

## Torpedo

*Torpedo nobiliana* Bonaparte 1835

[Bigelow and Schroeder, 1953, p. 96.]

[Garman, 1913, pl. 25, fig. 2, as *Narcacion nobilianus*.]

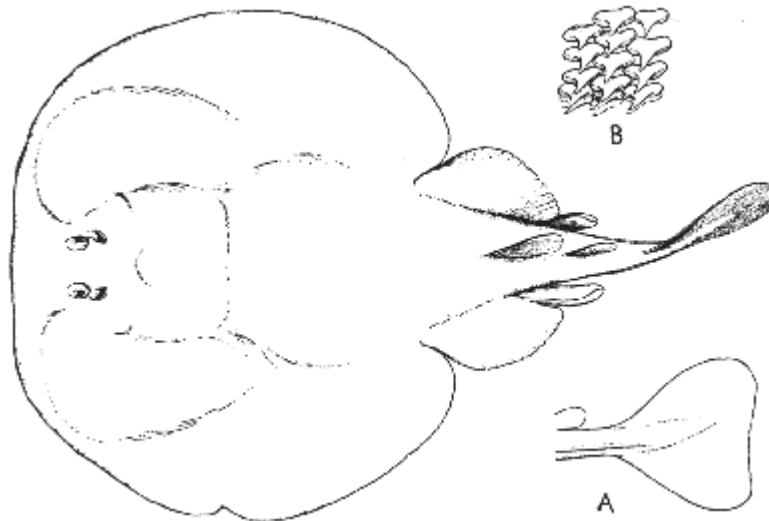


Figure 24 - *Torpedo* (*Torpedo nobiliana*) male, about 33 inches long, off Plymouth, Massachusetts.

A, side view of caudal fin;  
B, teeth 3 times natural size.

From Bigelow and Schroeder. Drawings by E. N. Fischer.

## Description

No one would be apt to mistake a torpedo for any other Gulf of Maine skate or ray, the rounded outline of the disk and the large caudal fin identifies it at a glance. Furthermore, its skin is soft and naked, without the spines or thorns so characteristic of all our common skates. The disk is roughly subcircular, truncate in front, and somewhat broader than long. The eyes are very small and set far forward. The two dorsal fins, of which the first is the larger, stand on the forward end of the tail, the first, indeed, partly above the bases of the pelvic fins, and they are separated by an interspace nearly as long as the second dorsal fin. The tail fin is of ordinary fish form, triangular and nearly as long as it is deep. The tail is shorter than in the skates for it occupies only about two-fifths the total length of the fish, measured from the cloaca. The teeth are small, with sharp curved points, and are in about 60 series, with up to 7 rows exposed and functioning at one time.

## Color

Dark chocolate to purplish brown above, some with a few obscure darker spots; lower surface white except that the edges of disk, fins, and tail are of the same dark tint as the upper side.

## Size

Adult torpedoes are usually 2 to 5 feet long or a little longer, and heavy for their size. Specimens taken at Woods Hole average about 30 pounds, while most of those taken anywhere on our Atlantic coast weigh less than 75 pounds. But we have seen one only about 4 feet long from Chesapeake Bay that weighed about 100 pounds; one of 144 pounds was brought from Nantucket to the U. S. Fisheries Station at Woods Hole many years ago; and the heaviest taken near Provincetown were estimated long ago by a fisherman of keen observation as 170 to 200 pounds.

## Habits

The most interesting thing about the torpedo is its ability to give electric shocks of considerable strength to anyone touching it. The statement, even, has long been current that the shock from a large one in rested condition may be strong enough to throw a full grown man to the ground. And the story is told of a dog which was in the habit of wading on a Cape Cod beach in shoal water to catch flounders, but was so shocked by a torpedo that it ran away howling and could never be persuaded to go fishing again. In fact, this anecdote antedates the scientific naming of the New England torpedo. But shocks of a strength even approaching what is suggested by such reports are to be expected only from torpedoes of the largest size in rested condition. The voltage recorded recently was 170 to 220 for one that had been kept in a live well. And the most we have felt ourselves from medium-sized torpedoes lying on the dock at Woods Hole has been a slight benumbing sensation.

The torpedo, like others of its tribe, is a bottom fish. It is a fish eater. The stomach of one taken at Woods Hole contained a summer flounder (*Paralichthys dentatus*) about 14½ inches long. A 2-pound eel, a 1-pound flounder, plaice (*Pleuronectes platessa*), red mullet (*Mullus surmuletus*), a salmon weighing 4 or 5 pounds, and the remains of spotted dogfish (genus *Scyliorhinus*) have been found in the stomachs of British specimens. The wide distensibility of its jaws allows it to swallow fishes much larger than might be considered possible from the breadth of the mouth when closed. And it is generally believed that it stuns its prey by its electric shocks. Otherwise it is difficult to conceive how so sluggish a fish could capture such active prey.

It bears "living" young, but there is no placental connection between embryo and mother. And it seems that the young are born offshore, for the smallest torpedo yet recorded from American inshore waters (from New Jersey) was about 2 feet (610 mm.) long. And we doubt if it succeeds in producing young in the colder waters of our Gulf.

## **General Range**

Both sides of the North Atlantic[56] from southern Nova Scotia (La Have Bank), Bay of Fundy, and Georges Bank to North Carolina in the west;[57] and from northern Scotland to the Mediterranean, Azores, Madeira, and tropical West Africa in the east.

## **Occurrence in Gulf of Maine**

The torpedo is more common south and west from Cape Cod than to the northward and eastward. But it strays past the elbow of the Cape often enough for it to be classed as a regular member of the Gulf of Maine fish fauna. The most northeasterly records for it are of one presumably of this species taken in St. Margaret's Bay, Nova Scotia, some 30 years ago; one caught on a long line set for cod [page 60] on La Have Bank in 1890,[58] and from Eastport, Maine, at the mouth of the Bay of Fundy. It has also been taken at Williamsport, Maine; off Seguin Island where one was examined in 1880; at the mouth of Casco Bay; at Wood Island near Cape Elizabeth (1, in a trap, in 1894); near Cape Ann; off Plymouth in the southern side of Massachusetts Bay; near Provincetown; and on the outer coast of Cape Cod, so it would be no surprise to find it anywhere along the shores of the Gulf. It has been caught occasionally on Georges Bank;[59] there are records of long standing of torpedoes off Nantucket and Marthas Vineyard, and they are caught yearly in Vineyard Sound and in Buzzards Bay.

Most of the reports of torpedoes within the Gulf have been based on single specimens. But it has been known for a long time that torpedoes are caught in much larger numbers in some years than in others. Thus they are said to have been unusually common near Provincetown in 1819 and for the next 4 or 5 years, when 60 to 80 were taken there yearly. Again in 1845 about a dozen came ashore or were caught otherwise near Provincetown. Any fluctuation, however, that may have taken place from year to year thereafter seems to have attracted no attention until the summer of 1896, when Dr. W. C. Kendall, of the U. S. Fish Commission collected several along the coast of Maine. The Massachusetts Bay specimen mentioned above, taken off Plymouth and now in the Harvard Museum of Comparative Zoology, is the only torpedo from the inner part of the Gulf of which we have heard since that time. But it is as likely to be found in the Gulf now as it ever was.

## **Importance**

The torpedo is of no commercial value nowadays, but its liver oil was considered equal to the best sperm for illuminating purposes before the use of kerosene oil was general. There is an old tale that its oil was a good cure for cramps if rubbed on externally, for stomach trouble if taken internally. And when one is landed on the dock at Woods Hole it is an object of interest to the workers at the Biological Laboratory because of its electric discharges.

---

[56] Comparison of American specimens with one from the North Sea revealed no differences.

[57] This torpedo is also reported from the Florida Keys and from Cuba but on doubtful evidence.

[58] Reported by G. F. O. Hansen, then second mate and later master of the U. S. Fish Commission schooner Grampus, who doubtless was acquainted with the torpedo at Woods Hole.

[59] the most recent record is of one 58 inches long, trawled on the southwest part in December 1930.

---

**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.

This reprint is from <http://NJScuba.net>

