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Recovering a Fish Tag – Worth the Effort

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Recently we have received several inquiries from customers hoping to recover their fish tags. Finding a still-transmitting fish tag is feasible with some specialized equipment – a simple receiver and a small directional Yagi antenna. Since our friends at the Cape Eleuthera Institute (CEI) have had such great success recovering tags, we asked them to write a short article about the trials and tribulations of recovering their tags.

Photo by Harry Parker

Edd Brooks and "Flat Stanley" find an X-Tag on Rum Cay.

Researchers at CEI and our collaborators studying pelagic, deepwater and coastal species of sharks in The Bahamas have deployed more than 50 X-Tags over the last year and a half. The Bahamas is situated on a large calcium carbonate bank and consists of over 700 islands with innumerable sand banks, mangrove creeks, channels and cays, creating one of the most diverse mosaic habitats anywhere in the Greater Caribbean region. Using pop-off satellite telemetry in this jigsaw of habitats presents a number of challenges and opportunities: challenges in that tags often wash up onto land prior to the complete transmission of the dataset via the Argos system, and opportunities in that these tags can be recovered, returned to MTI and the entire archived high-resolution dataset retrieved. Needless to say, we have put considerable effort into tag recovery all over The Bahamas, leading to some great adventures!

Photo by Harry Parker

Yagi antenna used to locate direction of transmitting tag.

Cat Island: Several tags deployed on oceanic whitetip sharks have popped-off very close to where they were originally deployed. Access roads to the beaches of Cat Island, home to less than 2000 people, are few and far between. This means a lot of beach walking on recovery missions – up to 5 km just to get close to the tag! On the most recent recovery trip, I walked two kilometers through spider infested bush before finding the tag buried several inches beneath sand and sargassum seaweed!

Rum Cay: Some islands in The Bahamas don't even have regular commercial flights. Edd Brooks from CEI managed to hitchhike on a private plane south to Rum Cay and narrowed down the tag's location from the plane by using the Yagi antenna and reciever during approach! Rum Cay is the only place in The Bahamas where you can skydive, and the team at Sumner Point Marina had just finished filming an episode of the Japanese equivalent of 'Jackass'! The skydive cameraman, Harry Parker, and his assistant 'Flat Stanley' helped out with the search, and after a quad bike and boat ride the X-Tag was found on an uninhabited beach inaccessible by land, on the north side of the island.

Photo by Edd Brooks

Rubble Beach of Long Island – not ideal for building sand castles.

Long Island: So sand and sargassum might not sound too tough, but what about a shoreline composed of thousands of lumps of coral?! An oceanic whitetip tag found its way a few feet deep into such a shoreline on Long Island last year. After moving about a ton of football (soccer) sized lumps of coral rubble the tag was eventually located, battered after its brush with the rocks, but otherwise intact.

Eleuthera: The most recent find was only a few miles away from the Cape Eleuthera Institute on the Atlantic coast of Eleuthera, but still proved to be the most difficult recovery yet. After days of frustrating searching and miles of beach walking, the tag was located at the back of a limestone fissure in a rock under a boulder the size of a MINI Cooper. The team returned the next day armed with shovels, pickaxes and crowbars, and after several hours of digging the tag was recovered by a long armed member of the team who was under the boulder up to his waist.

Photo by Aaron Shultz

Spelunking for pop-up tags.

Not all recoveries are as onerous, but they do require effort and financial expenditure, however, the benefits outweigh the costs. To date CEI and their collaborators have recovered 3 out of 5 tags deployed on Caribbean reef sharks, 6 out of 42 tags deployed on oceanic whitetip sharks, 1 out of 3 deployed on bluntnose sixgill sharks and 3 out of 14 deployed on gulper sharks... That's almost two million data points recovered from those tags!