

Cooperative Science Services, LLC Dolphinfish Research Program

September 2010



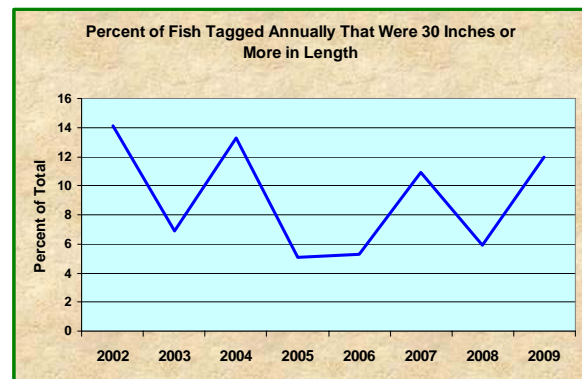
Do Large Fish Survive Tagging?

This question has been raised by several anglers: Do large dolphin, fish 30 inches in fork length or longer, that are tagged survive to be recaptured? This is a good question, considering dolphin are such determined fighters that they do not normally come to the boat until they are exhausted. Once at the boat large fish are more difficult to tag properly while in the water and, when boated for tagging, frequently require so much force to restrain them that they can suffer internal injuries. Poor tag placement and injuries lower a fish's chance for recovery. Further complicating the matter is the fact that few dolphin live past 12 months, and fish this size are already more than six months old.

In researching this question the first fact that jumped out was the low number of larger fish being tagged. Most

anglers keep dolphin that are 30 inches in fork length. Among boats that have tagged fish, fewer than one in ten have tagged a fish that was 30 inches or more in length, and only about 5 percent of active taggers regularly tag larger fish. But some anglers have shown no reluctance to tag even trophy-size animals. Dolphinfish measuring 50 and even 60 inches in length have been tagged and released. The largest fish to be tagged and later recovered was a 52-incher tagged by the crew of the *Special Lady*, captained by John Thomas of Mt. Pleasant, South Carolina, during a fishing trip in the Bahamas.

A total of 1,001 dolphin 30 inches or more in fork length were tagged from 2002 through 2009. Larger fish have made up from 5.1 to 14.1 percent of the fish tagged annually. Overall, large fish have accounted for 8.8 percent of all dolphin tagged from 2002 through 2009.



Large fish have most commonly been tagged off the Bahamas, Florida and South Carolina. Fish tagged in these three areas have produced a total of 31 reported tag recoveries. The largest number of recoveries, 13, came from fish tagged off South Carolina, while ten recoveries involved large fish from Florida's east coast and eight recaptures of fish from the Bahamas. A good indicator



Captain Bouncer Smith holds a trophy bull dolphin he tagged and released aboard his charter boat Bouncer's Dusky off Miami, Florida.

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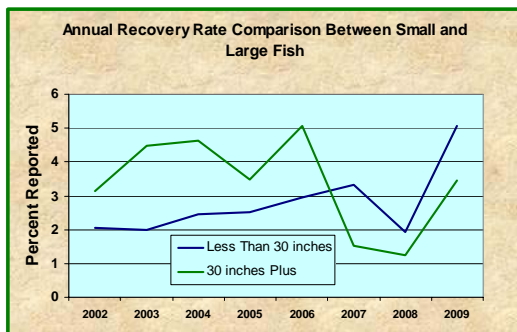


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of survival for the large fish is the proportion of large fish tagged that are recovered. If the large-fish recovery rate is equal to that of small fish, then they are surviving at least as well as the smaller individuals. The resulting comparison of the recovery rate for the two size classes of dolphin, percent of the fish tagged in a year that were reported recovered, indicates that large fish had an 11 percent higher overall recapture rate of 3.1 percent than small fish with 2.78 percent. However, the recovery rate for large fish did not exceed that of small fish every year. It is interesting that large-fish recoveries exceeded those of small fish from 2002 through 2006 years but not the past three years.



Only five boats have had multiple recoveries of their larger fish. The *Petrel IV* out of Mt. Pleasant, South Carolina, owned by Harry Johnson Jr., the *Houdini*, owned by James Shannon of the Isle of Palms, South Carolina, and the *Reel Gator*, owned by Tony Zara of Orlando, Florida, each had three of their large fish recovered. The *Prowess*, owned by Ritt Ritter of Charleston, South Carolina, the *Knot Yet*, owned by Dave Wilson of Andros Island, Bahamas and Chester Kalb, of Key West, Florida, fishing on his unnamed boat each had two of their large fish recaptured. The fact that these boats had multiple recoveries from the large fish they tagged indicates they took care in their capture, tagging and handling of the fish.

Looking at the behavior of the larger fish compared to the smaller fish, some differences were observed. The large fish from Florida and the Bahamas that were traveling to other areas traveled at slower speeds, traveled shorter distances, and on average had shorter liberties. However, large fish leaving South Carolina while exhibiting a slower rate of travel, had nearly twice as long a liberty period and distance traveled. Because of the small sample size involved in these comparisons, these observations are shaky at best.

The bottom line is that larger fish not only survive the tagging experience but appear to have a higher potential to be recaptured. So, if you have all the dolphin in the box that you feel you need or want to clean, tag the rest of your dolphin even if they are gaffers.

Dolphin Tagging Progress by Zones, August 31, 2010.

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22° N	28° N	204
2	FL Straits	23° N	25° N	527
3	South Florida	25° N	27° N	439
4	Central Florida	27° N	30° N	81
5	North FL & GA	30° N	32° N	76
6	Southern SC	32° N	33° N	107
7	N. SC - S. NC	33° N	35° N	9
8	Northern NC	35° N	36.5° N	75
9	Virginia	36.5° N	38° N	2
10	N. Mid-Atlantic	38° N		7
11	Gulf of Mexico			37
12	W Central Atlantic			45
13	Caribbean Sea			3
	Total			1,612

Dolphin Move Farther North

Three more tag recoveries have been reported since the last newsletter, bringing the total reported recoveries for 2010 to 32. Two recaptures exhibited long movements to the north, while the third tag recovery reminds us that dolphin are part of the ocean's food chain.

The third tag recovery came from Hallandale Beach, Florida, where it was found washed ashore by Betina Ramon of Hallandale, Florida. The tag had been originally placed in an 18-inch dolphin by Bill Pomenti during a fishing trip off Islamorada, Florida, 32 days earlier. It is very likely that a predator ingested the tag while consuming the bearer of the tag and later expelled the tag, allowing it to float ashore.

The first tag story starts out off Marathon, Florida, on July 10, 2010 when the crew of Don Gates' boat *Killin Time* tagged and released an 18-inch dolphin, one of many that day. The fish was recovered 31 days later by Capt. Scott Warren aboard his charter boat *Big Tahuna* during a fishing trip off Cape Hatteras, North Carolina. The fish was recaptured 819 miles from its release site, which means the fish averaged traveling at the rate of 26.4 miles per day. Capt. Warren reported measuring the fish at 22 inches fork length, indicating it had grown four inches during its four weeks of liberty.

The second tag recovery account had its beginning off Miami, Florida, on June 3, 2010, when Rick Thomas, mate on the *Thomas Flyer* charter boat based in Miami, tagged and released a dolphin estimated to be 18 inches in length. John Hand of Brigantine, New Jersey, recovered this dolphin 69 days later at Carteret Canyon off the central New Jersey coast while working aboard

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

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the charter boat *Full Moon Too*. The fish was recovered 996 miles from its release site suggesting that it had traveled at an average speed of 14.4 miles per day. At recapture the fish measured 27 inches, suggesting the fish may have grown roughly nine inches in its ten weeks of liberty. Weight-wise, it means the fish went from two pounds at release to more than seven pounds when it was harvested.

Fishermen frequently ask how much fish grow during their liberty periods. Unfortunately, all too often, the person releasing the fish or recovering the fish estimates the length of the fish. I recognize there are good and bad length estimators among the angling public, but I have no way to know who is good and who is bad at estimating length. Subsequently, lengths that are estimated on one or both ends are largely ignored. While estimated lengths do indicate whether it was a small, medium or large fish, they lack the credibility for use in growth assessment. That is why I frequently do not comment about the growth.

For more information on the dolphin movements in 2010 visit the Dolphinfish Research program Web site at <http://dolphintagging.homestead.com/Map2010.html>.

Web Site Updated

If you have not been to the Dolphinfish Research Program's Web Site <http://dolphintagging.homestead.com/index.html> recently, you need to visit it. You will find fresh information on the annual progress pages of the site. Also, a new page has been added presenting a summary of the movement patterns observed for dolphin.

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