# Cooperative Science Services, LLC Dolphinfish Research Program

January 2014



## **Small Dolphin Abundance**

A questionnaire was sent out in October to participants in the Dolphin Tagging Study seeking their opinions on the abundance and occurrence of young-of-the-year dolphin during 2013. A total of 31 anglers from Ocean City, New Jersey, to Key West, Florida, to Port Aransas, Texas, were kind enough to provide their thoughts about their 2013 dolphin season. The purpose of the survey was to see if there was a common perception about the abundance and occurrence of small dolphin in U.S. East Coast and Gulf waters during 2013.



Small dolphin are an important component of the U.S. fishery but may also represent the source of the large 10 to 20-pound dolphin caught in the Caribbean during the fall and winter. Photo by T. Heiser.

As responses normally go in surveys, some respondents did not answer all of the questions, while others provided great details of their fishing without directly answering the specific questions. In true survey fashion, responses were all over the board.

Overall, nine fishermen said that they encountered more small dolphin than normally, while four anglers said that it was a normal year for them, and 19 fishermen reported they encountered fewer small fish. Averaging out angler responses by region showed that anglers in the Florida Keys, south Florida, and South Carolina, believe the small fish abundance was about normal. Fishermen from the North Carolina and the Mid-Atlantic Bight reported small dolphin being less abundant than normal. Gulf of Mexico anglers indicated a slightly below average year in their area.

In regard to when the peak abundance occurred, eleven percent of the responders believed the small fish arrived earlier than normal, while 30 percent thought the fish showed up at their normal time. However, the largest proportion of the anglers, 33 percent, said they peaked one month late with another 26 percent thinking they were several months late reaching their peak. Overall, in the opinion of 59 percent of the fishermen felt the fish were late reaching their peak while 41 percent held that the fish peaked at their normal time or earlier.

When asked how long the peak fishing for small dolphin lasted, the largest proportion of the anglers, 40 percent, said it lasted for a shorter period than normal, while 32 percent of the anglers reported that it lasted longer than normal. Another 28 percent said that peak fishing for schoolies lasted for the normal length of time. Overall, you can say that 60 percent of the responding fishermen thought that fishing lasted a normal length of time or even longer.

When you want to appraise the abundance of a wild animal that does not have a rigid time schedule of where it should be, you need to document its abundance during the entire period that it is present in an area. For dolphin off the U.S. East and Gulf coasts that would be a calendar year. The fishermen cited in the responses above, averaged making 11 trips that could have caught dolphin. The number of trips each fisherman made in 2013 was between one and 25. Most of these trips were made during the spring

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and early summer, leaving the abundance of small dolphin unknown for a large part of the year.

Fortunately, I did hear from another segment of the recreational fishermen, charter boat captains. These fishermen will be on the water 12 months out of the year if they can, making 100 to more than 300 trips in a single year. I heard from very notable charter captains located in the Florida Keys (Capt. Jim Sharp), south Florida (Capt. Bouncer Smith), North Carolina Outer Banks (Capt. Rom Whitaker), and Venice, Louisiana (Capt. Kevin Beach).

These experienced anglers offer a somewhat different view about small dolphin in 2013. Capt. Sharp believed that he encountered a normal number of small dolphin, and even though fishing did peak several months late, it lasted for a normal length of time. On the other hand Capt. Smith noted that the fish showed up earlier than normal and hung around longer but flatly stated that it was one of his worst years for small dolphin. Capt. Whitaker's thoughts were similar to Capt. Smith's in that it was a very poor year but also that not only were the fish several months late but were available for a shorter period as well. Capt. Beach reported that it was a very poor year for him in the Gulf also, with the fish showing up about the normal time and staying in the area for a shorter length of time.

So what can we get from this? The majority of reports indicates a below average number of small dolphin encountered during 2013 within the normal fishing areas of the U.S, Atlantic and Gulf coasts. This may not be because of a decrease in the population but could be the result of the small fish remaining farther offshore than normal, which could keep them out of the reach of recreational fishermen. If there is an actual decline in the abundance of these small fish off the East Coast, the fishermen in the Caribbean could see the first results of the shortage since these fish most likely are the source of the 10-to 25-pound fish that support their fall/winter fishery.

The final question would be that if the 2013 -14 Caribbean dolphin fishery is down, what impact would it have on the 2014 season along the U.S. East and Gulf coasts? Stay tuned.

## **Tag Washes Ashore**

Every few years the DRP receives a report of a dolphin tag having been found on a beach. While this is not uncommon or unexpected, it does raise the question of what happened to allow the tag to wind up where it did.

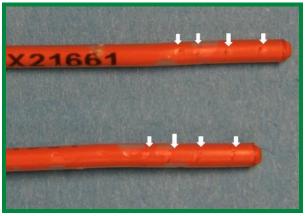
Dolphinfish do have a short life expectancy, but it is even shorter due to their popularity among the ocean's predators. The reality is that few dolphin make it to the ripe old age of 12 months. This coupled with the facts that dolphin tags float and are impervious to animal stomach acids, sets the stage allowing these identification tags to wash ashore.

Your donations to the Dolphin Study are Fully Tax-Deductible

Make checks out to:

HH Reef Foundation/Dolphin Study Mail checks to the address below. Tagging Progress by Zones, December 18, 2013.

	ng i rogress by Zor	Southern	Northern	Number
Zone	Area	Limit	Limit	Tagged
1	Bahamas	22 ° N	28 ° N	16
2	FL Straits	23 ° N	25 ° N	622
3	South Florida	25 ° N	27 ° N	363
4	Central Florida	27 ° N	30 ° N	36
5	North FL & GA	30 ° N	32 ° N	18
6	Southern SC	32 ° N	33 ° N	77
7	N. SC - S. NC	33 ° N	35 ° N	42
8	Northern NC	35 ° N	36.5 ° N	26
9	Virginia	36.5 ° N	38 ° N	0
10	N. Mid-Atlantic	38 ° N		13
11	Gulf of Mexico			45
12	W Central Atlantic			3
13	Caribbean Sea			36
	Total			1,297



Regularly spaced indentations (indicated by green arrows) on opposing sides of this dolphin tag suggest that an animal (likely a fish) may have pulled the tag out.

There could be many reasons for the tag showing up on a beach. These could range from the tag accidentally going overboard to the tag separating from the fish. In most instances of these reports, the tag is not returned to the DRP for examination. Recently a tag found on Cocoa Beach, Florida, by Mrs. Marcia Williams was returned. The tag had been deployed in a 21-inch fish on August 31, 2013, off Ft. Pierce, Florida, by Vince Lifrieri. The tag was out for 65 days before being recovered from a beach 68 miles north of its release point.

Many photos sent in by participating taggers have shown tags inserted so shallow, just under the skin, that they would likely fall out of the fish quickly. Macroscopic examination of this tag suggested that this tag did not fall out, nor that the fish became food for a predator. Evidence indicates that the tag may have been extracted from the fish. Four regularly spaced indentations found on two sides of the tags indicate that an animal had hold of the tag at some point in time. The round shaped depressions suggest

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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that they were made by small conical teeth, which is the tooth-type found in dolphinfish.

While these marks could have been made at any time while the tag was in the water, these marks are strong evidence that another fish pulled the tag out for whatever reason. Since dolphin are known to associate with some of the most aggressive feeding fish, other dolphin, it is very likely that a school mate was the culprit in this caper.

Researchers have suspected that tags placed in predatory schooling fish could be subject to having tags pulled out by other school members. This is why I stress the deep implanting of the tag to allow the tag's barb to lock around one of the spines radiating up from the backbone.

#### **Send in Your Tag Cards**

2013 is quickly coming to a close. It is time for all tagging partners to check their boats or where they keep their tagging equipment for any tag cards that may have been used but overlooked and not sent in. Tag cards must be received by January 8, 2014, to count toward the 2013 year-end awards.

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