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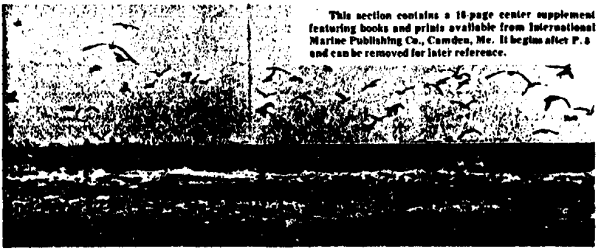
PCBs In Hudson River Stripers Point Up Contamination Hazards

Section B

This section contains a 16-page center supplement featuring books and prints available from International Marine Publishing Co., Camden, Me. It begins after P. 8 and can be removed for later reference.



Birds Hover For Their Share As Bass Drive Bait To The Surface.

The pervasive contamination of our waterways by polychlorinated biphenyls (PCBs) has been very much in the news in recent months. Thanks to mounting pressure from both government and private sources, it now appears that its manufacture and use may be phased out in the next few years. The danger inherent in PCB pollution is well shown in its effect on striped bass, one of the most important sport and commercial fish on the Atlantic coast. The center of this most recent storm is the Hudson River, as detailed by NF Special Correspondent Chuck Meyer, Ed.

By Charles R. Meyer
Special Correspondent

Of recent years, New York State might aptly be described as "the battleground of the striped bass" with the latest skirmish being fought between Commissioner Ogden R. Reid of the State Dept. of Environmental Conservation and the General Electric Corp. over toxic contaminants, chiefly polychlorinated biphenyls (PCBs).

Briefly, the state claims that General Electric is discharging chemicals into the Hudson River from plants at Fort Edward and Hudson Falls, about 50 miles north of Albany, and that these wastes make the fish unfit for human consumption by violating water quality standards.

Most disturbing to the commercial market, scientists have discovered high levels of PCBs in striped bass taken near the Tappan Zee Bridge, less than 30 miles north of New York City, and certainly on the migratory route that extends eastward through Long Island Sound to the Atlantic.

As reported by "The New York Times," the present furor actually started last Aug. 6 when Commissioner Reid, joined by Dr. Robert Whelan, the state health commissioner, warned consumers not to eat striped bass taken from the Hudson River or salmon caught in Lake Ontario after levels of PCB were found to exceed federal standards. The federal government says that stripers and other food species that contain more than five parts of PCB per million are unfit for human consumption and should not be shipped in interstate commerce.



SMALL STRIPERS swarm in the Hudson River, one of the main spawning grounds for the fish in the East.

—Photos by Charles R. Meyer

If they're correct, at least as far as New York State is concerned, it is most interesting to note that Washington's researchers have documented rock bass with as much as 300 parts of PCB per million near the two General Electric Company plants at Fort Edward and Hudson Falls. Commissioner Reid has data in Albany indicating high PCB readings in Ontario salmon from the years 1970 and 1972.

The state environmental department's files also contain 1972 reports indicating high PCB readings in largemouth and smallmouth bass, pike and sturgeon taken in the mid-Hudson area. An American Museum of Natural History scientist has been quietly investigating hybrid tern births and subsequent deaths of sea birds in the area around Great and Little Gull islands on the eastern tip of Long Island just beyond Orient Point – and come to the tentative conclusion that the terns are absorbing potentially lethal and perhaps sterilizing doses of PCB through baitfish they consume: the identical baitfish eaten by such seasonal fish as striped bass and bluefish.

In total, taking the results of all the admittedly inconclusive and fragmentary tests done to date, more than half the fish tested contained PCB in excess of federal health standards!

There have been warnings, largely ignored, from private citizens as well as various government agencies. Robert H. Boyle, a noted conservationist and senior writer for the national magazine, "Sports Illustrated," wrote to Carl Parker, then chief of the state environmental department's Bureau of Fisheries on Feb. 17, 1971, informing him that he had shipped six Hudson River striped bass to the Warf Institute in Madison, Wis., for laboratory analysis. Boyle informed Parker that the tests showed 11.4 parts per million of PCB in the striper eggs and 4.05 parts per million in the flesh.

"These are grim figures and I certainly think the state should warn fishermen not to eat striped bass eggs," said Boyle.

He received the usual, noncommittal and typically bureaucratic acknowledgement of his letter containing the findings and then heard nothing more on the subject until recently when the agency requested another copy of the original communication, claiming it could find no record of it in its files. Boyle complied.

Meanwhile, the sole manufacturer of PCB in this country, the Monsanto Chemical Co., has provided a listing of its local customers. According to a summary published in the Aug. 17 issue of "The New York Times," "In 1974, the two General Electric plants in question purchased 5.7 million pounds of PCB. State officials believe that the company dumped an average of 30 pounds a day into the river during the year. The amount has reportedly been reduced this year.

"The company has the right to dump PCB into the river by virtue of a permit granted it by the Federal Environmental Protection Agency. One environmental group, the Hudson River Sloop Restoration, Inc., says its research shows that the permit virtually gives the company the right to dump as much PCB as it wants into the river.

"Thus far, only General Electric has been documented as putting PCB into the Hudson. However, other companies are buying large amounts. The companies and their 1974 purchase figures are as follows:

"Niagara Transformer Corporation, Buffalo, 440,000 pounds; York Capacitor of Brooklyn, 300,000 pounds, R.F. Interonics of Bay Shore, 11,000 pounds; and Axel Electronics of Jamaica, Queens, a subsidiary

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ONE OF THE BIG ATTRACTIONS of striped bass is that it grows to large size and, being an inshore fish, is readily caught by sport fishermen and beach netters, both of whom sell on the commercial market. Gulls and other sea birds may be affected by PCBs.

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of the General Signal Corporation of 268 Park Avenue in New York City, 5,500 pounds."

Information Scarce

There is no information presently available indicating how these other companies are disposing of their waste PCBs nor of firms in neighboring states who may be using polychlorinated biphenyls in various manufacturing processes and their waste-disposal methods.

Nevertheless, it seems patently obvious that the sea birds surrounding Great Gull Island in the Long Island-Block Island Sound areas are not picking up their dosages of PCB from dumpings in the Hudson. Even more disturbing is the glaring lack of any concentrated effort by the bordering states to discover exactly where the chemical pollution originates.

In the October 1975 issue of the monthly "New York State Environment," published by the N.Y. Dept. of Environmental Conservation, an updated front page story states, "commissioner Ogden Reid has announced that the Department will seek an abatement order requiring General Electric to reduce discharges of the toxic contaminants polychlorinated byphenyls (PCBs), from its manufacturing facilities to two pounds daily by December 31, 1975, and to achieve zero discharge by September 30 of the next year.

"The proposed order would also require GE to eliminate PCB discharges from all sources on their premises. These sources include residual PCBs in the ground, built up over the years, which leach from the soil in wet weather. The order would require GE to take steps to restore the Hudson and clean up contamination caused by the company practices of the past.

"To insure compliance with the order, the Commissioner is asking that GE post a minimum compliance bond of $2 million," since the continuing discharges present a "...hazard to human health and the natural resources of New York State likely to cause irreparable damage to the Hudson and likely to result in substantial injury to the river's commercial and recreational fishery."

Further, the publication bluntly states, "Fish contaminated with the chemical substance have been discovered by Department personnel in several waters, including the St. Lawrence River, the Mohawk River, Lake Champlain, Lake Ontario, and even Lake George."

On a country-wide scope, with the object of getting a broader picture of PCB problems throughout the nation, 40 of the country's top scientists gathered in Albany on Sept. 11 and compared notes and research findings. Some of the scientific groups represented at the conference were the U.S. Environmental Protection Agency's Duluth National Water Quality Laboratory; New York State EPA's Office of Toxic Substances and its Region II office; N.Y. State Health Dept.; N.Y. Gov. Hugh Carey's Office; Mich. Dept. of Natural Resources; Boyce Thompson Institute; Hudson River Sloop Clearwater; National Audubon Society; New York City's Medical Examiner's Office and others.

Another meeting devoted to PCBs was held in Chicago on Nov. 18 through 20, sponsored by

the U.S. Dept. of Health, Education and Welfare, the U.S. Environmental Protection Agency and the Council on Environmental Quality.

Legislation is now pending in the Congress which will ban certain toxic substances, including PCBs, enabling control of such problems directly at the production level — in this case the Monsanto Chemical Co., but there is no present guarantee that these new restrictive measures will be passed or that anyone knows how much *damage has already been done.* It appears much similar to the case of locking the barn door after the livestock has largely departed — similar to declaring a 200-mile limit on fisheries control offshore after many of the grounds have been decimated.

More Monitoring

Regarding New York state, Commissioner Reid recently stated, "We have 30 sampling stations on line and this will be expanded to 100. We will be monitoring on a continuing basis in the Hudson, St. Lawrence, Mohawk rivers, and Finger Lakes, Great Lakes, marine coastal areas and other important waterways in the state."

The department apparently is also studying the problem of PCBs leaching (seeping) from landfills into the ground water, especially in wet weather, and thus contaminating ground water supplies.

Extensive testing at all major landfill sites in Nassau and Suffolk counties on Long Island has already been initiated to test for PCB content in leachate. A proposal is also being prepared for a joint DEC/USGS investigation. The two counties are also setting up schemes for monitoring with observation wells to test the ground water. Commissioner Reid has also discussed the possibility of having the New York City medical examiner's office check for PCBs in autopsies.

In yet another project, the DEC staff is considering a pilot program which may use aquatic plants and marsh grasses to rid state waters of PCBs through absorption and metabolism.

An overall proposed $1.1 million expanded program of stream monitoring and water testing will instigate more detailed biological water and sediment analyses and research into heavy metals, toxic substances and trace metals including PCBs, mercury and other substances. At least five agencies — the DEC, EPA, the Federal Food and Drug Administration, N.Y.S. Health Dept., the federal National Oceanographic and Atmospheric Administration — as well as agencies in other states, are launching into this widespread problem.

Referring to PCBs as a complex, not easily solved problem, Commissioner Reid said, "This could become the work of decades."

Wasted Effort?

From the viewpoint of a fisherman, it could also become a massive duplication of effort and waste of the taxpayers' monies which could be prevented by initially monitoring the production of chemical companies, determining what their products do to fish and the environment, and then refusing to permit initial manufacture.

To achieve this result, it is distinctly possible that opposing factions like New York's commercial and sport fishermen may be forced to band together for their mutual benefit. They might, once combined, help ban PCB as is presently the case in both Canada and Britain.

Indicating growing concern that the problem is distinctly more than regional, officers of the Striped Bass Fund are calling on the federal government to embark on a crash program to collect data on striped bass in the Northeast as *quickly as possible.* The fund fosters research to protect striped bass fisheries, and its executive director, Rod Vandivert, said, "If this isn't done the announcement will clearly affect the entire coastal economy."

There will be formidable *pressure groups lobbying* to continue the use of PCB since the chemical is used in the manufacture of plastics, paints, electrical transformers, printing ink, caulking compounds and hydraulic fluids. Not using PCB would cost them money. The safe disposal of PCB would be expensive and time consuming, according to industry spokesmen.

Robert Paul, a GE community relations official, recently said, "We don't *put* PCBs *into* the Hudson River intentionally. But we live in a real world, and it's going to take time to solve the problem."

Similar in molecular structure to the more well known DDT pesticide, PCB is not readily soluble in water but is highly soluble in fats. Like DDT, it is a chlorinated hydrocarbon. The late writer, Rachel Carson, sounded a conservationist's warning on the dangers of chlorinated hydrocarbons to all forms of life back in the early 1960s. Only in the last five years, however, has a broad spectrum of the scientific community and various fisherman's groups begun to warn of the PCB peril.

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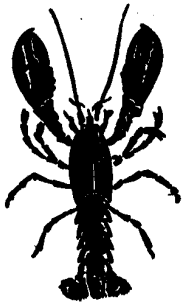
Long-Term Effect

In 1971, for example, the presence of PCB in Lake Michigan virtually ended that waterway's role as a major commercial fishery. It is not beyond understanding that increasing pollution along coastwise rivers and estuaries might do the same for such inshore migrants as the striped bass.

And because the Toxic Substances Control Act has not yet been acted on by Congress, although it has been pending for more than four years in Washington, D.C., the federal government lacks the power to emulate such nations as Canada and Britain and ban PCB entirely.

Robert Paul was right when he stated that we live in a real world but it is also a very strange world. Sometimes, it appears that our elected and appointed officials are our own worst enemies — and certainly the enemies of the fish in the sea.



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