

Tonnara Diving

Peter Brueggeman, 2001. Photos & text copyrighted.

I travelled with friends to dive in a tonnara in the Mediterranean, in May 2001. Shore-based tuna trap net fisheries are called tonnara or madrague. I saw large bluefin tuna (6 feet plus, 600-700 pounds) in schooling groups, swimming within the net traps, staged for harvesting. The bluefin tuna tended to be on the large side, since the tuna being trapped are sexually mature, and some already having spawned. It was fascinating to see a traditional, highly selective, and sustainable method of bluefin tuna fishing going back for centuries.

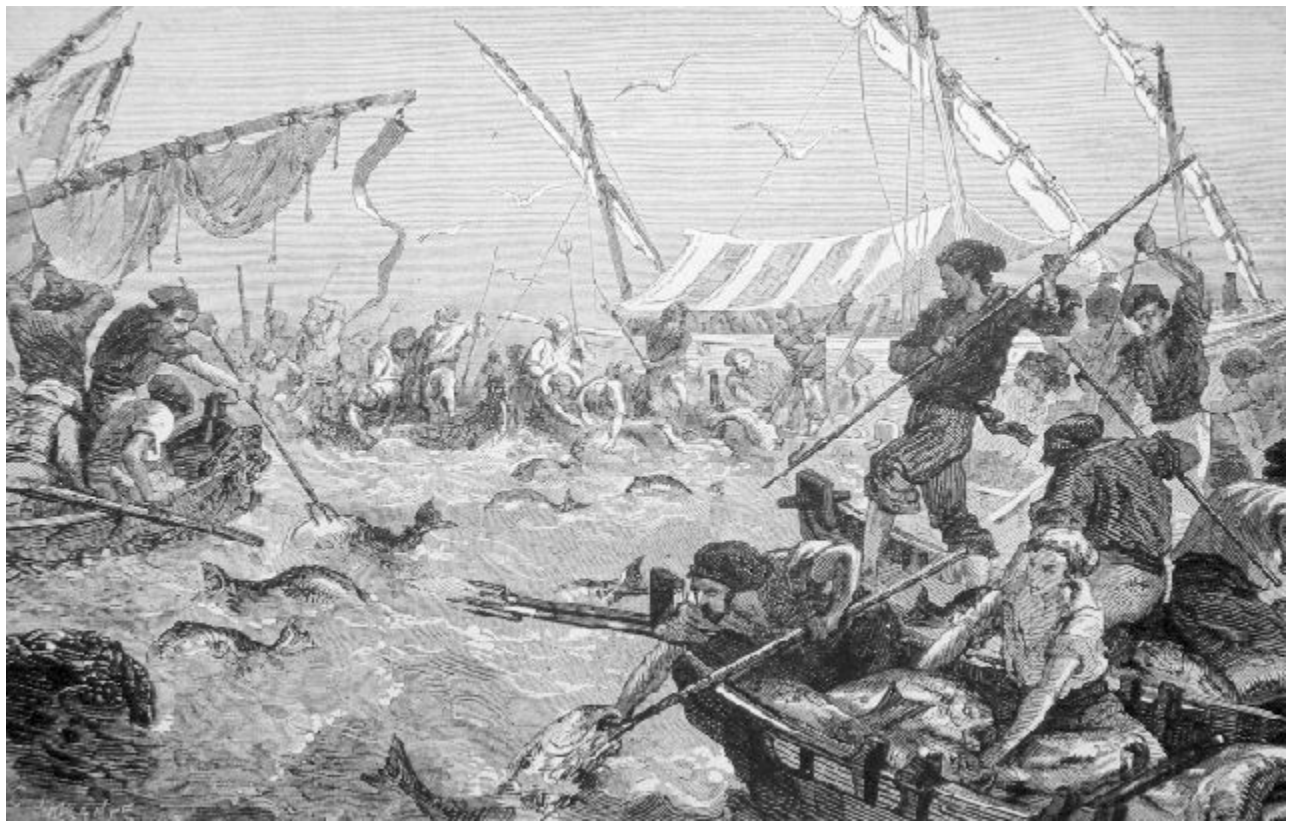


A 1760 illustration of tuna trap fishing in the Gulf of Bandol, France.

Mediterranean tuna fishing, particularly for bluefin tuna, has been practiced for centuries, being first described by Homer in the Odyssey. Migrations and spawning of bluefin tuna were described by Aristotle in 350 BC. Shore-based tuna trap fisheries have been active in Mediterranean countries since these ancient times, and have declined in number in recent years due to changes in tuna migration, coastal changes like industry and pollution, as well as increased competition with other fishery methods.



An 1839 illustration of tuna trap fishing.

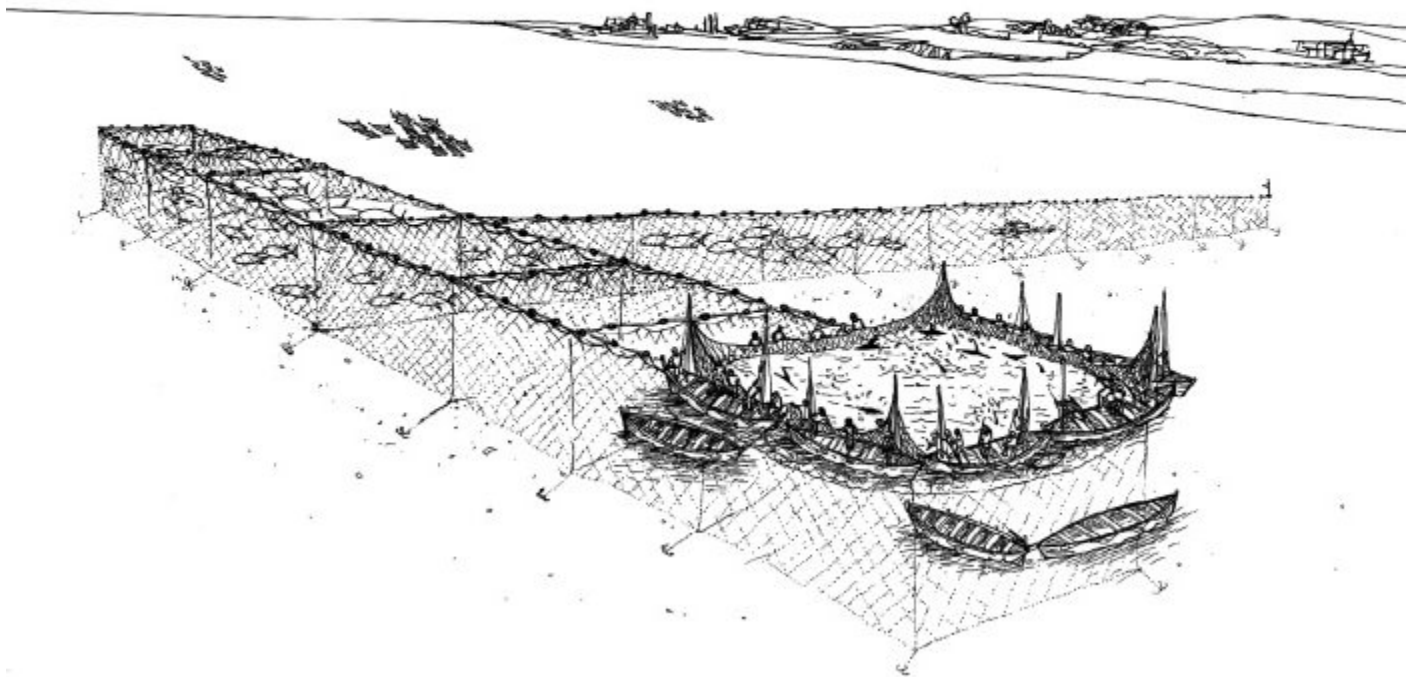


An 1869 illustration of tuna trap fishing.

Mediterranean tuna trap fisheries continue today in a very few Mediterranean countries, and also outside the Strait of Gibraltar. Tuna were caught in the tonnara I visited from the end of April until early June. The migrating bluefin tuna caught in these traps are sexually mature and some females have already deposited eggs before entering the traps. Catches from these traditional tuna trap fisheries are relatively minor compared to modern means of tuna detection (radar, sonar, satellites) and fishing (seiners and longliners).



An 1883 illustration of tuna trap fishing.



A view of a tonnara very similar to what I saw and in which I went diving. Made from netting stretching like a wall vertically from seafloor to sea surface, a Mediterranean tuna trap is called a tonnara or madrague and is set in places known from long experience. A net wall stretches out from the coast to over a mile offshore, steering migrating

tuna towards an offshore netted enclosure about one hundred feet or more to a side and plunging down to the sandy bottom at 130 feet. Through a vertical opening, the tuna find their way into this netted enclosure, but once inside and circling as a school, cannot find their way out to escape. When a sufficient quantity of tuna have arrived, schooling within this enclosure, they are moved into an adjacent net enclosure by lowering an intervening net. Staged in more enclosures, the tuna are then ready for landing by the fishermen. The tuna landing is called a *mattanza* and is led by the *rais* or head fishermen. Fishermen bring the tuna to the surface by hauling up a net laying on the seafloor. Near the surface, the tuna thrash around frantically, and then when the tuna quiet down from exhaustion, the fishermen haul or hoist them into a barge.



Out of the blue, there they were.....a large school of bluefin tuna closing in on us. Silently passing by above, below, and alongside, the bluefin tuna were enormous, with many over six feet in length, weighing 600 to 700 pounds. Silver- colored football-shaped torpedos with an electric blue stripe down their sides, retractable pectoral fins, lunate crescent-shaped tail fins they were built for speed and long-distance swimming. Passing by, they numbered at least one hundred, though it was hard to count, as passing tuna appeared and disappeared in the deep blue water.



Blufin Tuna !! They were circling slowly within a chamber of the nets. They passed around and among us, seemingly unconcerned with our presence.



The tonnara net (I'm taking photos). We were asked to stay close to the sides of the net chamber. You had to watch out about getting something caught in the mesh of the net.



Steve taking photos.



Bluefin Tuna

Me: Shooting Photos & Safety Stop







Swordfish and molas (sunfish) are also entrapped at the tonnara. Swordfish are infrequently caught and are landed before the tuna; the tuna thrashing would alarm the swordfish which would rip open the nets. Swordfish that we saw were four to five feet long, not counting the sword. The swordfish slowly cruised up and down one side of a net enclosure, seeking a way out. We approached molas at very close range, with the molas seemingly more interested in finding their way out than in reacting to our presence.

The swordfish is easily distinguished from other billfish by its flat bill, absence of jaw teeth, the short base of its dorsal fin, the absence of pelvic fins, and the presence of a keel on each side of its tail. Swordfish occur worldwide in tropical and temperate oceans and have the greatest temperature tolerance among billfishes. Capable of descending into waters of 5-10 degrees Celsius to depths of at least 650 meters, swordfish feed on other fish and use their sword to kill some of their prey, particularly squid and cuttlefish. Swordfish can reach a maximum length of 14 feet and 1200 pounds weight.



The mattanza.... The mattanza is the tuna harvest... the drawing up of the nets to bring the tuna to the surface for landing. Sergio's DV picture



Looking up at the underside of the Camera della Morte. The last netted chamber from which the tuna are harvested is called the Camera della Morte. A net is drawn up from the bottom to land the tuna. Norbert Wu picture



Landing the tuna Sergio's DV picture



Landing tuna Sergio's DV picture



Shooting pictures of the mattanza. From left: Norb, me



Back from diving at the dock. From left: me, Norb, Brian, Steve.
Thanks to Steve for everything he did on my behalf and for his excellent company.