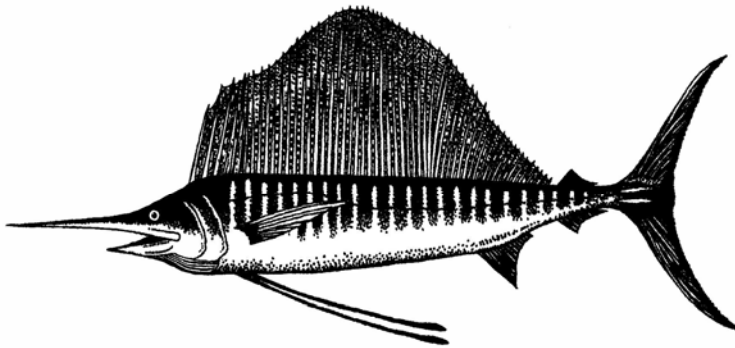


Species Spotlight: Atlantic Sailfish (*Istiophorus albicans**)

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*See taxonomic footnote

Sailfish drawing by Richard Ellis



A.K.A. : Abanico (Cuba), Agulhao de vela (Brazil), Atlantisk segelfisk (Sweden), Bayonet fish (Australia), Nishibashoo (Japan), Peixe de vela (Portugal), Pesce vela (Italy), Pez vela (Mexico)

Class: Actinopterygii (ray-finned fishes)

Order: Perciformes (perch-like fishes)

Sub Order: Xiphoidei (billfishes, marlins, sailfishes, spearfishes, swordfishes)

Family: Istiophoridae (billfishes)

Genus: *Istiophorus* (“bearing a sail” – Greek)

Species: *albicans*

This month we highlight a fish that inhabits many an anglers’ dreams, is the focus of seafaring legends and Ernest Hemingway novels: the Atlantic sailfish (*Istiophorus albicans*). An apex predator that ranges throughout the tropical and semi-tropical waters of all our oceans. Highly maneuverable and capable of extreme bursts of speed, its ability to launch itself into and through the air have earned the sailfish the designation as the “Fastest Fish in the Sea.”

Sailfish grow extremely quickly, reaching a length of 4-5 feet in just a single year.

They can live as long as 16 years, a highly migratory species, they have been known to travel as much as 200,000 miles or more in their lifetime.

Taxonomy of the Family Istiophoridae:

Genus Istiophorus:

- *Istiophorus albicans* *- **Atlantic sailfish**
- *Istiophorus platypterus** - **Indo-Pacific sailfish**

Genus Makaira:

- *Makaira indica* - **black marlin**
- *Makaira mazara* - **Indo-Pacific blue marlin**
- *Makaira nigricans* - **Atlantic blue marlin**

Genus Tetrapturus:

- *Tetrapturus albidus* - **Atlantic white marlin**
- *Tetrapturus angustirostris* - **shortbill spearfish**
- *Tetrapturus audax* - **striped marlin**
- *Tetrapturus belone* - **Mediterranean spearfish**
- *Tetrapturus georgii* - **roundscale spearfish**
- *Tetrapturus pfluegeri* - **longbill spearfish**

**Because of the marked difference in body and fin size (the Pacific sailfish is known to attain a significantly larger size), Atlantic and Pacific sailfish were originally classified as two separate species - Atlantic sailfish (*Istiophorus albicans*) and Indo-Pacific sailfish (*Istiophorus platypterus*). Recent genetic research has confirmed that they are indeed the same species (with some lingering debate of course), though there is no known interbreeding occurring between the two populations. From here on I will simply refer to this fish as sailfish.*



Description: One of the most exceptional identifying features of the sailfish is its upper jaw, which is modified into a long bill that is circular in cross section. The upper jaw is approximately twice the length of the lower jaw.

The sailfish has two dorsal and anal fins. Its first dorsal fin is large and fan-like, being much taller than the width of the body. This large fin runs most of the length of the body and provides the inspiration for the name, sailfish. The first anal fin is set far back on the body, and the second dorsal and anal fins roughly mirror one another in size and shape, with both being short in comparison to the sail-like first dorsal fin. The pectoral and pelvic fins are long with the pelvic fins almost twice as long and nearly reaching the origin of the first anal fin. The pelvic fins have one spine and multiple soft rays fused together.

The sailfish bears a pair of grooves along each side of its body into which the pelvic fins can be depressed, greatly decreasing the fish's drag through the water at speed. The strongly forked tail fin has double keels and caudal notches on the upper and lower surfaces, which act as hydrofoils.

Marlins, sailfish, and spearfishes all possess heat-producing tissue beneath the brain and adjacent to the eyes. This tissue warms the brain and eyes while the rest of the body remains at water temperature; allowing this predator to venture into colder hunting grounds than would be otherwise possible.

A sailfish's body is sparsely covered with embedded scales, each ending in a blunt point.

Color: Body color is variable depending upon the fish's level of excitement. The body is dark blue dorsally and white with brown spots ventrally. About 20 vertical bars, each consisting of many light blue dots, are present on each side. The fins are all generally blackish blue. The anal fin base is white. The first dorsal fin (the sail) contains many small black dots, which are more common toward the anterior end of the fin.

Size: The sailfish is one of the smaller members of the family Istiophoridae. The maximum size for the sailfish from the Atlantic region is 124 inches total length and around 128 pounds. The all-tackle record listed by International Game Fish Association (IGFA) is a 128 pound 1 ounce sailfish that was caught in 1974 at Luanda, Angola.

In southern Florida, the fish tend to be smaller, generally between 68-90 inches total length. Commercial longline vessels in the Atlantic generally catch fish of 49-83 inches in length as bycatch in pursuit of other pelagic marketable species. Pacific sailfish are commonly larger than their Atlantic cousins. The IGFA world record for Pacific sailfish of 221 pounds was set in 1947 by a fish caught at the Galapagos Islands, Ecuador.

Sailfish reach maturity at around 3 years of age, with females measuring approximately 61 inches, and males measuring 48 inches. As a rule, sailfish do not grow to more than 10 ft in length and rarely weigh over 200 pounds, although larger specimens have been reported off the shores of Costa Rica. Female sailfish tend to grow faster and reach a larger maximum size than males.

Range: The Atlantic sailfish's habitat varies according to water temperature and in some cases wind conditions. At the northern and southern extremes of their distribution, Atlantic sailfish appear only during the warmer months. These seasonal changes in distribution may be linked to prey migrations. Usually found in the warmer, upper layers of the water column the species often migrates into near-shore waters, preferring temperatures between 70° to 82°F, but is also capable of descending to rather deep water. The Atlantic sailfish is highly migratory and can be found from approximately 40°N to 40°S in the western Atlantic Ocean and from 50°N to 32°S in the eastern Atlantic Ocean. There is a known aggregation of sailfish off the coast of West Africa. Although few records exist for the Mediterranean Sea, several juvenile specimens have been caught there. In the western Atlantic Ocean, sailfish are most abundant in the Gulf of Mexico, the Caribbean Sea, and the Atlantic coast of Florida, where it is the official state saltwater fish.

Habits and Feeding: The sail, which is normally kept folded down and to the side when swimming, may be raised when the sailfish feels threatened or excited, making the fish appear much larger than it actually is. This strategy has also been observed during feeding, when a group of sailfish will use their sails to "herd" a school of fish or squid into a tight ball, often referred to as a "bait ball." Other sailfish then burst through this mass of bait fish at top speed, slashing their bills from side to side. The lightning fast sailfish then doubles back to leisurely swallow the stunned and injured baitfish. Divers have photographed sailfish hunting in these groups, flashing brilliant colors (via organs

called chromatophores) on their bodies when excited during feeding; this behavior is often termed “lighting up”.

Sailfish have been clocked at speeds of up to 68 mph, which is the highest speed reliably reported in a fish. In a series of speed trials carried out at a Long Key, Florida, fishing camp, one sailfish took out 100 yards of line in 3 seconds, which is equivalent to a speed of 68 mph. It is important to note however, that the fish was leaping while its speed was timed, so this speed does not actually represent a true swimming speed.

Cephalopods (squid and octopi) and bony fishes such as; flying fish, halfbeaks (ballyhoo), mackerel, mullet, needlefish and small tuna, are the primary prey items of the sailfish in the Atlantic. The ecology of these prey items indicates that while most feeding occurs at the surface, it also occurs in the mid-water column, and even along the sea floor. Juvenile sailfish are preyed upon by sea birds such as; the sooty tern and the brown noddy, as well as other pelagic fishes like dolphinfish.

Reproduction: In the western North Atlantic Ocean, spawning may begin as early as April, but occurs primarily during the summer months. On their Southeast Florida spawning grounds, females swim slowly through shallow water, with their dorsal fin above the water surface. One or more males will accompany her and they will spawn near the surface. Fertilization is external and these fertilized eggs will hatch within 36 hours. Spawning may also occur in deep offshore waters beyond the 100 fathom curve along the coast of North America (south of North Carolina) and over the continental shelf off the West African coast. During the first year of life, young sailfish can often be observed off the coast of Florida. Spawning has been observed year-round in the eastern Atlantic, with a peak in the summer months. A large female may release 4,500,000 eggs while spawning. Atlantic sailfish are approximately 0.125 inches at hatching and lack the jaw characteristic of adults. The juvenile sailfish head contains many spines: one above the eye, on the lower gill cover, and a smaller one located between these. At 0.25 inches in length the jaws begin to elongate. At 8 inches all larval characteristics have disappeared and the juvenile has all the features of an adult. At six months, a juvenile may weigh 6 lbs and be 4.5 feet long. Upon reaching this size, growth rate decreases.

Conservation status: The Highly Migratory Species Division of the National Marine Fisheries Service manages Atlantic highly migratory species (HMS) which includes tunas, sharks, swordfish and billfish. Owners of vessels used to fish recreationally (*i.e.*, no sale of fish) for Atlantic HMS (billfish, swordfish, sharks and tunas) are required to obtain an HMS Angling category permit from NMFS. Recreational fishermen may not sell, barter, or trade Atlantic HMS when fishing with an HMS Angling category permit.

In the Atlantic, sailfish has little value as a commercial fishery, with the meat being relatively tough and rarely sold unless smoked. However, the sailfish is highly sought after by recreational fishermen. Popular fishing locations include; Bermuda, Puerto Rico, Southern Florida, the Windward Islands, and the Gulf of Mexico. Atlantic sailfish are usually hooked by trolling, with either whole mullet or ballyhoo as bait. Kites are

sometimes deployed as extended outriggers to keep live baits on the surface while fishing for sailfish.

In the United States, sailfish are not taken commercially, except as incidental catch in longline and gillnet fisheries. Marlins, in addition to sailfish and longbill spearfish, are discarded as bycatch in the Atlantic pelagic longline and shark gillnet fisheries and they can not be taken commercially. Possession of sailfish is prohibited for U.S. commercial vessels fishing in the Atlantic. The 2000 estimates of the level of the billfish bycatch discarded dead by the U.S. commercial longline and other commercial fisheries are: 59.6 Metric Tons of blue marlin, 40.8 Metric Tons of white marlin, and 45.4 Metric Tons of sailfish (NOAA Fisheries, 2002).

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