

A world without tuna?

The world's appetite for sushi is threatening to wipe out the 'tigers of the sea.'

What's happening to bluefin tuna?

They're nearing extinction. The World Wildlife Fund recently predicted that if current fishing trends continue, bluefins could virtually disappear from the Atlantic by 2012. The species' global spawning stock is now down to as little as 5 percent of its 1940s levels. Over the past 50 years or so, the adult bluefin population in the Eastern Atlantic and Mediterranean has fallen 74 percent. The situation is even worse in the Western Atlantic, where the spawning stock is down 82.5 percent. And the fish that are being caught are smaller than ever; the average weight of a tuna caught in the Mediterranean has dropped from 275 pounds to about 143 pounds. While concerns have also been raised about the stocks of other tuna species—including yellowfin, skipjack, and albacore—the bluefin is by far the most imperiled.

Why is this happening?

Two reasons: Sushi and sashimi. People have enjoyed tuna since antiquity; Aristotle mentioned the bluefin in his *History of Animals* around 350 B.C., and Roman soldiers carried bluefins' dried flesh and eggs in their mess kits. But for centuries tuna weren't widely consumed, largely because of the problems associated with bringing them great distances to market before they spoiled. Before World War II, most tuna were considered "garbage fish" and thrown away, even in fish-loving Japan. But after the war, flash-freezing and other preservation methods permitted bluefins to be consumed while still fresh-tasting. The bluefin's popularity exploded about 25 years ago, when the sushi craze went global. In fact, the sushi and sashimi industry now accounts for 80 percent of the world's bluefin catch. The advent of the modern "tuna ranch" about a decade ago has greatly accelerated the bluefin's collapse (see box).

Why is it so popular?

It has the misfortune of being delicious. Bluefin tuna is a far cry from the run-of-the-mill yellowfin, skipjack, or albacore tuna that end up in your sandwich at lunch. Popularly known as "tigers of the sea," bluefins grow up to 12 feet long and weigh as much as 1,500 pounds. Unlike most fish, they are warmblooded, and their superbly hydrodynamic bodies are capable of maintaining an internal temperature of 80 degrees Fahrenheit. The result is a uniquely rich, red, buttery underbelly, known as *toro*, that sushi fanatics prize above all other fare, and that proved highly popular in postwar Japan, when people began eating a more Westernized diet, especially fatty red meat. Today, a single bluefin can fetch up to \$100,000 in Tokyo, making it



Disappearing delicacy: A recent bluefin haul in Italy

one of the most expensive foods on earth. "If you have good tuna," says Izumi Niitsu, who manages the Tokyo restaurant Kihachi, "you have a reputation of being a proper restaurant."

Aren't there quotas on bluefins?

Yes, but they are largely ineffective. Since 1969, the 48-nation International Commission for the Conservation of Atlantic Tunas (ICCAT) has set voluntary limits on catches and on the duration of the tuna fishing season, and has monitored fish stocks. Last year, the agency cut the annual catch limit to 22,000 tons, down from 28,500 tons. But ICCAT's own scientists had called for a 15,000-ton limit to provide the

minimum threshold of sustainability. Critics charge that the commission routinely ignores such expert advice, relying instead on data provided by the tuna industry. "The organization is totally dominated by commercial companies," says Paolo Guglielmi of the World Wildlife Fund, "and is refusing to take any action to stop the catastrophe." Conservationists like to joke that ICCAT really stands for "International Conspiracy to Catch All Tuna."

How big a problem is poaching?

It's a major source of concern. Experts say that as much as half of each year's bluefin haul may be illegal, unreported, or unregulated. Because tuna are open-water creatures, they range far beyond international boundaries and the reach of the law. So rogue vessels often brazenly catch and sell bluefins at sea, evading port controls. The business is so lucrative, in fact, that fishermen can make as much in one month of bluefin fishing as they can in a year of other kinds of fishing. There's little that ICCAT can do, since it doesn't have the power to punish poachers.

So what can be done?

The only viable action, many experts say, is an outright commercial ban, much like the ones that have at various times been imposed on cod, swordfish, and other threatened fish. In October, Monaco asked the U.N. to list the bluefin as officially endangered—which would lead to a ban—but that move is expected to encounter fierce resistance, especially from Japan and Mediterranean countries. Meanwhile, conservationists are calling on restaurants to take bluefin off their menus. Some have done so, though many have not. The world-famous Nobu chain chose to add a note to its menu suggesting that because the bluefin is "environmentally challenged," customers should "Please ask your server for an alternative."

The problem with tuna 'ranching'

Faced with declining bluefin populations, the fishing industry in the 1990s developed "tuna ranching" as an alternative. The process has only further devastated the species. Tuna ranches consist of huge circular nets anchored at ports in the Mediterranean, Mexico, Australia, and Japan. There, bluefins are glutted on mackerel, sardines, and pilchard until they are fat enough to be slaughtered. The problem is that when the bluefins are initially captured in nets in the open ocean, many younger specimens get swept up. Like the older tuna, they are usually killed and eaten within six months—too little time for them to reproduce. "It's like having a bank account, and you keep taking much more out than you're putting in," says French marine biologist Jean-Marc Fromentin. The Ocean Conservancy's George Leonard calls tuna ranching "the least sustainable form of aquaculture on the planet."