

## 3 Fish Caught Near a Battery Factory on the Hudson Contain Up to 1,000 Times Normal Cadmium

By RICHARD D. LYONS

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WASHINGTON, June 12. — Three fish caught near the outwash of a federally built battery factory on the Hudson River have been found to contain up to 1,000 times as much cadmium as might normally be expected, a Senate subcommittee reported today.

The case is believed to be the first instance in which the heavy metal has rendered fish unfit for consumption in the United States.

The fish were caught last month in Foundry Cove, near Cold Spring in Putnam County, and tested at the Trace Element Laboratory at Dartmouth College, which relayed the data to the Senate environmental subcommittee, chaired by Philip A. Hart, Democrat of Michigan.

The factory, originally built for the Army Corps of Engineers, initially operated for the Federal Government, and currently owned by the Marathon Battery Company, was enjoined during the last year by a Federal court from dumping cad-

mium and other metals into the Hudson.

Still pending is a second Federal suit that seeks to have the present, and perhaps previous, owners clean up cadmium and nickel deposits up to 4 feet thick in the cove.

Commenting on the discovery, Senator Hart said it would be dangerous to draw too many conclusions from a catch of only three fish.

The fish were caught by David Seymour, an official of the National Audubon Society,

and Robert Boyle, a writer for Sports Illustrated magazine. The fish were a bass, a silver dace and a carp.

Mr. Seymour said he and Mr. Boyle had set out to determine what effect the cadmium had on the marine life in Foundry Cove because it was known to have been heavily contaminated by cadmium and nickel for several decades, since the factory made nickel-cadmium batteries.

The fish were sent to Dr. Henry A. Schroeder, professor of physiology at Dartmouth. Dr.

Schroeder said an analysis had found 11.22 parts per million of cadmium in the bass, 7.6 parts per million in the dace and from .67 to 20.44 parts per million in the carp.

Dr. Schroeder said the normal, or "background," level of cadmium in fish is about 0.02 parts per million.

"The silver dace and the bass should be considered unfit to eat on the basis of their cadmium content," Dr. Schroeder said. He added that the carp was "questionably edible," al-

though he noted that few persons would eat the innards of the fish, which had the highest concentrations of cadmium.

The fish appeared to be in good condition, despite the cadmium levels, although the liver of the carp appeared to be "degenerate," Dr. Schroeder said.

High cadmium levels in humans may cause liver damage, as well as high blood pressure, hardening of the arteries and pains similar to rheumatism. The most famous case of cad-

mium poisoning occurred in Japan in the nineteen-fifties when over 100 persons died after eating rice irrigated by water from the cadmium-polluted Jintsu River.

Cadmium intoxication is relatively rare in the United States, occurring mainly among workers in smelters, mines and plating factories.

The Food and Drug Administration, which has set tolerance levels for mercury in fish of up to 0.5 parts per million, has not acted on similar levels for cadmium. An F.D.A. spokes-

man said that the agency has been working on the problem for eight months and that "we expect to establish a guideline as soon as we can get the necessary data to support it."

The Federal suit against Marathon Battery was one of the first filed under the Federal Refuse Act of 1899. The company, which bought the battery factory several years ago, installed a filtration system last year that has stopped the dumping of cadmium into the Hudson.