

NATURAL SELECTIONS

Tuna's just too cheap

Japanese appetites are set to eat these fish to the brink of extinction

By ROWAN HOOPER

A prime slice of fatty, creamy *otoro* — belly-meat of Bluefin tuna — isn't cheap. These days in Tokyo, you can expect to pay at least ¥10,000 (\$100) for a goodly portion of the stuff.

As supplies dwindle, prices of tuna have been going up, and if fuel prices continue to rise — meaning that year-long fishing trips by ocean-going boats out of Japan become less frequent — then the price of the fish will rise further, too.



Sea changes: An abandoned tuna factory on the west coast of Sicily
ROWAN HOOPER PHOTOS

But I think tuna should be even more expensive.

In 2001, a 202-kg Bluefin tuna was sold at Tokyo's Tsukiji market (the biggest fish market in the world) for ¥20 million. That's the sort of price we should be paying.

Stocks of this fish are being severely depleted, and we should have to pay more if we want the privilege of dipping sashimi slices of their meat in soy sauce and purring with pleasure as we savor the taste and texture.

I was in Sicily last week, the largest island in the Mediterranean, where once a year they still perform a centuries-old tradition: the *mattanza* (ritual tuna slaughter).

The fish are herded, using boats and nets, into an enclosed space, named the *camera della morte* (chamber of death). In scenes reminiscent of the "drive- fisheries" that dolphin slaughterers carry out

every year from September until spring in Taiji, Wakayama Prefecture, the huge fish are impaled with hooks, dragged aboard the boats and killed.



The village of Scopello, built around a tuna factory that operated for 700 years until the 1980s

Of course, these are "only" fish (as opposed to dolphins, which are mammals), so there isn't a public outcry about the mattanza being barbaric. Another difference is that sometimes the tuna drives don't yield any fish: the nets are

hauled in empty.

Once upon a time — but well within living memory — Bluefin tuna weighing up to 300 kg were caught off Sicily. Now, though, those days are long gone and the mattanza has become largely a tourist attraction.

So what happened?

How did a sustainable, 900-year-old tradition end up being a mere tourist attraction that sometimes doesn't even pull in any fish?

Much of the blame must be laid on the change to year-round industrial-scale fishing using long lines and indiscriminate drift nets. And much of the demand for tuna driving these practices came from — and still comes from — Japan.

Despite well-founded fears about mercury levels in tuna, flesh from the "black diamonds" of the sea is as popular as ever in Japan. In 2005, Japanese diners munched through 27,000 tons of tuna from the Mediterranean alone, and the country accounts for 40 percent of all Bluefin tuna caught every year worldwide — and about 25 percent of all species of tuna.

And here's one last stat to chew on: Japanese men consume an average of 100 grams of fish every day from early in life. Meanwhile, Americans typically eat fish less than twice a week. The high levels of seafood intake may explain the puzzlingly low rate of heart disease in Japan compared with other developed countries, despite Japan's high level of smoking.



The writer at the helm off the Zingaro Nature Reserve

But any beneficial effect on human health from eating seafood (long-term mercury damage apart) comes at an environmental cost when so many millions of fish are taken from the sea every year.

In Sicily, I rented a boat with my friend and motored in it past now-deserted *tonnaras* (tuna-processing plants) along the west coast. You'd never think a fish-gutting factory could be so picturesque.

Much of the coast is part of the Zingaro Nature Reserve, Italy's first national nature reserve. I saw a pair of rare Bonelli's eagles, and a Swallowtail butterfly, quite far out at sea. But what I really wanted to see — on the end of my fishing line — was a mackerel.

With the aim of having fresh sashimi, I trailed a line for hours — and caught nothing. The reason for my failure would be revealed only later in the afternoon, as we steered the boat home.

At the same time that I was sailing past abandoned tuna plants in Sicily — and failing to catch more than an old plastic bag — research was published showing some surprising patterns of dispersal of Bluefin tuna between the Atlantic and the Mediterranean.

This comes at an important time as new assessments by international scientists suggest that Bluefin tuna fishing is unsustainable at current levels, and some in the fishing industry dispute that.

The study, published in the journal *Science*, and led by Jay Rooker of Texas A&M University, shows that more than half of all the juvenile Bluefin tuna

collected in North American waters had a Mediterranean origin.

To establish this, the scientists examined the chemical composition of the fishes' ear bones — the otolith — and found that they have distinct carbon- and oxygen-isotope ratios depending on where the fish was spawned. The ear bones serve as a "birth certificate," said Rooker.

"North American fisheries for juvenile Bluefin tuna appear to be supported to a large degree by the Mediterranean population, and thus the condition of the Mediterranean population will directly impact recreational fisheries for Bluefin tuna in U.S. waters," Rooker said.

In other words, the already-depleted Mediterranean fish stocks are subsidizing U.S. fisheries as well.

Disheartened by not having caught our mackerel, we headed home — only to encounter a pod of at least eight Bottlenose dolphins jumping high and spouting water from their blow-holes.

Though cheered as you cannot help but be when you see dolphins, it made sense when the boat owner told us later that when dolphins are around you often don't catch fish, as the fish stay away from the coast and are wary.

Maybe some of the big fishing boats should stay away too.

The second volume of Natural Selections columns translated into Japanese is published by Shinchosha at ¥1,500. The title is "Hito wa Ima mo Shinka Shiteru (The Evolving Human: How New Biology Explains Your Journey Through Life)."

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