



species specifics

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A wahoo's toothy grin prior to being tagged and released with an electronic archival device.

WAHOO (*ACANTHOCYBIUM SOLANDRI*)

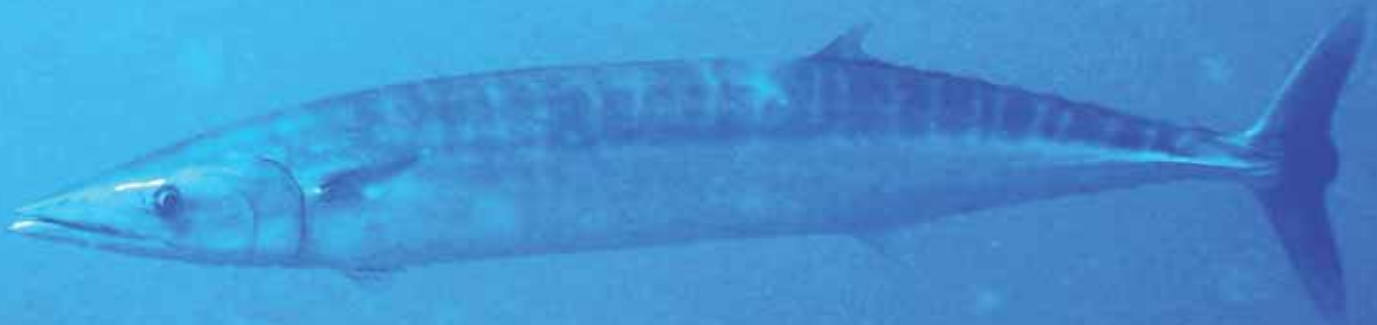


Photo by Tom Bass

Just the mention of *wahoo* inspires tremendous excitement, even among anglers who have never had the opportunity to witness the unique coloration or incredible speeds displayed by these pelagic predators. From those fortunate

enough to have experienced wahoo fishing, you will often hear accounts of drag-burning runs, anchor lines being sliced in half, and, of course, a few stories related to their razor-sharp teeth.

The wahoo is a member of the tuna and mackerel family (*Scombridae*) with a circum-global distribution throughout the tropical and subtropical ocean basins. There is only one recognized species of wahoo worldwide, although members of the Spanish and king mackerels (*Scomberomorus*) share many of the wahoo characteristics.

Typically found in water temperatures above 74 degrees Fahrenheit, in the US wahoo are common to the Gulf of Mexico, along the Atlantic coast following the Gulf Stream, and in the Pacific they can be found around the Hawaiian

Archipelago. Although wahoo are rarely encountered off California, they are a common target of the San Diego-based long-range fleet that fishes the productive waters of Baja California and mainland Mexico.

Fisheries

Wahoo are a very important target species for recreational, commercial, and artisanal fisheries of coastal and island nations around the world, and are also a valuable bycatch species for purse seine fisheries, particularly when sets are made around floating objects or near offshore banks. Hook-and-line fisheries target wahoo, using several methods (i.e., trolling, live-bait), with strikes typically enticed by fast-moving prey. Contributing to their difficulty to land,

wahoo have very strong jaws lined with razor-sharp teeth capable of slicing prey in half without hesitation.

Several characteristics of the wahoo make it an incredible ambush predator. Its long, slender body has relatively small pectoral fins that compress into grooves along the body. The wahoo is powered by an efficient lunate caudal fin and a muscle mass largely composed of fast-twitch white muscle fibers. This provides the wahoo with amazing burst speeds but also makes it such that the fish tires relatively quickly. Muscle composition is also responsible for its reputation as a very sought-after, mild-tasting fish. *Ono*, as wahoo is known in Hawaiian, is a favored dish of gourmet chefs and makes for excellent table fare, regardless of how it is prepared.

Biology

As an ambush predator the wahoo feeds high on the food chain, often slicing larger prey items into bite-sized pieces

prior to ingestion. Diet consists of a wide variety of prey, ranging from flying fish to juvenile tunas as well as mesopelagic (deep-water) fishes and squid that move towards the surface at night.

As with most pelagic fish, wahoo have a high natural mortality rate, especially at small sizes. Relatively fast growing, they reach sexual maturity at around three feet in length, between one and two years of age. Larger females are capable of releasing more than 1.5 million eggs per spawn and may spawn every five days during the spawning season. In the Atlantic, the majority of spawning activity has been shown to occur during the summer months, although spawning periods vary by location, with possible year 'round spawning in some of the more tropical regions.

Over a potential lifespan of approximately 10 years, these fish can grow to a large size. Several fish in excess of 200 pounds have been reported, while a 184-pound wahoo, an IGFA record candidate, was landed by a junior angler while trolling off Cabo San Lucas in 2005.

Movements

Like many pelagic species, wahoo are structure-oriented predators that typically aggregate under floating objects or around reef edges, ridges, and seamounts. Because little is known regarding their movement or migration patterns, PIER has a wahoo movement study that investigates the vertical distribution and temperature preferences of this species in the Eastern Pacific. PIER's research team has deployed over 100 archival tags in wahoo from 10 to 60 pounds. Tagged fish have been recaptured by both Mexican purse seiners as well as anglers aboard the San Diego long-range fleet. To date we have received over 20 recaptures, confirming that wahoo primarily inhabit the epipelagic zone with only brief and infrequent dives below the thermocline. The greatest depth achieved by any of the tagged wahoo was over 800 feet, but, again, most of the records show these fish principally reside in the upper 100 feet, in water temperatures from 74 to 80 degrees Fahrenheit.

Although this species is not currently listed as endangered or vulnerable, additional biological and movement data would be useful towards effective international management of the wahoo. Of specific concern is the reduced wahoo landings today compared to the early years of the San Diego long-range fleet. Questions that come to mind include: *Have we as recreational fishers reduced this once abundant resource? Or have changes to commercial purse seining practices, such as the increased use of FADs (fish aggregating devices) and sets made on debris, affected wahoo abundance in the Eastern Pacific? Or is it a combination of the two?*

PIER is a non-profit 501(c)3 research institute dedicated to scientific research, education and the sustainable management of the marine environment. Special thanks are offered to Mr. Thomas Pflieger and Family, the George T. Pflieger Foundation, the Harris Foundation, Tommy Fulham, Lorraine Bohnet, and Vicki Wintrode. To read more about PIER research projects please visit us at www.pier.org. ■

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