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Despised Alewife a Culprit Again



An alewife

By Thomas J. Hagerty
Journal Environmental Reporter

The lowly alewife is being blamed for more environmental mischief.

The small, silvery ocean fish, long despised for its periodic dieoffs that foul beaches, is the source of high concentrations of the toxic industrial chemical polychlorinated biphenyls (PCBs) in Lake Michigan's big predator fish, a University of Wisconsin — Madison water chemistry professor said Tuesday.

David Armstrong, speaking at the University of Wisconsin — Milwaukee, suggested that getting rid of the alewife would improve Lake Michigan's prospects for recovering from PCBs even though sediments would remain a nagging problem. His talk was the fifth in a series of nine UW Sea Grant lectures at UWM this semester.

Lake trout and salmon would contain less of the dangerous chemical if they ~~ended~~ on smelt, since the alewife eats more than the smelt, the professor said.

Armstrong calculates the average PCB concentration in an adult alewife at 8.5 parts per million and in a grown smelt at 2 ppm.

Nearly all of the PCBs in the big fish are acquired in the food chain, Armstrong believes.

Which leads him to wonder whether an extensive alewife harvest, letting smelt take over, wouldn't be a good way to reduce PCBs in the big fish and improve the sports fishery.

"It's nice to think about, but it could be too costly," he conceded.

In less than a decade, Lake Michigan fish would shake off most ill effects of the chemical — but only if all PCB contamination stopped, Armstrong said. Concentrations in salmon and lake trout, now as high as 15 ppm, would drop off 50% in seven years if we added no PCBs, he said.

With a rebound like that, the human consumption advisory for salmon and lake trout could be lifted.

However, it's unlikely that we can stop putting the chemical into the lake, Armstrong cautioned. The largest share gets there from the air, rather than from easily controlled sources, he said.

Armstrong's predictions are contained in computer calculations based on the theory that PCBs mirror DDT in their behavior and distribution in the water, sediments and fish. After DDT was banned, it quickly left the Lake Michigan food chain.

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