The Pelagic Plague

Destructive, indiscriminate commercial-fishing gear is wreaking havoc on ocean food chains that sustain all our favorite fish.

By Ted Williams

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No method of commercial fishing is more destructive of marine ecosystems than longlining. on any given day 100 million baited hooks dangle from giant trotlines in all the world's oceans. a single mainline (and each vessel tends many sets) may be 60 miles long and drape two thousand 1,200-foot branch lines. longlines kill sea turtles, sea birds, marine mammals, sharks, billfish, tunas, mahi—in short, any creature that gets tangled in the cord, snagged by a hook or that eats the squid or fish bait.

Longlining was introduced by the Japanese in 1952 when the United States first allowed their provisional government to return to the sea. By 1965, Japanese longliners were stripping marine life from every quarter of every ocean. Later in the decade, Spain and the United States joined the slaughter. By the 21st century longlining had become a free-for-all with more than 40 nations and untold pirate fleets competing for rapidly dwindling resources.

The international commission for the conservation of atlantic tunas (ICCAT)—the body that supposedly manages highly migratory species by setting quotas, leaving most local regulations to member nations— estimated that in 1961, when major longlining was just getting underway, marlin and tuna populations were about double what was needed for maximum sustained yield (mSY).By 1995, ICCAT was reporting atlantic blue marlin down to 24 percent mSY, Atlantic white marlin down to 23 percent mSY, Western atlantic sailfish down to 62 percent mSY and Western atlantic bluefin tuna down to 6 to 12 percent mSY. Since then these declines have accelerated in direct proportion to increased longlining effort.

Worldwide, longlining is causing 95 percent of all mortality of marlin, sailfish and spearfish. By-catch of most billfish and virtually all tuna (which need to swim fast to oxygenate) is discarded dead. the only big fish on the planet doing better than it was a decade ago is the swordfish. and that's because longliners had plundered the species to the extent that the National marine fisheries Service (NmfS) had to close large nursery areas off the carolinas.

Do you remember how good swordfish tasted when you were a kid; and have you noticed how horrible it tastes now? this is not a function of your maturing palate. the completely selective, sustainable harpoon fishery that longlining replaced produced fish that were brought daily to dockside. today swordfish soak dead in seawater for days; then, after their waterlogged carcasses are winched onboard, they fester on ice for a few weeks. When they finally make it to shore they're so slimy and disgusting that longline crews sometimes scrub them with bleach. Longlining has slipped under the radar screens of fly-rodders and other light-tackle anglers because—excepting school bluefin and yellowfin tuna, white marlin, sailfish and mahi—the practice targets few fish we commonly pursue.

Why, for example, should we care about the gross by-catch of sea birds and endangered and threatened sea turtles or about the unsustainable slaughter of snappers (other than muttons, which occasionally patrol the flats), groupers, tilefish and sharks (other than makos, spinners, bonnets and blues, which some of us chase)? Because, as 19th and early 20th century philosopher-naturalist John Muir planted by the U.S. Army Corps of Engineers in the Piankatank River as part of an effort to restore dwindling shellfish.

But what have shellfish got to do with angling? Well, they filter seawater. And their unnatural absence in Chesapeake Bay is allowing a proliferation of algae and phytoplankton that blocks sunlight from benthic, oxygenating vegetation thereby killing gamefish forage and gamefish fry while creating a fertile environment for mycobacteriosis, a disease devastating Atlantic striped bass in this, their most important nursery area. Interestingly enough, the one large shark declining less precipitously than the others is the mako.

The Blue Ocean Institute's Dr. Carl Safina offers this explanation: "I think the reason is that most makos over 400 pounds break off longlines. So there's probably a pool of breeders out there. We're seeing a lot of pups and adults, but very few mediums." Florida has dropped more than 40 percent in the last decade, eat jellyfish too. So do countless species of fish. Annihilation of jellyfish predators by longliners may be much of what's behind the enormous jellyfish blooms being seen all around the world. Jellyfish are extremely proficient predators of larval fish, including all the ones we target. "You get to a tipping point where the number of jellyfish predators decrease and the number of jellyfish increase," says Dr. Russell Nelson, chief scientist for the Billfish Foundation. In the 1980s, almost 5,000 leatherbacks nested at Mexico's Mexiquillo Beach, historically the species' most important nesting site. Recently the average has been four.

In September 2008, NMFS reported that observers placed aboard selected longliner vessels targeting such bottom fish as grouper and tilefish in the Gulf of Mexico noted, "When one tugs at a single thing in nature, he finds it hitched to the rest of the universe." Herewith, examples: Sharks reproduce slowly, 70 percent of them bearing live young after long gestation periods and in dog-sized litters. This makes them especially vulnerable to directed and incidental fisheries. Longliners, killing sharks on purpose and by mistake, have knocked most of the larger species down to a fraction of their natural abundance. Sharks are especially fond of eating rays; and as sharks have declined ray populations have exploded. But why should anglers worry about ray overabundance?

Because, to offer just one example, huge flocks of cow-nosed rays, some weighing 35 pounds, are now wafting into Chesapeake Bay, chowing down on bivalves. In 2006, for instance, they devoured 775,000 oysters All anglers I associate with care deeply about sea turtles simply because they are beautiful parts of

nature and because they make the act of fishing more meaningful and exciting. Three times on Cape Cod Bay I've had endangered leatherbacks breach near my boat, the last time in dense fog and so close I heard it breathe before I saw it. Although I can't recall what if any fish I caught on those days, I remember every detail about the turtles, two of which I estimated at 2,000 pounds.

But there's another, more practical reason for anglers to worry about sea turtles. The leatherback (basically tied with the saltwater crocodile as the planet's largest reptile and of all marine organisms the species least likely to survive longlining) dines almost exclusively on jellyfish. Loggerheads, whose nesting population in reported a by-catch of 974 turtles (799 of which were loggerheads) with 83 percent of the captures resulting in death or serious injury. Although many vessels lacked observers, the by-catch reported was three times the "incidental take" authorized by NMFS, placing the agency in violation of the Endangered Species Act.

"We've taken out a lot of top predators and knocked the system out of whack," declares Lee Crockett, director of federal fisheries policy for the Pew Environment Group. "We're conducting these grand, ecosystem-wide experiments to see what longlining does; and we have no idea of what's going to happen. One of the things the ocean is going to need to withstand increasing global climate change is the diversity we're destroying."

Unless longlining directed at yellowfin tuna and swordfish in the Gulf of Mexico is banned in spring and summer, the western stock of Atlantic bluefin tuna is likely to become commercially extinct within five years. The Gulf is their only known spawning habitat.

In 2007, the longline by-catch of bluefins here was reported at 81 metric tons; but, invariably, "reported" by-catch figures are grossly deflated. And this was taken from a breeding population estimated at fewer than 20,000 individuals. In addition, Gulf of Mexico longlining causes the highest by-catch of blue marlin in the Atlantic, and it is clobbering white marlin.

Gulf longliners who kill bluefin tuna as "by-catch" are allowed to retain and sell up to three fish per trip. And, because even a midsize bluefin can fetch \$40,000 on the Japanese market, longliners are catching them "incidentally on purpose." It's a directed fisheries in disguise, and because longliners depend on it to stay viable they've been fiercely lobbying NMFS to allow even more bluefin by-catch.

NMFS—still populated with Bush appointees and, as a tentacle of the Commerce Department, conflicted by a dual mission of promoting and regulating fisheries—has agreed. On June 1, 2009, echoing the industry almost verbatim, the agency issued an Advanced Notice of Proposed Rulemaking (ANPR) in which it suggested a higher or unlimited bluefin by-catch for Gulf longliners and an increase in harvest for swordfish, a species still in the process of recovery. ANPRs precede hearings and public commentary.

The commercial industry was positively giddy. "This is an unprecedented ANPR," gushed Richard Ruais, mouthpiece for the Blue Water Fisherman's Association and the American Bluefin Tuna Association. And he told NMFS, that, in its response to the industry's demands, "Well, you've addressed them in spades."

The marine conservation community, on the other hand, was horrified, as were rank-and-file NMFS professionals who privately expressed their desire for a pelagic longline ban. Within two weeks, 14 NGOs including the National Coalition for Marine Conservation, the Billfish Foundation, the Pew Environment Group and the Coastal Conservation Association together with 57,000 individuals had contacted NMFS, condemning its proposal and supporting a pelagic longline ban in the Gulf from March through September.

Ken Hinman, president of the National Coalition for Marine Conservation, commented as follows: "There is a very real danger of reducing the western Atlantic bluefin tuna's breeding population below a critical mass—the minimum population sufficient to sustain itself—resulting in a stock failure that's irreversible. The population of spawning-age fish in the west is just 7 percent of an unexploited stock (and 14 percent of the rebuilding target), despite quotas in place since the early 1980s. The ICCAT 'rebuilding' program, implemented in 1998, is not working, evidenced by the fact that the spawning stock today is 11 percent below the level ten years ago.... In the Gulf, in the spring, every fish we kill is a rare western breeder in the act of spawning. We're killing hundreds each year, as needless longline by-catch."

NMFS' split personality of cop-abettor is apparent in its West Coast mismanagement, as well. In 1999, after the annual by-catch of sea turtles around Hawaii reached 800 and finfish by-catch soared, a federal judge shut down longlining in a million square miles of ocean. But longlining there has been reinstated on the industry- and NMFS-promoted myth that the circle hooks now required make the gear safe for sea turtles.

In 2004, when it became clear that the Pacific leatherback faced imminent extinction at the hands of longliners, NMFS shut down areas seaward of federal waters (already closed to longlining). But last winter it backed an industry proposal, offered by the Pacific Fisheries Management Council, to reopen the closed areas to California-based longliners clamoring to cash in on the still recovering swordfish population.

According to the council's own data, this would subject 28 non-target species to by-catch mortality, including critically depleted Pacific bluefin tuna, striped marlin and shortfin mako, depleted big-eye tuna, possibly depleted yellowfin tuna and heavily fished albacore tuna, which may soon become depleted.

After irate public commentary, the Pacific Fishery Management Council voted down the proposal on April 4, 2009.

Because bluefin tuna are flirting with commercial extinction, longliners have been unable to fill the U.S. ICCAT quota since 2003. Therefore, proclaims the industry, regulations need to be liberalized and size limits decreased so that ICCAT doesn't give away the U.S. quota to some nation that fishes in a less environmentally friendly fashion, as if that were possible.

What industry barkers don't get around to saying is that ICCAT has never given away an unused quota. Still, they sound like hyenas sparring over a kill. "It is crucial," Ruais told the Commercial Fisheries News, "that there be an 'interim suspension' of major existing measures preventing U.S. fishermen from catching the bulk of our duly earned international quota, which is threatened by recent underperformance and the upcoming opportunistic attempts to 'steal' our share by a coalition of ICCAT member nations planning an agreement to do so."

A ban on pelagic longlining in the Gulf would at least postpone commercial extinction and possible biological extinction of Atlantic bluefin tuna. But there's only one way to prevent both— and that's an endangered (Appendix 1) listing by the Convention on International Trade in Endangered Species (CITES), which would ban international trade. In September the European Commission—which oversees fisheries policy in the 27-nation European Union—voted to recommend Appendix 1 listing for Atlantic bluefin at the March CITES meeting. At this writing, the U.S. Fish and Wildlife Service, in charge of CITES issues, is soliciting public commentary on the proposal; and it's pretty clear that the U.S. will vote with the European Commission.

Appendix 1 listing would not affect recreational angling (except to dramatically improve it). It would also improve domestic trade; and it would create far more opportunity for harpooners. But because you can't hawk a dead bluefin outside Japan for \$40,000, U.S. longliners and the commercial tuna industry are shrieking like Sabine virgins.

The marine conservation community is, of course, unanimously on board. But a significant percentage of anglers, distrustful of anything "federal" or "foreign" and easily manipulated by commercial interests, fantasize that an Appendix 1 listing is a foot in the door to a listing by NMFS under the U.S. Endangered Species Act, which could ban recreational fishing. However, an Appendix 1 CITES listing is the best possible way to prevent a U.S. listing.

Much of the opposition among anglers is being fomented by the Recreational Fishing Alliance, which sees CITES (and most any regulating body, for that matter) as a malevolent entity plotting to somehow strip it of fishing rights. (I have read and reread RFA screeds on why an Appendix 1 listing for bluefin tuna would be a disaster, and I still can't ascertain a single logical or even alleged reason.)

Anglers have everything to gain from a CITES listing. Yankee fly rodders who experienced the incredible run of two-year-old bluefins in 2005 (and I'm one of them) got a taste of what the fishery could be. On my best day off Point Judith, Rhode Island, I hooked 14 and landed 12, all between 20 and 35 pounds (See "Bluefin Summer," FR&R, July/Oct 2006).

These fish taught me that 20-pound tippets aren't enough because even baby bluefins can bust them with zero rod pressure merely by dragging line and backing at warp speed. Bluefins are warm-blooded, überfish with horizontal stabilizers jutting from the caudal peduncle, fins that fold into groves during speed bursts of 55 mph, double-hinged jaws that swing the mouth out as well as open and immense gills through which water is not pumped, as with lesser fish, but pushed by forward motion as with ramjets. No finer fly-rod fish swims. Our bluefin summer of four years ago could be an annual event. But now that great year class has been fished down; survivors weigh between 150 and 200 pounds; and thanks largely to longliners there are few fly-rod-size fish coming along.

For this we can offer special thanks to ICCAT, a sorry gaggle of fish-mongers and politicians derisively and deservedly called the "International Commission to Catch All the Tunas."

"It's time to try something new," remarks Pew's Lee Crockett. "ICCAT has done a terrible job. Do you keep banging your head against the wall with these guys or do you try something different? Maybe a CITES listing is the club you need to get their attention." Dr. Russell Nelson, who on Gulf of Mexico tuna issues works for the Coastal Conservation Association, calls the CITES proposal "an acknowledgement of the failure of ICCAT to take sufficient actions to reduce bluefin tuna harvest, especially of eastern stock."

It's not as if a ban on longlining is going to be a major hardship for the commercial-fishing industry. Longlining was never an easy way to make a living; and, as it has fished down the food chain, profits have dwindled. Currently the average Atlantic longliner loses \$7,000 a year. And there are plenty of safe alternatives that will protect the resource for everyone, including commercial fishermen.

"Greensticking," for example, is a selective and extremely efficient method of trolling for tuna developed by the Japanese in the early 1980s. The fiberglass or graphite stick (originally green but now any color) elevates and tows a heavy "bird" about 400 yards behind the boat. The bird has the dual function of serving as a teaser and keeping the mainline taught so the attached squid lures can properly fly in and out of the water. Airborne tuna blast them, break the "tag line" from the stick, and are then winched to the boat.

The old harpoon fishery for swordfish and bluefin tuna produced a much higher catch than longlining does today. Longlining may be more efficient than harpooning or even greensticking when populations are healthy, but the point is this: It makes populations unhealthy.

That helps no one and hurts everyone.

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