, 9 and 10. Fishermen out of Oregon Inlet accounted for 8 of these tag recoveries. Only one tagged fish was reported recaptured north of zone 8.

Three tag recoveries did involve winter time movement of dolphin. A dolphin tagged off New Jersey the fall of 2003 was recovered the next spring off North Carolina. A



dolphin tagged off North Carolina the summer of 2003 was recovered by a longline vessel off Georgia 10 months later. The third fish tagged off St. Lucie Inlet, Florida in November 2003 was recovered over five months later off Sebastian Inlet, only 65 miles from where it was released.

A total of 18 of the tagged dolphin recoveries were from fish tagged off Florida, zones 2, 3, and 4. South Carolina anglers, zones 5 and 6, tagged 15 of the dolphin that were recovered. Tagging efforts in the Bahamas yielded 3 tagged dolphin recoveries, one coming from the US mainland. Two recaptures came from dolphin tagged off North Carolina with the final recovery from a fish tagged off New Jersey.

The 2004 study year was a truly banner year for the South Carolina Dolphin Tagging Study. More information was gathered this year than the previous two combined. The study needs your help to insure that 2005 will be as successful.

## Fishermen Needed Prior to 1 August 2005

Entering its fourth and final year in 2005, the dolphin study is in need of experienced offshore boat owners who are concerned enough about the future of dolphin to tag and release their smaller catches for science. Boat owners who fish in the **Mid-Atlantic Bight, Gulf of Mexico and eastern Bahamas** are needed to tag dolphin to help answer questions about the movement of dolphin from their regions.

This project offers offshore fishermen the chance to actively participate in scientific research. In the past, anglers have voiced their concerns that no research is being done on popular game fish in their areas. Here is your opportunity! Anglers who want to know more about dolphin in their area should sign up to participate in this project. The more dolphin tagged in an area, the greater the opportunity to learn about the fish in that area.

Anglers interested in participating in this study can register at <http://dolphintagging.homestead.com> or should contact the project leader listed at the end of the newsletter. Anglers will not be registered to tag dolphin after August 1.

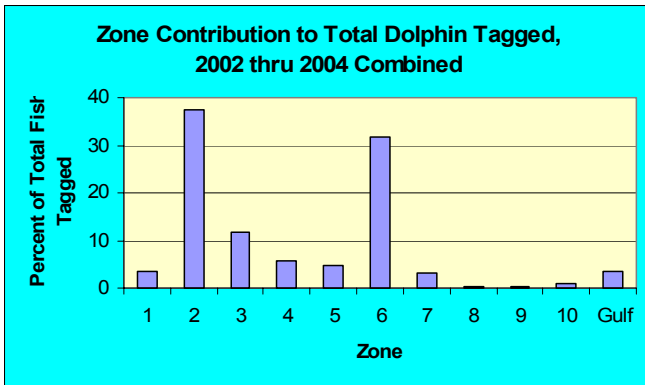
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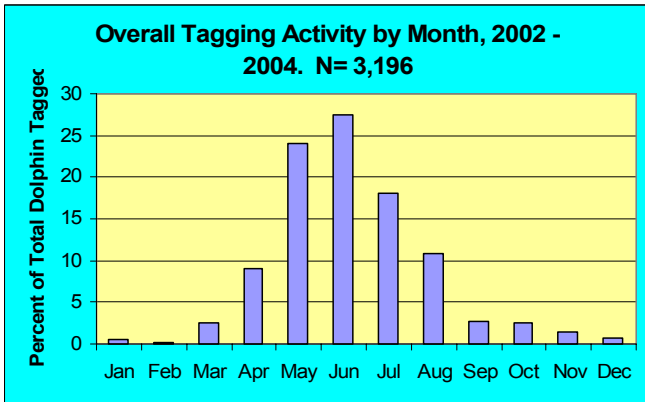
## Three Years of Tagging

During the three years which the South Carolina Dolphin Tagging Study has been conducted, fishermen have voluntarily tagged and released over 3,000 fish in support of the study. Over 500 fishermen fishing on more than 240 boats have tagged dolphin for this research effort. While dolphin have been tagged in every zone along the east coast and in the Gulf of Mexico, two zones have been responsible for over two thirds of the fish tagged.



Recreational anglers in the Florida Keys (zone 2) and the southern section off South Carolina (zone 6) have shown an amazing commitment and dedication to this project's study of dolphin. Fishermen in these two areas recognize the important role dolphin play in their recreational fishery and they are concerned enough about the future health of the fish stocks to get involved.

Combining the three years of tagging data, of which 97 percent is from the east coast of the United States, gives us a look at the seasonality of the east coast dolphin fishery as a whole. From this perspective, the peak period is May, June and July which account for 70 percent of the fish tagged. When April and August are added, the resulting five month period accounts for over 90 percent of all dolphin tagged.



Because of the large number of fish tagged in zone 2 and zone 6, we can get an idea about the seasonality of the dolphin fishery in these areas. In the Keys, 87 percent of the dolphin were tagged from May through August. Only during

January and February were no dolphin tagged. Also the April fishery is likely under represented since this is when many of the Key's larger fish show up and few of these are tagged. Off South Carolina, 94 percent of all dolphin tagged occurred from April through July. No fish were tagged from December through March.

## 2005 Critical Tagging Needs

1. More late summer and fall tagging of dolphin are needed from zone 6 northward to enhance the opportunity to document the fall migration routes of dolphin.
2. More dolphin need to be tagged off the eastern side of the Bahamas April through June to determine if these fish move northward to the US east coast.
3. Aggressive tagging in the Gulf of Mexico will be necessary to determine movements of dolphin in this area.
4. More tagging is needed after July 1 to determine movement direction on dolphin present in the Florida Straits in mid to late summer.

## 2005 Bahama's Billfish Championship to Aid Dolphin Study – Next Newsletter

### 2005 Tagging by Zone thru February 28.

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

### For more information on the project, visit

<http://dolphintagging.homestead.com> or contact

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