

Cooperative Science Services, LLC Dolphin Tagging Research Project

July 2007



Record Year for Tagging

2007 is being reported as one of the best years in recent history for 10 to 20 pound dolphin in the Gulf of Mexico, Bahamas and the South Atlantic Bight. This has led to record levels of tagging activity. The most dolphin tagged in this study in a year was 1,600 fish in 2005. As of the end of June, 1,899 dolphinfish had been tagged this year. This is already a new record high and two good months of tagging still remain. More than 1,200 dolphin were tagged in June, which is virtually twice the previous record for a month.

The majority of fish have been tagged off the east coast of Florida: 1,081 fish. Anglers in the Florida Keys have provided the lion's share: 695 dolphin. Anglers off south Florida provided the second highest number of tagged fish with 320. New fishery regulations in the Bahamas prompted visiting anglers to tag more fish than ever before, which resulted in 313 dolphin being marked and released. This is more than has been tagged in the Bahamas in the previous five years combined. In the same vein, South Carolina taggers have surpassed the number of fish marked in 2006, with 309 dolphin already tagged in 2007.

While no dolphin have been tagged in the western central Atlantic this year, 134 individuals have been tagged in the western Caribbean Sea. All were a direct result of the Dolphin Study's cruise aboard Tom McMurray's boat *Makara*. Even with the great dolphin year in the Gulf of Mexico, no dolphin have been tagged

there. This study hopes to see a greater interest by anglers in the Mid-Atlantic Bight in tagging dolphin now that their dolphin season has started. It is only by marking dolphin in each area that their regional behavior patterns will be revealed.

Number of Dolphin Tagged in 2007 by Zone.
As of June 30, 2007

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22N	28N	313
2	FL Straits	23N	25N	695
3	South Florida	25N	27N	344
4	Central Florida	27N	30N	43
5	North FL & GA	30N	32N	51
6	Southern SC	32N	33N	322
7	Southern NC	33N	35N	16
8	Northern NC	35N	36.5N	0
9	Virginia	36.5N	38N	0
10	N. Mid-Atlantic	38N		0
11	Gulf of Mexico			0
12	W C Atlantic			0
13	W Caribbean			134
	Total			1899

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Tag Recovery Reports at a Record Pace

Anglers are reporting the recapture of tagged dolphin at a record setting pace. As of June 30th, 42 recoveries had been reported for 2007. The highest number of recaptures reported for a single year came in 2006 with 49 tagged fish recovered. In a typical year 30 to 40% of tag recoveries occur after July 1. So if the recovery reports are anywhere close to normal, a record year will be realized.

As in previous years, the recoveries made prior to July centered off the east coast of Florida and the Bahamas (see table below). Anglers reported recovering five fish that were tagged in the Bahamas. All were recovered close to their release site with the longest movement by a fish out 22 days that traveled east 57 miles from Chub Cay to beyond Nassau. The Bahamas recoveries average being at liberty 9 days during which they traveled 27 miles.

Distribution of recaptures reported as of June 30.

Zone Tagged	Zone Recaptured						
	1	2	3	4	5	6	7
1	5						
2	1	10	10	4			
3			6	3			
4							
5							
6						1	2

Dolphin tagged in the Florida Keys, zone 2, had the highest recovery rate at 3.6%. This is because the fish face what fishermen call the "Gauntlet" - that area from Key Largo, Florida, to Stuart, Florida, which has possibly the highest density of offshore vessels to be found anywhere along the Eastern Seaboard. Fish tagged in zone 2 and recovered in zone 2, in-zone recoveries, averaged being at liberty for 1.5 days and traveling 24

miles from their release site. Those fish that managed to move into another zone before recovery averaged being at liberty for 4.8 days during which they moved 174 miles at an average daily speed 36 miles per day. Only four of the 25 fish recaptured made it past St. Lucie Inlet, Florida.

Recaptures of fish tagged in zone 3, Key Largo to St. Lucie Inlet, showed a harvest similar to the Keys' fish. Two-thirds of the recoveries occurred before they got past St. Lucie Inlet. These in-zone recoveries had an average freedom period of 11 days traveling 30 miles from their release point. These fish traveled at an average rate of 3.7 miles per day. The recaptures made in other zones had a freedom period averaging 16.7 days during which they traveled an average of 80.6 miles. These fish traveled at an average rate of 4.8 miles per day.

Three fish tagged in zone 6, off South Carolina, round out the recoveries reported this period. One fish was recovered in-zone the day following its release. It had moved only 3.4 miles from its release site. The other two tagged fish had traveled northward to the North Carolina coast. These fish were at liberty for an average of 10.5 days during which time they moved an average of 74 miles. This would give them an average rate of travel of 7.1 miles per day.

The 2007 tag recoveries along the U.S. East Coast exhibited northward movements, typically seen in the spring. The fastest rate of travel, 77 miles per day, came from a fish tagged off Marathon, Florida, by Don Gates on his boat *Killin Time*. The fish was recovered two days later by Adam Kanner off Hallandale, Florida, (154 miles). Five other tagged fish averaged traveling more than 50 miles per day during their liberties.

While none of the recoveries of fish tagged off Florida occurred out-of-state, 11 fish did move more than 100 miles during their period of freedom. Three of these fish traveled more than 200 miles up the Florida coast. It was another of Don Gates' fish that traveled the farthest, 377 miles, from Marathon to Ponce Inlet, Florida, in 7 days where Richard Pettis recovered it fishing aboard his boat *Reel Cowboy*.

One of the more noteworthy accomplishments in the first half of 2007 is the performance of the tagging crew aboard the *Killin Time*, owned and captained by Don Gates of Conroe, Texas. Fishing off Marathon, Florida, in June, his crew was able to tag 359 dolphin - quite an accomplishment in itself. But the fact that their fish have accounted for 23 of the 42 recoveries this period is truly astounding. This clearly shows that they are releasing healthy fish. Quality tagging comes from planning ahead *before* the fish is in the boat and having an established system that everyone knows.

Supporting Dolphin Tagging Research
Hilton Head Reef Foundation

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Donations are fully tax deductible.

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Sponsor a Satellite Tag for 2008

A new study in 2008 using satellite pop-off tags will focus on tracking the movement of individual fish in the North Atlantic, Caribbean Sea and Gulf of Mexico for up to six months. These long-term tracks could provide the first information on the movement patterns of fish that visit U.S. waters as well as routes used in the fall and winter to travel to southern waters.

Current funding provides for only three of the high tech tags for dolphin. These instruments have the potential to add significantly to our knowledge about the life and long-term movement behavior. But data already suggest that fish behave differently in different areas, so deploying these high-tech devices in each of the six major regions of the Western North Atlantic would address whether regional behavior differences do exist and help define them.

For this reason I am seeking sponsors for satellite tags in an effort to increase the number of instruments deployed. The sponsor would be able to designate where the tag would be deployed so long as they also provided the means to capture the fish for tagging. Also the tag and fish would be officially named after the sponsor and referred to as such in publications.

Sponsors are asked to cover all costs associated with purchase of the tag and acquisition of the data. The tag costs \$4,500 while the cost of satellite time runs another \$1,700. This brings the cost of sponsorship of a pop-off satellite tag to \$6,200, which is fully tax deductible through the Hilton Head Reef Foundation. The Dolphin Study will need to have the funds by January 1, 2008, to allow time for construction of the instruments.

For more information contact the CSS office.

Your Financial Support Is Needed

The CSS Dolphin Tagging Study operates solely on donations. Contributions from individuals, organizations and businesses in the private sector make this research possible. I hope that you will consider donating to the Dolphin Research Program to ensure this important work continues. Donations are fully tax-deductible, thanks to the help of the Hilton Head Reef Foundation. Checks should be made out to the H H Reef Foundation /Dolphin Study and sent to the address at right.

New 2007 Contributors

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