

# SC Dolphin Tagging Study

December 2004

## Dolphin Study Going High-Tech in 2005

The S.C. Department of Natural Resources' Dolphin Tagging Study will step into a new dimension of high-tech monitoring this summer. This phase will employ archival satellite pop-off tags similar to those used on billfish and bluefin tuna.

The high-tech tags to be utilized are the PTT-100 HR Archival Satellite pop-off tags manufactured by Microwave Telemetry. They provide one of the first opportunities to study the dolphin's vertical movements in the water column and to document their water temperature preference. These miniature computers record water pressure, temperature, and time of day every few minutes, generating a detailed portrait of the dolphin's use of the water column and the temperature selection throughout each day for a 30-day period.

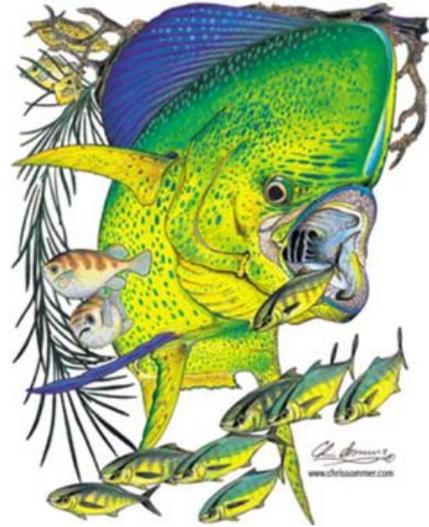
The most unique advantage the satellite tags offer is that the dolphin do not have to be recovered in order for us to learn information. The tags are designed to release, or pop off from the fish automatically. At a preprogrammed time, the microcomputers will release from the fish, float to the surface and download information via satellite back to the tag manufacturer. The data is then forwarded to a computer at the S.C. Department of Natural Resources.

The cost of the tags at over \$4,000 each limited the project to purchasing only seven tags. Additionally, the large size of the tag requires that only dolphin of 40 pounds or more be tagged. Such a large size requirement limits the study to using these tags on only the largest of the species, which may not be representative of the entire population.



The satellite pop-off tag weighs about two ounces, and features a main body that is just over 13 inches in length and 0.8 to 1.6 inches in diameter. It carries an eight-inch nylon coated stainless steel antenna.

This effort to use the satellite tags this summer will likely be the first attempt in the U.S. to document the vertical movement behavior and water temperature preference of dolphin. Fishermen have frequently reported catching dolphin



on downriggers and planners. This study will hopefully gather information on how deep dolphin dive, how much time they spend in deeper water, and what temperatures they prefer.

Current plans in this pilot study call for two satellite tags to be deployed in the Florida Strait in May of 2005. Three tags are allotted for use off the South Carolina coast in June and July. The two remaining tags are designated for use in the Mid-Atlantic Bight in August. The project will be seeking assistance from fishermen in each area who are knowledgeable in catching big dolphin and who are willing to tag and release a trophy bull for science.

## Fishermen Needed

Entering its fourth year in 2005, the dolphin study is in serious 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. Anglers often voice their concerns that no research is being done on popular gamefish in their area. Well here is the opportunity! Anglers who want to know more about dolphin in their area should sign up to participating in this project. The more dolphin tagged in an area, the greater the opportunity there will be 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.

**Fishermen are reminded that tag reporting cards must be received at project headquarters by January 17, 2005 to count toward the 2004 rod and reel competition.**

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Page 2

## Record Number of Dolphin Tagged in 2004

With 1,433 dolphin reported tagged by recreational fishermen so far in 2004, the SC Dolphin Tagging Study has reached a new program high in the number of dolphin tagged and released for science in one year. This new record was accomplished by 307 anglers fishing on 117 different boats who tagged dolphin to support this research effort.

### Tagging Progress by Zone as of November 30, 2004.

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	E. Bahamas	22N	28N	94
2	FL Straits	23N	25N	501
3	South Florida	25N	27N	137
4	Central Florida	27N	30N	49
5	North FL & GA	30N	32N	76
6	Southern SC	32N	33N	528
7	N. SC - S. NC	33N	35N	19
8	Northern NC	35N	36.5N	10
9	Virginia	36.5N	38N	3
10	N. Mid-Atlantic	38N		5
11	Gulf of Mexico			11

Throughout the four years of the study, 506 fishermen and 233 boats have participated in this cooperative program, collectively tagging over 3,000 dolphin. As the table below shows, fishermen in the Florida Keys have been the biggest support to the study, followed closely by anglers in South Carolina. Anglers in the Bahamas, central Florida, north Florida and southern North Carolina have provided moderate levels of support. The study has not received near the level of support in the Mid-Atlantic Bight that is needed to learn about the dolphin's fall migration routes. Since the study expanded in the summer of 2004 to include the Gulf of Mexico, it will take a major effort to enlist enough taggers to begin to answer movement questions on the dolphin stocks in the Gulf during 2005.

### Tagging by Zone 2002 through 2004 Combined.

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22N	28N	103
2	FL Straits	23N	25N	1,125
3	South Florida	25N	27N	345
4	Central Florida	27N	30N	179
5	North FL & GA	30N	32N	153
6	Southern SC	32N	33N	964
7	N. SC - S. NC	33N	35N	97
8	Northern NC	35N	36.5N	10
9	Virginia	36.5N	38N	5
10	N. Mid-Atlantic	38N		27
11	Gulf of Mexico			11

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The South Carolina Department of Natural Resources extends sincere gratitude to **Shimano Corporation** and the **Don Coffee Company** of Olafee, Kansas and to **Sea Striker Corporation** and **Star Rods** of Morehead City, North Carolina for their generous support of the SC Dolphin Tagging Study. These companies have shown their strong commitment to the conservation of our valuable fisheries resources through the generous donation of the annual incentive awards.

At the end of the year, three fishermen who participate in the SC Dolphin Tagging Study will receive a Shimano Tiagra 50W on a top quality Star Standup rod for their contributions to the study. These outfits will be given to the private boat owner, charter boat owner and individual angler tagging the most dolphin during 2004.

The SC Dolphin Tagging Study was designed to utilize private sports fishermen as the backbone of the project. Fishery managers recognize that anglers along the U.S. east coast are concerned about the future health of the dolphin stocks, and would be interested in getting involved. The project was designed to capitalize on this army of volunteers to carry out the tagging of dolphin over 1,300 miles of U.S. coastline. A project of such magnitude would have been cost-prohibitive without the willingness of volunteers and their concern for our valuable resources.

### For more information on the project, visit

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

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