

## Thresher Shark

*Alopias vulpinus* (Bonnaterre) 1758  
[Bigelow and Schroeder, 1948 p. 167.]  
[Garman, 1913 pl. 7, figs. 1-3.]

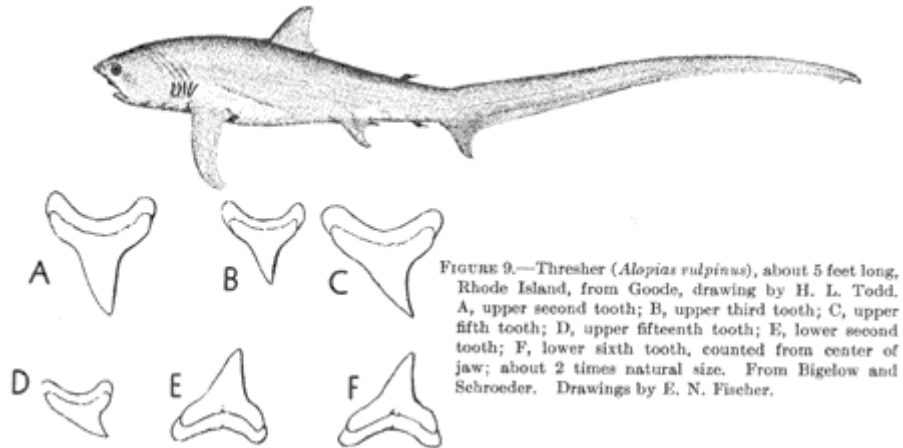


Figure 9 - Thresher (*Alopias vulpinus*), about 5 feet long, Rhode Island, from Goode, drawing by H. L. Todd.

A, upper second tooth;  
B, upper third tooth;  
C, upper fifth tooth;  
D, upper fifteenth tooth;  
E, lower second tooth;  
F, lower sixth tooth, counted from center of jaw;  
about 2 times natural size.  
From Bigelow and Schroeder. Drawings by E. N. Fischer.

## Description

The thresher is as easily distinguished from all other Gulf of Maine sharks by its long tail as the hammerhead is by its head, the upper caudal lobe being a little longer than the head and body of the fish together, curved much like the blade of an ordinary scythe, and notched near the tip, whereas the lower lobe measured along the front margin is hardly longer than the pelvic fins. We need merely point out in addition that the first dorsal fin (of moderate size and about as high as it is long) stands about midway between pectoral and pelvic fins; that the second dorsal fin and the anal are very small; that the pectoral fin is long and sickle shaped; and that the thresher is a stout-bodied shark with short snout and blunt, rounded nose. Its teeth are small, subtriangular with a single sharp cusp and are smooth edged. Those near the center of mouth are nearly symmetrical, but the successive teeth are increasingly oblique outward, with their outer margins increasingly concave.

## Color

Dark brown, blue-slate, slate gray, blue gray, leaden or even nearly black above, often with metallic luster, grading on the sides to white below, except that the snout and the lower surface of the pectorals are usually about as dark below as above, and that the sides near the pectorals may be more or less mottled with gray, the belly also. The iris is black or green.

## Size

Threshers vary considerably in size at birth, for while free living specimens have been reported as small as 46 inches, with many of 48 to 60 inches (some with umbilical scars still showing), one unborn embryo was 61 inches long. The state of development of the claspers of males, with the lengths (14 ft. 6 in. and about 15½ ft.) of females that have been found with embryos, makes it unlikely that they mature sexually until they are at least 14 feet long (tail included). Lengths up to 16 feet are usual;[76] the maximum length (tail included) is about 20 feet. Threshers are so largely tail that they are much lighter than many other sharks, length for length. The few actually weighed have ranged from about 300 to 320 pounds at about 10 feet, and 375 to 400 pounds at about 13 feet, to about 500 pounds at about 14½ feet. Perhaps 1,000 pounds is about the maximum to be expected for a very large one.

## Habits

The reports of threshers are mostly based on ones seen at the surface or caught either in nets set shoal, or in traps set close inshore. But a thresher has been hooked as deep as 35 fathoms in British waters.[77]

The thresher feeds chiefly if not exclusively on small schooling fishes; in American waters mostly on mackerel, menhaden, herring, and bluefish (*Pomatomus*); also on bonito and on squid. A pair of threshers often work in concert "herding" a school of fish, and it is to frighten its prey together that the enormously long, flail-like tail is employed. Allen[78] gives an interesting eyewitness account of a thresher pursuing and striking a single small fish with its tail.

The tale that the thresher leagues with the swordfish to attack whales is time honored, but has long since been relegated to the category of myth. And so weak toothed is this shark that the second part of the story (it makes a meal of its huge victim) is close to an impossibility. The thresher, we may add, does not harm human beings.

In American waters it is probable that threshers are born throughout its range, very small free living specimens having been caught off New England on the one hand, and off Florida on the other. The embryos do not develop a placental attachment with the mother, and either 2 or 4 have been reported in gravid females.

## **General range**

This is an oceanic shark of temperate and subtropical seas. In the Atlantic it is known from southern Ireland and the North Sea to Madeira and the Mediterranean in the east, and also from the Cape of Good Hope; from Nova Scotia and the Gulf of St. Lawrence to Cuba and the northern part of the Gulf of Mexico in the west, and again from southern Brazil and northern Argentina. Seemingly it does not occur in the equatorial belt of the Atlantic. But it does in the Pacific, where it is known from Oregon to Panama and Chile. Threshers of this same type are also found in the central and western Pacific and in the Indian Ocean. Whether the thresher of the eastern side of the Pacific is identical with that of the Indian Ocean remains to be determined.

## **Occurrence in the Gulf of Maine**

The thresher has often been seen off the southern coast of New England and in some numbers. Three about 16 feet long have been taken near Woods Hole, for example, in one trap in a single morning, and it has been classed as the commonest of the large sharks off Block Island. Scattered specimens also visit the Gulf of Maine in some years, though perhaps none in others. Thus two have been reported in print from Nantucket; we saw several large ones in Pollock Rip, off the southern angle of Cape Cod on August 4, 1913; it has been reported repeatedly on the coast of Massachusetts, as at Barnstable on Cape Cod Bay, where one about 10 feet long was taken in a trap on October 21, 1949, and from various localities in Massachusetts Bay (e. g. Boston Harbor and Nahant).

Records for it along the coast of Maine include the vicinity of Monhegan Island, east of Matinicus Island, the offing of Penobscot Bay where one weighing about 500 pounds (estimated) was caught in 1911 and another seen in 1911, in the vicinity of Eastport. It has also been taken in the cold waters of Passamaquoddy Bay; one for instance in a weir at Deer Island, August 28, 1936;[79] also in the Basin of Minas on the Nova Scotian shore of the Bay of Fundy. Occasionally a thresher is netted or seen off the outer coast of Nova Scotia. The most northerly record for it from our side of the Atlantic is for the Bay of Chaleur in the southern side of the Gulf of St. Lawrence. It is to be expected in Gulf of Maine waters only during the warm half of the year, perhaps May to October (April to late autumn for Woods Hole); in the cold season it altogether deserts our northern coasts for warmer seas.

## **Importance**

The thresher is not common enough in the Gulf of Maine to be of any importance to fishermen one way or another, or to play [page 34] a practical role of any moment among the smaller fish. Further south, however, and wherever it is numerous in the Atlantic, it makes itself a pest, tangling and tearing mackerel nets as well as destroying and chasing away the more valuable fishes on which it feeds.

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[76] Several of that size have been taken in the traps at Woods Hole.

[77] there is another group of species of the genus, with very large eyes, that live at greater depths; for discussion of these, see Bigelow and Schroeder (Fish. Western North Atlantic, Pt. 1, 1948, pp. 162, 163).

[78] Science, N. Ser., vol. 58, 1923, pp. 31-32.

[79] Reported by McKenzie, Proc. Nova Scotia Inst. Sci., vol. 20, 1939, p. 14.

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**Fishes of the Gulf of Maine** by Bigelow & Schroeder is the seminal work on North Atlantic fishes. It was originally published in 1925 with William Welsh, a Bureau of Fisheries scientist who often accompanied Henry Bigelow on his research cruises. In the late 1920's, Bigelow began a long association with William C. Schroeder, publishing a number of papers and reports on fishes of the North Atlantic, including the first revision of *Fishes of the Gulf of Maine*. This excerpt is from that 1953 edition.

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