

Study finds contaminants in bird eggs across Maine

BY JOHN RICHARDSON

Blethen Maine Newspapers

The eggs of birds across the state, from bald eagles and loons in northern Maine to ospreys on the South Portland waterfront, contain a soup of industrial chemicals, according to a study to be presented in the Legislature today.

The Gorham-based BioDiversity Research Institute tested eggs from 23 different kinds of birds and looked for more than 100 toxic pollutants, including pesticides, mercury and carpet stain repellents. It's the first study anywhere to provide such a broad snapshot of toxic contaminants in the food chain, according to Wing Goodale, the lead researcher.

"We found all the major contaminants we looked for in every species, in every habitat," Goodale said. "We found all of the compounds in the wild and we found many of them above levels that research has established can cause effects."

Some of the chemicals were found in quantities that have affected animals in laboratory studies. But more research is needed to find out if the pollutants are harming the birds or their eggs.

"Across the country and across the world, we're finding a lot of things we use daily in our lives are getting out into our environment," said Barry Mower, a toxics researcher with the Maine Department of Environmental Protection. "We ought to be looking more closely at some of these species."

The study found that:

- n Contaminants are present in eggs from even the most remote parts of the state, indicating that much of the pollution arrives with prevailing winds before settling in the environment.

- n Populated areas have the highest levels of contamination, evidence that local sources such as urban runoff or smokestacks also contribute.

- n Top predators such as eagles and peregrine falcons had the highest levels of contaminants, while terns and red-winged blackbirds had some of the lowest levels. The piping plover, a shorebird that eats invertebrates from coastal mud flats, ranked among the top five, a finding that researchers can't yet explain.

- n Chemicals used for such products as stain-resistant carpets, called perfluorinated chemicals, or PFCs, were found in bird eggs for the first time.

- n Contaminants banned decades ago, including the pesticide DDT, are still present in the food chain, but at levels that continue to decline.

The study has yet to be formally reviewed by other scientists or submitted for publication. State and federal experts who worked with Goodale on the project said the findings are consistent with their own research of individual species.

"Basically, we find the same range of contaminants," said Steve Mierzykowski, a researcher with the U.S. Fish and Wildlife Service. Goodale tested a total of 60 eggs collected around the state last summer by researchers surveying different bird populations.

In some cases of rare or protected birds, such as bald eagles and loons, eggs were only collected after it was clear they wouldn't hatch. In other cases, the eggs were taken before they hatched.

The eggs were kept sterile, frozen and sent to a lab for testing. The study cost \$75,000, and Maine's DEP contributed \$16,000.

While it will take more research to know for sure, Goodale said it's likely some of the more concentrated compounds -- or combinations of them -- are affecting birds, perhaps making it more difficult for the birds to raise their young.

And, he said, the widespread exposure in the wild adds to concerns about human health.

"I am absolutely convinced I have all these toxins in myself," he said. "I'm starting to really wonder what other compounds are out there."

Goodale is scheduled to present the findings to Legislature's Natural Resources Committee at 1 p.m. today.

Last year, Maine's Legislature banned the sale of a fire retardant chemical, deca-PBDE, that was found in many of the eggs tested as part of Goodale's study.

Lawmakers are now considering a comprehensive proposal to monitor and regulate toxic chemicals used in household products that may get into the environment and threaten public health.

The institute is not taking a position on the legislation, Goodale said. Conservationists, however, are pointing to the research to support their call for more aggressive regulation.

Chemicals that accumulate in birds also will accumulate in people, according to Matt Prindiville, a lobbyist with the Natural Resources Council of Maine, who reviewed a copy of the report. A spokeswoman for the American Chemistry Council, an industry group that opposes the bill, could not be reached to comment on the study.

It has argued that the presence of trace amounts of chemicals does not mean they pose any threat.