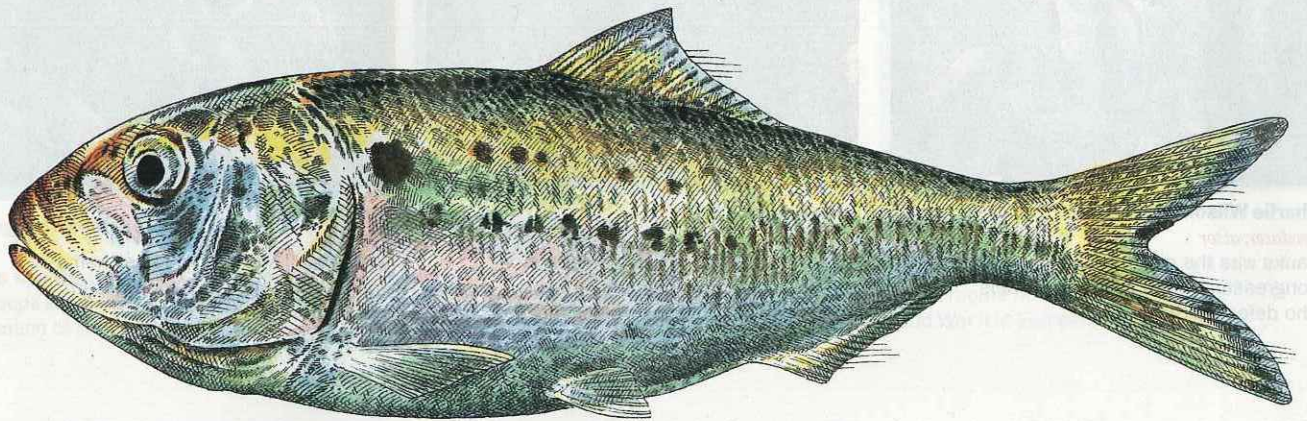


The Trouble with Fish Oil. It may be good for humans, but it's threatening a species that is vital to the ocean's health

BY TIM PADGETT



THE APPETITE FOR OMEGA-3 fatty acids—hailed by studies as a weapon against ailments from heart disease to Alzheimer's to depression—appears to be endless. Since 2006, the U.S. market for omega-3 supplements has doubled, to an estimated \$1 billion, and that doesn't count the billions of dollars more that consumers paid for infant formula, orange juice, breakfast cereals and a host of other products that have added these wonder nutrients.

But is the fatty-acid craze threatening our ecosystem? The best omega-3 source is oily fish like salmon, mackerel and sardines. Environmentalists fear that some species—especially a small filter feeder called menhaden, which plays a critical role in the aquatic food chain—are being overfished for oil supplements. Bigger fish prey on menhaden, which eat omega-3-rich algae and in doing so clean the ocean waters off North America's Atlantic and Gulf coasts. By filtering up to 7 gal. (about 26 L) per min., menhaden help prevent oxygen-depleting algal

blooms that lead to underwater dead zones.

Although few Americans have heard of menhaden, its protection is a big enough worry that 13 of 15 Atlantic states have banned from their waters the fish-oil company that catches 90% of the country's menhaden. The Houston-based Omega Protein insists the menhaden population is healthy. But while the Atlantic States Marine Fisheries Commission says menhaden don't yet face overfishing on a coastal scale, it is limiting the industrial harvest of the fish in Chesapeake Bay, hard hit of late by dead zones. "The devastation of the marine environment has to be taken into account," says H. Bruce Franklin, a professor of American studies at Rutgers University and the author of a recent book on menhaden, *The Most Important Fish in the Sea*.

The declining menhaden population isn't the only concern swimming around fish-based omega-3 supplements. Mercury consumption is another, as are the needs of vegetarians. The good news there is that plant sources like flaxseed and canola oils have one



OMEGA-3

Demand for fatty-acid supplements could lead to overfishing of the ocean-cleaning menhaden, above



GREENER OPTION

A combination of algae and seed oils may pack almost as big an omega-3 punch

of the omega-3 fatty acids, alpha-linolenic acid (ALA). The bad news is that they don't contain docosahexaenoic acid (DHA) or eicosapentaenoic acid (EPA), the more important omega-3 nutrients. Our bodies can convert ALA into DHA and EPA, but the process is limited and slow.

A more efficient source of omega-3s is emerging, however, and it's made straight from the algae that give menhaden and other fish so many healthful fatty acids. Maryland biotech company Martek, which farms myriad algal strains in massive tanks, is marketing life'sDHA, an algal omega-3 supplement rich in DHA, which is especially beneficial to the brain.

Martek and others are also developing oilseed-algae hybrids that are packed with a larger array of fatty acids, according to Adam Ismail, director of the Global Organization for EPA & DHA Omega-3, a Salt Lake City trade group. "This is a really interesting new area we're heading into," he says. And given consumer demand for omega-3s, it's likely to be a booming one. ■