Study Finds High Metal Pollution In New York Water Bare of Fish

A study by marine scientists has found that two bodies of water in the metropolitan New York area—the apex of the New York Bight and Long Island Sound—are contaminated by "extraordinarily high levels" of heavy metals.

The findings, which report contamination as much as several thousand times the norm, follow reports by sports and commercial fishermen of nearly barren inshore fishing grounds that contributed to the worst summer of fishing in memory.

These accounts of murky, stained waters and the lack of bottom life have prompted a Federal agency to undertake the first study of fish that live along the inshore bottom, such as porgies, seabass and fluke.

Although the Environmental Protection Agency is supposed to end coastal pollution by 1981, there is widespread concern that this deadline will not be met by industries and municipalities because of the high costs involved in converting to land disposal of wastes.

Legal Action Supported

However, marine scientists support the proposal by the Mid-Atlantic Regional Fishery Management Council, the Federal group responsible for preserving local fish stocks, to force an end to pollution by court order, if necessary.

The bight, bounded by New Jersey and Long Island with New York City at the apex, is the most urbanized coastal ocean in the world. Fishermen contend that nearly one-fifth of the bight's 15,000 miles was nearly devoid of fish last summer. They say the accelerated pollution of inshore waters threatens their $340-million-a-year industry.

A recent study by laboratories of the New England Fisheries Center at Sandy Hook, N.J., shows that toxic heavy metals like mercury, cadmium and lead, along with oils and PCB's (polychlorinated biphenyls), are presenting a deadly threat to the marine environment.

There has been a "tremendous" drop in the amount of bottom-dwelling organisms, while at the same time there has been a "tremendous" increase in heavy metals," said Dr. Jack Pearce, chief of the laboratory's division of environmental assessment.

Heading out to sea around Sandy Hook, the scientists found "extremely large amounts" of copper in the water. The amounts seem minuscule, 60 parts per billion—but according to Dr. Pearce, this is "more copper than is measured in any water anywhere in the world." It is having an adverse affect on the growth of fish larve and eggs, he said.

Surveys of sediment in the New York and Raritan Bays and Long Island Sound showed the presence of heavy metals in such high amounts that they were contaminating the marine food chain and, in some cases, wiping out certain organisms altogether. In the Sound the greatest concentrations were found in the more industrialized western end, but high readings were registered throughout.

'Like a Cancer Spreading'

"Although we've upgraded our sewer treatment plants in the past 15 years, the inshore bays continue to deteriorate," continued Dr. Pearce. "It's like a cancer spreading out from the coast into the ocean."

Normally one to three parts per million of copper or lead, for instance, are found in bottom silt, he said. The scientists found readings of 100 to 800 parts per million of just one metal.

"When you add all the metals together, you're getting several thousand parts per million," he said. "This is extraordinarily high."

One change in Raritan Bay illustrates the damage being done. Fifteen years ago the bay was loaded with small, shrimp-like animals that lived along the bottom. They were the principal food for important fish stocks, such as striped bass and flounder. The Sandy Hook investigations show they are nonexistent now.

Both Dr. Pearce and another marine scientist, Dr. Joel O'Connor, agree that a sludge dump site offshore tends to be blamed for the contamination along the coastline. And they believe the greatest threat to the marine environment comes from the heavy metals, oils and PCB's.

These contaminants have "substantially modified communities of bottom organisms, which, in turn, are major sources of food for bottom fish," explained Dr. O'Connor, who is senior ecologist for the National Oceanographic and Atmospheric Administration's ongoing study of the bight. Through the food chain, bluefish, another major commercial and sport fish, is being contaminated by PCB's.

Dr. O'Connor, who works out of the State University of New York at Stony Brook, L.I., said he was initiating a study of bottom fish in the bight after following the fishermen's accounts of their scarcity.

For Warren Apel, there is nothing scientific or political about pollution. He views it as a thief stealing his livelihood. The owner of a 60-foot dragger operating out of Belford, N.J., Captain Apel found he couldn't make a living fishing in the bight. Now he is forced to go from Raritan Bay to the eastern half of the Sound.

"Porgies, weakfish and blues in the Sound are so light this year, it's disgusting," he said. "I made three straight trips in a row last month where I didn't make expenses. But it don't pay to fish locally."

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