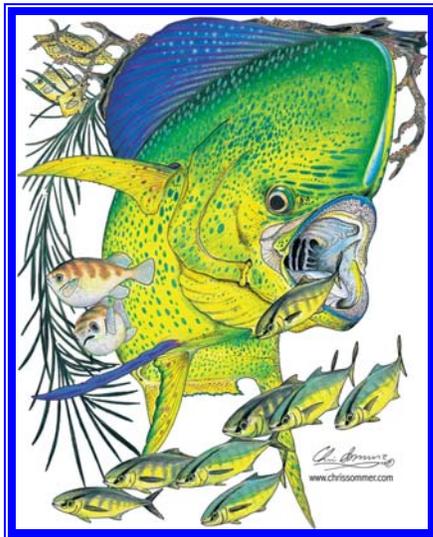


Cooperative Science Services, LLC Dolphin Tagging Research Project

December 2006



Colorful Expressions

In our everyday life we not only listen to what people say to us but we are also attentive to their body language for additional information. As young children we learned that when mom or dad used that special stern look, especially if their hands were on their hips, you did what they said, no back-talk.

While man may use body language to convey some feelings, animals are the masters of conveying messages to others through their body posture. Marine animals are no exception. A well-known example is the way sharks use a rigid swimming posture to warn other animals to stay away or risk attack. Fish not only use muscle tone or physical posture to convey messages but, because so many are multicolor, they also use color patterns to speak their minds. Dolphin are the masters of “texting” messages via colors.

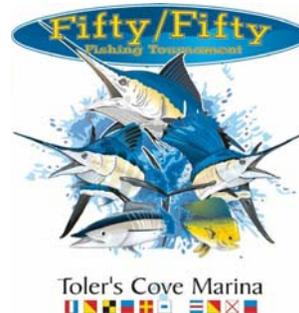
The five years of this study have provided the opportunity for a closer examination of the dolphin’s brilliant colors. This new attention to body coloration has revealed some amazing facts. One of the most impressive is that in just a matter of seconds, a dolphin can completely change the color pattern over its entire body. This can appear as a wave of color washing over the fish from one end to the other or it may occur simultaneously over the entire body.

Dolphinfish use colors to express emotions and their physical condition such as calm/relaxed, fear, excitement, ready to spawn or even physical injury. They

also use color patterns to aid in avoiding becoming a meal for a larger predator. Color changes appear to be under both conscious and subconscious control, but the exact role of each control is unknown.

A new report prepared as part of the Dolphin Study, “Expressive Colors,” examines the use of color patterns by dolphinfish. With the help of several anglers who provided photos that captured some interesting color phases, the report examines the roles that each color phase may play in the life of this great game fish. The report “Expressive Colors” has been placed on the “Study Results” page of the project’s Web site, www.dolphintagging.com. You can visit the Web site to read or download the article.

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Intriguing Recaptures

Reported tagged-fish recoveries have reached an all-time high in 2006. With two additional reports since the last newsletter, a total of 47 fish have been reported recovered in 2006, with 43 of these having been marked and released in 2006.

Is it a micro-migration?

The first new tag recovery involved a fish tagged July 3, 2006 by Kevin Alexander aboard his charter boat, *Capt. Hurricane*, during a fishing trip off Marathon, Florida. Dick Russell of Dania Beach, Florida, recovered the tagged fish on November 6 while fishing off Port Everglades, Florida. This is 145 miles NNE of where the fish had been released. Mr. Russell reported the fish as being 35 inches in fork length with a weight of 16 pounds. This would indicate that the fish had grown 15 inches in length and 12 to 13 pounds during its 126 days of liberty.

While the growth is impressive, it is the timing and movement that is most interesting. This fish had been marked and released four months earlier during summer. Now, in the fall, it is recovered a mere 145 miles to the north of the original release site. Where had this fish traveled during this liberty period?

Other dolphin tagged off south Florida in 2006 were at liberty for less time but traveled to such distant areas as North Carolina and New York, distances of 500 to more than 1,000 miles. Over the five years of the study, one fact that has stood out is that dolphin travel extensively. So it is unlikely that this fish remained in the narrow corridor between south Florida and the Bahamas Bank for such an extended period.

If the fish did not remain in the Florida Straits, where would it have gone for four months that allowed it to be back in the same area so quickly? The answer might be a mini-type migration that took it on a meandering course around and through the Bahamas Islands chain. Such a micro-migration theory would also help explain two similar recoveries in 2006 where dolphin were recaptured off southern Florida after two and three months of liberty within 110 miles of their release site.

A perplexing recovery

The second recapture sent in this period involved a fish recovered earlier in the summer. Ray Pinder of Brooksville, Florida, recovered a tagged dolphin during a fishing trip off Marathon, Florida, on July 13th. The boat he was on had caught three or four small dolphin, 16 to 24 inches in length, and one large bull. While he could not recall which small dolphin had the tag, he was certain that it did not come from the large fish.

As it turned out, the fish had been tagged by Chester Kalb of Key West during a fishing trip off Marathon on June 13, 2005. Kalb, who has tagged more than 500 dolphin for this study, measured the fish at 20 inches

fork length. For a common dolphin this would be a three to four month-old fish.

Subsequently the statistics for the fish show the fish being at liberty for 395 days (13 months), recaptured 27 miles from its release site and exhibiting little or no growth during the period. Anybody with just a little knowledge about dolphin would question the information provided in this recovery. How could a fish known to grow to 40 pounds in 12 months exhibit little growth after 13 months?

Mr. Kalb offered up a possible explanation when he said that he thought one of the fish tagged that day was a pompano dolphin but he had failed to note it in his report. The pompano dolphin is a small cousin to the common dolphin, seldom reaching nine pounds in size. Very little is known about its growth or life span. But because it is reported as seldom exceeding 24 inches in length, it could be possible that it was a pompano and that over a 13 month period it would grow only two or three inches, whereas the common dolphin should grow 20 to 30 inches in the same period.

If in fact it was a pompano (which we will never know since no photographs were taken of the fish), it is the second instance of one being tagged and recovered in US waters. However, the recovery is the longest time at liberty for a dolphin tagged in this research program.

For a complete listing of recoveries of 2006 fish go to the "Study Results" page on www.dolphintagging.com.

2006 Tagging Slowing Down

Dolphin Study Tagging Progress, December 1, 2006.

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22° N	28° N	71
2	FL Straits	23° N	25° N	729
3	South Florida	25° N	27° N	342
4	Central Florida	27° N	30° N	70
5	North FL & GA	30° N	32° N	11
6	South Carolina	32° N	33° N	183
7	N. SC - S. NC	33° N	35° N	34
8	Northern NC	35° N	36.5° N	10
9	Virginia	36.5° N	38° N	16
10	N. Mid-Atlantic	38° N		17
11	Gulf of Mexico	24° N	30.2° N	16

Fall tagging activity in 2006 has been better than most years with 57 dolphin being marked during October and November. More than two-thirds of these fish were tagged off Florida. While fall tagging off Florida may be better than in most years, it is still far below the 300 fish needed to really begin to identify a fall movement pattern.

2006 has turned into a banner year for the Dolphin Research program. Just one fish shy of 1,500 dolphin

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being tagged this year, the 2006 tagging effort ranks as second highest in the five years of the research program. More than 200 anglers fishing aboard 108 different fishing vessels supported the research by tagging fish for this study. For the first time during this study, a commercial longline vessel joined in tagging and releasing dolphin to aid the research.

During the five years of this scientific study, 6,100 dolphin have been tagged by 872 anglers fishing aboard 351 different fishing vessels. The involvement of such a large number of offshore fishermen is a strong testimonial to the popularity and concern fishermen have for this species.

Thanks to all of the fishermen who have made this study a big success.

Year-end Incentive Awards



Through the generosity of Shimano Fishing Tackle and the Don Coffey Company and Star Rods and the Sea Striker Fishing Tackle Company, the number of year-end awards has been increased to four. In addition to giving a Shimano TLD50 2 speed on a standup Star Rod for the most dolphin tagged by a private boat, charter boat and individual angler, a rod and reel will also be given to the boat tagging the most dolphin outside Florida.

This is being done for two reasons. First, that Florida anglers enjoy a distinct advantage with a longer season of high abundance and a much shorter ride to the fishing grounds than most other areas on the east and Gulf coasts. Secondly, it is imperative that large numbers of dolphin are tagged in the Mid-Atlantic Bight, Gulf of Mexico and Caribbean Sea so that information about the movement behavior unique to dolphin in those areas can be gathered.

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*Wishing you a Merry Christmas
and Happy Hanukkah!*

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