

Cooperative Science Services, LLC Dolphinfish Research Program

Made possible by a grant from Marine Ventures Foundation

May 2008

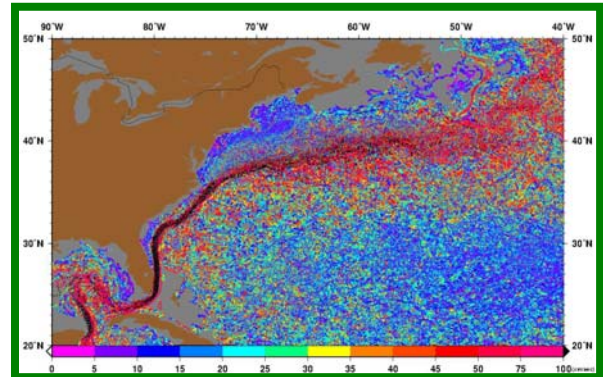


Image Courtesy of University of Miami, RSMAS.

The Gulf Stream System is one of the major Atlantic Ocean currents traversing thousands of miles from the Lesser Antilles in the Caribbean Sea to the middle of the northern Atlantic Ocean.

Do You Fish the Gulf Stream Current?

I have to admit that I have never fished in the Gulf Stream Current.

If you are fishing the blue offshore waters from Key West, Florida, to Cape Hatteras, North Carolina, you are not fishing the actual Gulf Stream Current. According to a University of Miami's Rosenstiel School of Marine and Atmospheric Science (RSMAS) Web site, you are fishing in the Florida Current.

When I started the study of dolphinfish I really did not plan for a sub-study of oceanography, namely ocean currents. However, it quickly became apparent that you can not study a highly migratory oceanic species without a study of their environment as well. You can say that I am in my "Ocean Currents 101" class. The first thing you learn is that these energy systems are very dynamic and are constantly changing.

Most people believe that the Gulf Stream Current circles the entire North Atlantic Ocean. It does not. According to researchers with Cooperative Institute of Marine and Atmospheric Studies at RSMAS, the actual Gulf Stream Current begins east of Cape Hatteras and extends eastward into the Atlantic ending in the area east of 50°W longitude around 40°N latitude. However, the term "Gulf Stream" is generally applied to a system of currents.

The Gulf Stream System begins in the southeastern islands of the Caribbean Sea with the Caribbean Current fed by the westward-flowing North Equatorial Current that crosses the Atlantic. The Caribbean Current runs from the southeastern islands west and north past the Yucatan Peninsula. There it forms the basis of the Loop Current in the Gulf of Mexico. The Loop Current

exits the Gulf of Mexico by way of the Florida Strait. At a point southwest of Key West, Florida, this current becomes known as the Florida Current. It is the Florida Current that flows northward along the South Atlantic Bight (Florida east coast, Georgia, South Carolina and North Carolina) up to Cape Hatteras. This is the ocean current that we have been fishing all these years as the Gulf Stream.

At the end of the southeastern finger of the actual GulfStream Current is the origin of the Azores Current, which flows southeasterly past the Azores Islands toward the Canary Islands. The ending of the Azores Current forms

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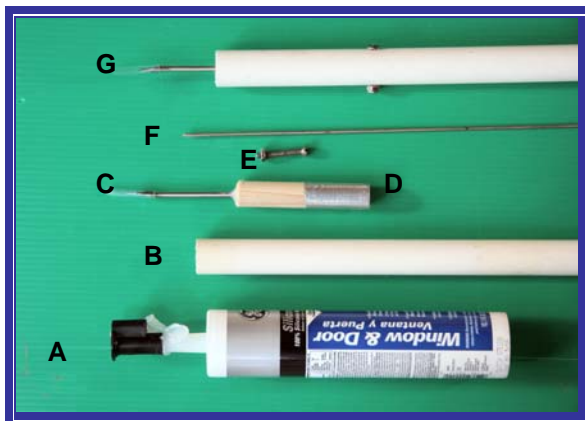
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the origin of the Canary Current, which flows south towards the equator. There it ends at the North Equatorial Current that runs west across the Atlantic to the southern Caribbean islands. If dolphinfish are going to make circum-Atlantic migrations, this could be the route that they may use.

To learn more about the major ocean surface currents visit the University of Miami's Web site, <http://oceancurrents.rsmas.miami.edu/index.html>.



Materials needed to construct a tag stick (G) for in-water tagging of larger dolphin.

Tagging Gaffer Dolphin

Many anglers who are currently tagging their small dolphin for this research program would occasionally also like to be able to tag big dolphin safely. Fishermen who regularly fish offshore occasionally encounter days when their fish box is not large enough for all of the big dolphin they're catching, or they are tired of cleaning fish and do not want to bring any to the dock. At these times participating taggers would like to have a little longer tag applicator to tag the fish in the water. Any angler who has fished offshore for any length of time has learned that a 36-inch dolphin can slap the fool out of you when trying to handle it.

A simple solution allows you to instantly convert a handheld applicator into one for use on fish beside the boat, easily returning to use as a handheld. It only requires a piece of PVC pipe, a plastic end cap, one bolt, a short length of duct tape and just a dab of silicone. A plus is that it will not rust or corrode in salt water.

Materials Needed:

- Power drill with 1/8th bit (not shown)
- 1 – small tube of silicone caulk (A)
- 1 – 3 to 4 ft PVC schedule 40 pipe 3/4" ID. (B)
- 1 – plastic end cap to fit 3/4 in. ID. pipe (not shown)
- 1 – 1/8th in. diam. x 1 1/4 in. stainless steel bolt with nut(E)
- 1 – 3 in. length duct tape (D)
- 1 – 7 in. long wire or piece of plastic 1/16th in. diam. (F)

Construction is simple and quick.

Step 1. Drill a 1/8th in. hole through the center of the pipe 4 1/2 inches from one end. Insert the bolt and secure it with the nut. A dab of silicone caulk on the bolt threads will keep the nut from backing loose in the future. Place a small amount of silicone on the inside wall of the end cap for an adhesive and slip it onto the other end of the pipe.

Step 2. Apply a moderate coating of silicone to the wire or plastic rod leaving 1 in. clean to hold it by. Slowly insert the wire into the applicator needle where the tag goes. Spin the wire inside the needle to ensure that you get a thin coating on the inside of the needle. This coating will provide a little friction to the tag to keep it from falling out when the applicator is pointed downward during tagging. Caution: too much silicone in the needle will prevent the tag from being fully inserted into the needle.

Step 3. Wrap a single layer of duct tape (D) around the top of the wooden handle opposite the needle (C). The tape should provide enough additional friction to hold the applicator up inside the pipe while tagging the fish. If the applicator is still loose in the pipe with one layer of tape, you may need to add a second layer of tape.

Step 4. Slide the applicator into the pipe until it rests firmly against the bolt. The needle should extend 2 1/2 in. beyond the pipe. You now have an in-water tagging stick.

Tagging fish in the water.

To properly tag dolphin in the water beside the boat requires patience and the philosophy that if the fish gets off before being tagged, it is no big deal. As soon as the fish comes to the boat, you should determine where the fish is hooked. If it is hooked in an eye, the gills or stomach, it should not be tagged. The absolute worst thing is to jab wildly at a thrashing fish. This usually results in a tag placement that is fatal to the fish. The boat should continue idling ahead to force the fish to swim beside the boat with its head toward the bow. The person doing the tagging should position himself along the gunwale between the person holding the leader and the stern. This provides the most open access to the fish. Wait for the fish to calm down, so it swims on its side in a stable position. Quickly position the applicator so that the needle is pointing to the place where you want to implant the tag, holding the needle point about 2 to 3 inches above the fish. Then use a short, quick jab to implant the tag. The tag should be inserted in the dorsal (back) muscle mid-way between the spine and the base of the dorsal fin, about 1/3rd the fish's body length back behind the head.

**Donations to the Dolphin Study are
Fully Tax-Deductible
Make checks out to:
HH Reef Foundation/Dolphin Study**

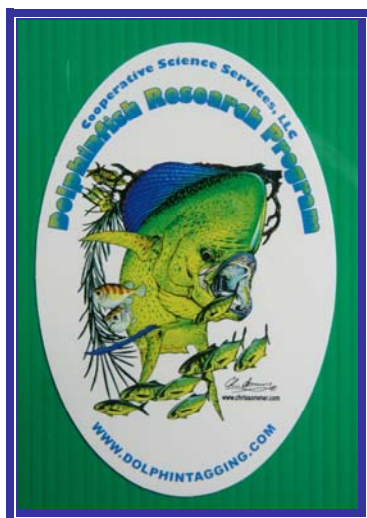
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Dolphin Tagging Progress by Zones, April 30, 2008

Zone	Area	Southern Limit	Northern Limit	Number Tagged
1	Bahamas	22N	28N	38
2	FL Straits	23N	25N	17
3	South Florida	25N	27N	127
4	Central Florida	27N	30N	19
5	North FL & GA	30N	32N	1
6	Southern SC	32N	33N	
7	N. SC - S. NC	33N	35N	
8	Northern NC	35N	36.5N	3
9	Virginia	36.5N	38N	
10	N. Mid-Atlantic	38N		
11	Gulf of Mexico			
	Total			205



Show Your Support

Now fishermen, conservationists, and businesses can show their support for the Dolphinfish Research Program by displaying the study's official decal. The new decal is a 6-inch-high by 4-inch-wide oval that bears the program's signature artwork by Chris Sommer. Decals are free and available to everyone who participates in the study. To receive your decal send a self-addressed, stamped envelope to the Dolphinfish Research Program Decal at 961 Anchor Rd., Charleston, SC 29412, and a decal will be sent to you.

Placing the decal on your boat or vehicle identifies you as a conservationist who is taking action to protect our fisheries.

Most Recent 2008 Financial Support

Greenville Salt Water Sport Fishing Club,
Greenville, SC

Lacy and Judy Henry, Atlantic Beach, NC

Tim Heiser, Plantation, FL

Jim Rose, Jr., Shelby, NC

Robert Waite, Delray Beach, FL

Your Financial Support Is Needed

2008 will be the last year funding will be received from the South Carolina Sea Grant Consortium for the use of satellite tags to study dolphinfish behavior and movements. These grants have been the primary financial source making the use of these instruments possible. These high-tech marvels have already changed the way we think about dolphinfish, but if these tools are to continue being used to reveal more unknown facts about this magnificent fish, a large increase in private donations will be required this year.

Donations to the Dolphin Tagging Study are fully tax-deductible, thanks to the help of the Hilton Head Reef Foundation. This 501 (c) 3 non-profit organization has agreed to receive donations in support of the Dolphinfish Research Program and then pass them on to the project when needed. Contributions should be made out to the Hilton Head Reef Foundation (HHR Foundation/Dolphin Study) and sent to the address below.

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For More Information, Contact

Don Hammond

Cooperative Science Services, LLC

961 Anchor Rd., Charleston, SC 29412-4902

Telephone – FAX (843) 795-7524

Email CSSLLC@bellsouth.net

Web site www.dolphintagging.com

