

***Microgadus proximus* — Pacific Tomcod**

By Susan McDougall

If you are a fish that plies the waters of the north Pacific, there are advantages to being small. True, many larger creatures might find you catchable, but one large two-legged predator, well-known for expanding its harvesting inclinations with great enthusiasm, most often dismisses you as too petite for consideration. While your close cousin is eagerly sought, you will figuratively, if not literally, slip through a net intended for such larger prey.

Unlike the Lingcod, which is placed in a different order altogether, the Pacific Tomcod (*Microgadus proximus*) is a “true” cod, being a member of the Gadidae, the same family as the more well-known Pacific Cod (*Gadus macrocephalus*). Ranging from southeastern Alaska and the eastern Aleutians to Santa Barbara, California, the Tomcod is particularly common in the coastal waters of Washington, Oregon, and British Columbia, including the Salish Sea, and the Strait of Juan de Fuca. Although most often a species of shallow nearshore waters, adults may range as deep as 325 ft (100 meters) on the continental slope; some pelagic populations are found in deep waters.

The origin of the common name “Tom” may come from its similarity to a European fish, the Tacaud, another true cod. *Microgadus* translates to “small cod”, and *proximus* means “near”, referring to its close relationship with the Atlantic Tomcod (*Microgadus tomcod*): the two are the only members of the *Microgadus* genus. Some research has suggested that the Pacific Tomcod is more likely a sister species to a north Atlantic Ocean fish, the Navaga (*Eleginus navaga*), this species having made its way west after the opening of the Bering Sea approximately five million years ago.



Pacific Tomcod (*Microgadus proximus*)

A bit confusing perhaps, but the scientific name of the Pacific Tomcod seems quite fixed, and the species itself has been dated with a reliable fossil at 126,000 years ago. Fossil otoliths (little ear bones) of the genus are 5.3 million years old.

As with most other Gadidae, the Pacific Tomcod is distinguished by having three dorsal fins and two anal fins: a characteristic (but short) barbel dangles from the lower lip. It is a much smaller fish

than the Pacific Cod, with a maximum length of 15 inches (37 cm) and a weight of .8 pounds (344 grams), but most individuals are much smaller, typically only 9-10 inches from the snout to tip of the tail. They are greenish to brown on the back, with a contrasting white belly. The body is elongated, and the scales are small and thin, accented with dusky tips; this fish lacks the spots characteristic of the Pacific Cod. The upper jaw is lined with many small teeth; the lower has somewhat larger teeth. The eyes are large, and the caudal fin sometimes rounded.

Pacific Tomcod (*Microgadus proximus*)

A schooling fish, the Pacific Tomcod is tolerant of a range of salinities and temperatures. The young are most often encountered in shallow waters, including brackish as well as marine habitats. There they browse near the surface or lounge around in eelgrass and kelp. Juveniles are more likely to forage in midwaters where they feed on zooplankton; the adults consume crustaceans, worms, crabs, and fish. Tasty to larger fish, this little cod is also sought by birds and mammals, including whales and seals.

Sexual maturity is believed to occur at two years, but research on the specifics of the Pacific Tomcod life processes is limited. Spawning is most typical from February to May, sometimes later; the demersal eggs (laid on the sea bottom) are not guarded.

Catching the Tomcod

Considered to have a sweet, delicate flavor by those who have caught and cooked it, the Pacific Tomcod is too small to be of commercial interest, although in the 19th century a paranzella trawl venture based in San Francisco targeted them: this method typically included two boats dragging a large net along the sea bottom. Recreational anglers have taken them over the years.

As marine fish, in Washington state the species is managed under the jurisdiction of the Washington Department of Fish and Wildlife. Considered a “bottomfish,” it is subject to a combination of general rules and specific season restrictions.

Fishing regulations for the Pacific Tomcod and other saltwater fish are specified by marine areas which include both the state’s coastal and inland waters. There are three marine areas in the Strait, with the westernmost (Area 4) extending to offshore waters south and west of Cape Flattery. In the central and eastern marine areas of the Strait, as with other bottomfish the Pacific Tomcod is included in the “15 fish daily limit,” and fishing is prohibited seaward of depths greater than 120 feet, except when those waters are open for halibut and Pacific Cod. Fishing boats are also required to carry a Descending Device: this is a recompression instrument that can safely return fish to the depth at which they were caught. While Pacific Tomcod is not commercially fished in the Strait, recreational anglers occasionally catch this small fish from piers or boats.

The size of the Pacific Tomcod makes it less desirable for recreational anglers today, but in the past, this abundant fish provided indigenous people with a sustaining food source. The presence of Pacific Tomcod bones in a 2,700-year-old site along the Elwha River near the Strait supports the idea that it was taken and consumed by the Klallam people. The Gadidae, represented by the Pacific Cod and Pacific Tomcod, was the third most common fish family at the Elwha site.

Pacific Tomcod bones have also been found in Ozette middens on the outer coast and along the Hoko River where an archeological dig begun in 1973 has revealed many details of the lives of the people who lived along the Strait at least 2,500 years ago. At this ancient settlement, there is also evidence of a fishing camp as recently as 100 years BP (before the present)

Other sites throughout the northeastern Pacific coast region as far north as the Alaska Peninsula reveal the use of the Pacific Tomcod in the diets of many people. The fish were caught by Vancouver Island First Nation people, and along the coast of the mainland. Typically, fishing was undertaken during the winter months through ice holes using a jigging technique: this method consists of a weighted line and a hook with lure that is moved up-and-down vertically to attract the fish. The composition of the jig itself varied, with lines made of stinging nettle fiber and hooks of different construction, including those constructed of Pacific yew and other materials; barbless hooks were also employed.

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Pacific Tomcod flesh was prepared by various methods, including boiling; fish were also used as bait for other species. Dried for later consumption, the species contributed to the winter diet.

Thus, although small by comparison to the related Pacific Cod, a potentially two-foot fish that typically weighs in at 5-8 pounds, the Pacific Tomcod played its own role, providing food for people who possessed the skills to catch and utilize the beneficial fish.

Eating the Tomcod — Livers and Steaks

Pacific Tomcod cuisine is not what might be termed a particularly common subject on the Internet; size alone undoubtedly restricts interest. It can be prepared much like a Pacific Cod which is prepared in a variety of ways but is often simply fried or baked. The Atlantic Tomcod, a slightly larger species, is featured in many recipes, offered by an establishment in eastern Quebec, where activities vary from snowmobile rides to ice fishing.

At this resort, nearly every part of the fish considered tasty. Tomcod eggs are made delectable with a cream and butter mix: there is Tomcod chowder, Tomcod Gratin, Fried Tomcod — the list goes on.

However, while the recipes for Atlantic Tomcod might suggest possibilities for the Pacific Tomcod, internal organs are not mentioned, at least in the published recipes. Yet in the northeastern Pacific and the Bering Strait region, Pacific Tomcod preparation uses the liver as the primary ingredient.

A recipe book prepared by the Kawerak non-profit corporation, an organization founded to represent the Bering Straits native people, offers many suggestions for preparation of non-salmon fish species. These include preparing Pacific Tomcod liver in a variety of ways, such as in combination with blackberries for a snack; a spread incorporating whitefish eggs, and a butter-like spread can also be prepared.

Dried Tomcod, strung from sticks, provides a more traditional meal; the fish can be boiled as well, and, if large enough, cooked like any other fish steak.

Three tribes compose about 75% of the Kawerak group: represented by 20 villages, these include the Inupiaq, the Central Yip'ik, and the Unalakleet, their presence confirmed to about 6,000 years BP, with human presence dated at least 10,000 years ago. The endurance of these peoples over such a long period has depended upon knowledge of local food resources and the ability to acquire and prepare them, as well as to pass on that cultural knowledge. The Pacific Tomcod may represent a small portion of food acquisition, but that does not negate its importance, a fact acknowledged by those who have provided recipes for its use. Perhaps there is a subtle lesson here. Even the smallest resource is worthy of notice and protection.

It is an awesome experience to hold a great fish, such as the powerful Chum Salmon. But my memories of the past involve little trout more than hefty salmon. Smaller (or occasionally as large) as the Pacific Tomcod, these fish, too, played their role. For equally as important as providing food, they offered a glimpse into the watery world, an ancient place that has provided so much for a very young species—ourselves.