

The Billfish Foundation

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Safe Handling Practices

Can you remember the first billfish you ever caught? For those of us who have been lucky enough to have caught a marlin, sailfish, or swordfish, the memory of our first billfish is perhaps one of the most coveted experiences for any angler. For most, it's a memory full of the smell of diesel, spray of the water, and sore arms pumping as the captain backs down on a lit up fish, gray-hounding and fighting with all its might. Although it's a memory that will be with us forever, many anglers choose to get a quick picture with their first billfish. However, pulling billfish out of the water for a picture may not only be illegal, it may be killing your catch.

Unfortunately, more and more photos are coming up on websites, social media, and even in fishing magazines of people holding up a sailfish or small marlin, stretched across their laps or covering boards. What most anglers do not know though is that in US, Atlantic waters it is actually illegal to take a highly migratory species (HMS) out of the water unless a person intends to harvest the fish.

CFR 635.21 ATLANTIC HIGHLY MIGRATORY SPECIES. Subpart C - Management Measures

Gear operation and deployment restrictions

(a) All Atlantic HMS fishing gears. (1) An Atlantic HMS harvested from its management unit that is not retained must be released in a manner that will ensure maximum probability of survival, but without removing the fish from the water.

(2) If a billfish is caught by a hook, the fish must be released by cutting the line near the hook or by using a dehooking device, in either case without removing the fish from the water.

Removing any fish from the water puts additional stress and damage to the fish on top of the physiological stress already caused from fighting the fish. Any contact the fish may have with a person, the gunnel, or covering board removes the protective slime layer of the fish which protects it from parasites and infections. Just like a person who is down after a hectic or traumatic experience, billfish are more susceptible to infections or diseases when stressed. Injuries also can occur to because the skeleton of a billfish is designed for the buoyant conditions of the ocean. Removing the fish from the water, even onto the gunnel, causes the skeleton and internal organs to come under the full strain of gravity causing potential damage.

While much research has been conducted on the effects of using circle hooks on the post release mortality of billfish, there is little analyzing the effects of fight times and other sources of stress from recreational fishing such as handling (i.e. whether or not the fish was removed from the water). In studies conducted by students at the Virginia Institute of Marine Science (VIMS) 22 pop-up satellite archival tags (PSATs) were deployed in white marlin caught using circle hooks. As part of the study, blood samples were also taken from the fish which required removing the

marlin from the water. Data from the PSATs indicated that 21% of the white marlin died immediately after release. In a separate, similar study also conducted by VIMS, 30 white marlin were tagged *without* being removed from the water resulted in only 2% post release mortality. It was hypothesized that the significantly different mortality rates could be due the additional stress put on the white marlin caused when the fish was removed from the water. It's also interesting to note that the white marlin that did not survive did not have the longest fight times. While a person might think that a longer time fight time and exerting more energy would cause more stress on the fish it turns out that it is the. Researchers hypothesize that a short fight time before being removed from the water for blood samples may be equivalent to a person sprinting for as long and hard as possible then being forced to hold their breath!

To follow up on these assumptions, the same researchers conducted another study to specifically test the affects of removing white marlin from the water. This past September the same researcher (Dr. John Graves, Virginia Institute of Marine Science) deployed 18 satellite tags on white marlin caught off of Virginia. Before release, the fish were brought on board for air-exposure times of one, three, and fish minutes. To little surprise the results showed that post release mortality increases with the amount of time the fish is exposed to air. One of the six fish exposed to air to for one minute died, two of five white marlin exposed to air for three minutes died, and more than half (four of seven) white marlin exposed to air for five minutes died after release.

For anglers, the welfare of billfish should be the first priority. It can start by first ensuring that non-offset, circle hooks are used with all natural baits, good angling, hook removal, and using tackle to match the size of your query. Taking the time to rig baits, spectacular boat handling, and world-class angling is all null though if the fish is pulled from the water. If an angler does elect to take a picture with his or her fish TBF recommends that safe handling practices are always followed. It's very important that the billfish is not too 'green' or lively before a crew member attempts to subdue the fish alongside the gunnel. If onboard, use of a 'snooter' or similar handling device is recommended not just for the safety of the fish, but crew members as well. Keeping the boat in gear and the fish's lower jaw in the water is necessary to ensure oxygenated water is passing over the fish's gills. All the angler has to do is lean over the gunnel while a photographer snaps some shots from the bridge, the deck, or even better, from another friend's boat.

Taking the time to ensure a safe release is the mark of a real sportsman, not just the number of flags flying from outriggers, or pictures on a wall. Pursuing billfish or any query should come from a passion for the animals and sport. If the only reason you set out to go billfishing is so you can get a 'hero shot' then you are in the wrong sport. The next time someone wants to get a pull a billfish out of the water for a picture, ask that person if the picture is worth the life of the fish. Many would argue that it is not just distasteful, but irresponsible. A picture may be worth a thousand words, but it's not worth killing a billfish.