

ADOPT-A-BILLFISH

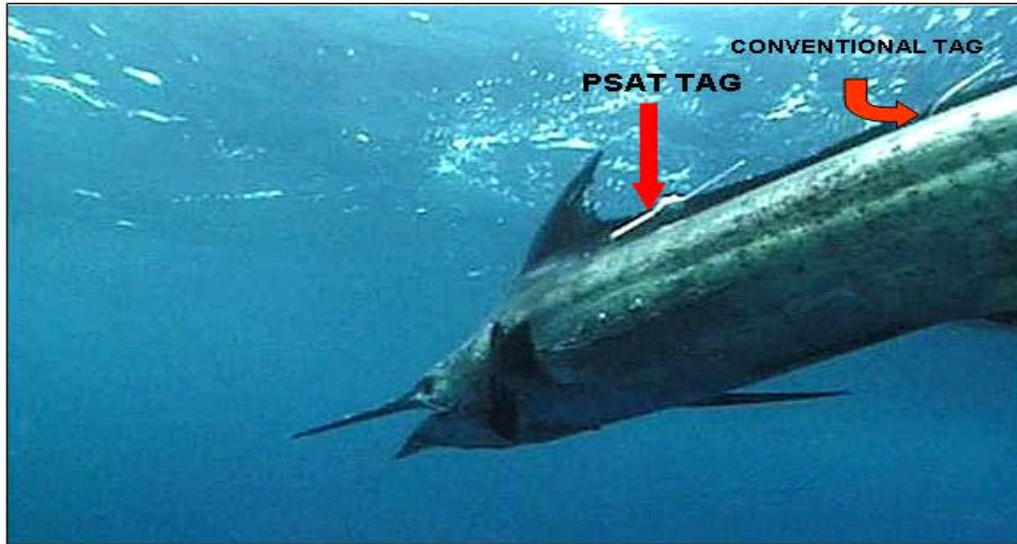


Photo © Diana Udel, Broadcast Quality Inc.



ADOPT-A-BILLFISH

You just tagged and released a marlin, sailfish, or swordfish. Ever wonder where that billfish will go, what route it took to get there, and what its ultimate fate will be? So do the scientists who are trying to determine the condition of, and connections among, billfish stocks and fisheries around the globe. Historically, 50 - 80% of what is known about our fisheries for billfish comes from traditional tagging data, but so much more is unknown. Because traditional tagging methods require the fish to be recaptured, the chance of ever hearing again about a given tagged billfish is about one in a hundred. Thanks to recent developments in electronic fish tags, that's changing.

A NEW TOOL

The technology that's making a big splash in billfish research is the "pop-up" satellite archival tag (PSAT). These tags are actually 5"-long, computer-controlled sensors that can be programmed to measure and store water temperature, depth and light-based location data every minute. After a pre-determined time period (researchers can program the tag to sample from less than a day to over a year), the tags detach from the fish and float to the surface where they transmit their stored information to the Argos data collection system onboard NOAA's polar-orbiting weather satellites (Figure 1). The collected data are then provided to the researcher via email. The beauty of this technology is that it provides intimate details of the life of individual billfish in their natural environment **without requiring researchers or anglers to physically retrieve the tags from the fish or from the ocean.** This new tool holds great promise for ultimately providing more specific types of data that will assist in management, conservation, and rebuilding of billfish resources around the globe.

WHY HELP?

The concept behind the **Adopt-A-Billfish** program is to enlist the help of billfish anglers who are not only interested in learning more about the billfish that they pursue, but who also want to play an important role in ensuring their stocks are healthy for future generations. The world's billfish populations generally are not in good shape, especially in the Atlantic Ocean. Atlantic sailfish, blue marlin and white marlin stocks are currently a fraction of their historical sizes and are continuing to decline. In fact, the International Commission for the Conservation of Atlantic Tunas (ICCAT) lists Atlantic blue and white marlin as "**over-fished**". In addition, Atlantic swordfish had previously been over-fished but is now showing signs of rebuilding. This problem is likely not limited to the Atlantic Ocean – information on billfish movement in the Pacific and Indian Oceans are particularly scarce and its important to obtain data from these ocean basins as well.

The major threats to the world's marlin, sailfish and swordfish stocks stem from the fact that these species are either targeted, or unintentionally caught as "bycatch" by

the multi-national offshore longline fisheries that supply tuna and swordfish for the global market. With the kind of data that pop-up satellite tags provide, we can let the fish themselves point to ways of reducing unnecessary lethal interactions with man. With pop-up tag data, we can form the basis for devising ways to reduce the “overlap” (in time and in space) between the commercial fisheries and the habitats that billfish have relied on to spawn, grow to maturity and feed for hundreds of thousands of years. Scientists are just now starting to appreciate the different applications of PSAT technology to address billfish research topics, including assessing the ultimate fate of animals released after being captured using various fishing methods, hook-types, and baits.

HOW TO HELP

If you want to be a part of the solution, you can help in one of two ways: **(1) adopt a sailfish, marlin, or swordfish by picking up the cost of one or more pop-up satellite tags (\$4,000 US each) for scientists to deploy; and/or (2) donate your offshore fishing vessel for deployment of these tags.** These donations will go directly to the purchase, testing, programming and deployment of satellite tags, when and where information is needed most. Throughout the world, private foundations, recreational fishing organizations, and individual anglers are increasingly becoming aware of the critical need for detailed data on the biology of these valuable, unique, yet vulnerable fish stocks.

RESEARCH PARTNERS

The **Adopt-A-Billfish** PSAT tagging program is being coordinated by a team of experienced scientists who work with the National Marine Fisheries Service’s Southeast and Southwest Fisheries Science Centers (Miami, FL., La Jolla, CA), University of Miami’s Center for Sustainable Fisheries, The Billfish Foundation, the Bermuda Department of Environmental Protection, and the International Game Fish Association. Tagging operations are currently underway throughout the Atlantic Ocean and Caribbean Sea, including the waters off South Florida, the Bahamas and Bermuda. In the Pacific, we are relying on a network of collaborators, especially those affiliated with the Presidential Challenge tournament series off the coast of Central America.

TAX STATUS OF ALL DONATIONS

All donations involving sponsorship of tags will be handled by The Billfish Foundation and the Presidential Challenge through to the University of Miami’s Center for Sustainable Fisheries. All donors contributing to **Adopt-A-Billfish** will be provided a letter documenting their tax deductible gift, from either The Billfish Foundation or University of Miami’s Center for Sustainable Fisheries. In addition, participants in **Adopt-A-Billfish** will also receive timely updates of research results.

|

FOR MORE INFORMATION

For more detailed information on how you can participate in **Adopt-A-Billfish**, contact the Southeast Fisheries Science Center's Cooperative Tagging Center (800 437-3936).

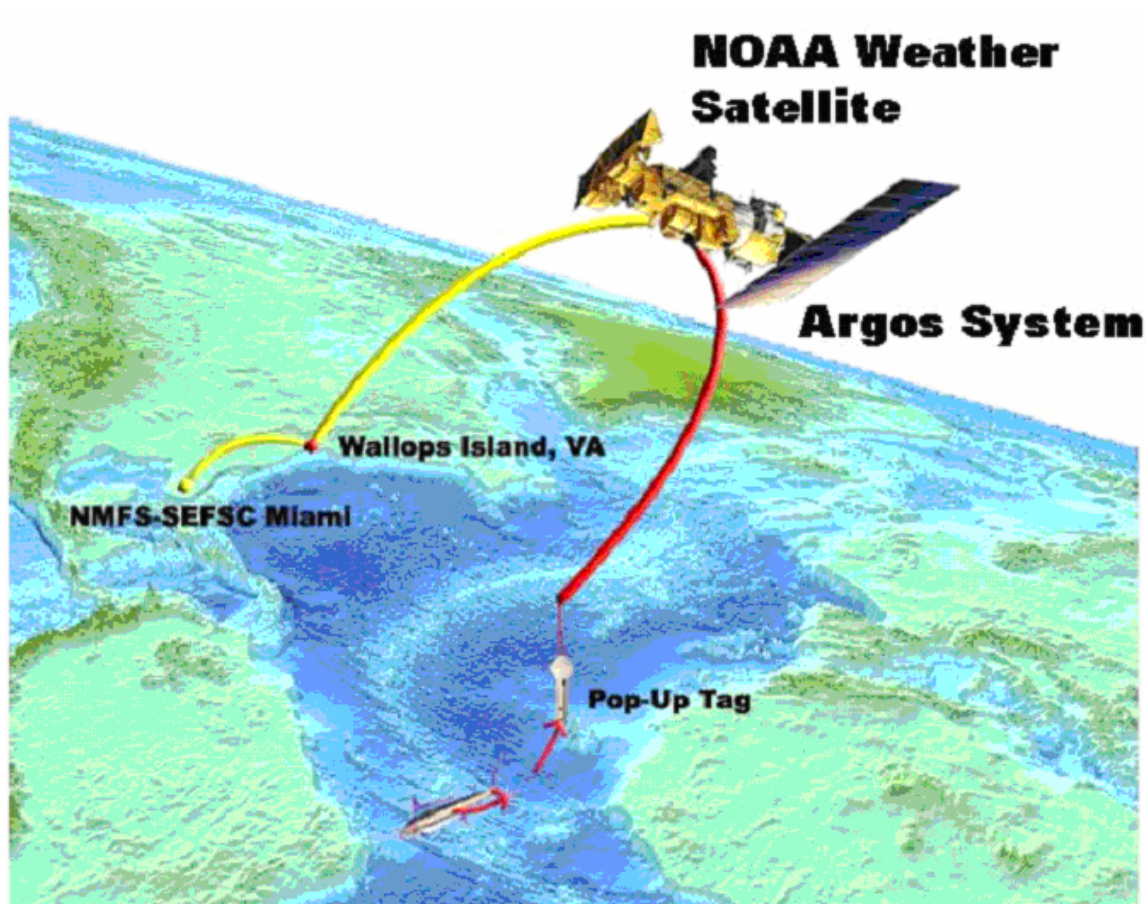


Figure 1. One of the unique benefits of using pop-up satellite archival tags is that this tool does not require recovering the billfish or the tag after it is released to obtain the data. Instead, these data are transmitted through the Argos data collection system onboard NOAA's polar-orbiting weather satellites and emailed to the researchers conducting the study.