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Mercury a concern in eagles

Raptors living in the Catskills face risks from coal-fired power plants

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Bald eagles have been making a soaring comeback in New York, becoming more common along lakes and rivers. But eagles living in the Catskills face a hidden danger carried on the wind from distant coal-fired power plants.

Eagles here contain more toxic mercury than those anywhere else in the state, according to a recent study from the Maine-based BioDiversity Research Institute and the state Department of Environmental Conservation.

One out of every four eaglets had elevated blood mercury levels from a diet of tainted fish, raising the possibility the birds could be at risk for reproductive or developmental problems. It is the first study of mercury exposure in the state's bald eagles. The study also found that a quarter of adult birds had elevated levels of mercury in their feathers, suggesting that the toxin builds up in the raptors faster than it dissipates.

"The average mercury level for eagle chicks in the Catskill Region — and especially those near the boundary of the Catskill Park — was comparable to levels found in regions associated with significant mercury pollution histories," said Chris DeSorbo, lead investigator of the study and director of BRI's Raptor Program. "The good news is that no eagle chicks outside the Catskill Region had mercury levels of concern."

DeSorbo said coal-fired power plants in the upper Ohio River basin are the most likely sources of mercury coming to the Catskills. Airborne mercury is carried by the wind and returns to earth in dry form, rain, snow and fog.

DeSorbo said it was "absolutely possible" that some mercury in the Catskills comes from local sources, like the Lafarge cement plant in Ravena, which is just to the northeast. The plant was the state's largest source of mercury recorded under the federal Toxic Release Inventory, and tests are currently being done there to determine what is responsible.

"Mercury does not dissipate equally across a landscape. There are certain areas that are disproportionately affected," he said. Mountains are particularly vulnerable because elevation causes air to rise and cool, which creates snow or rain that brings mercury and other pollution back to earth.

Under certain conditions, mercury can build up in waterborne plankton, as well as worms, insects and spiders. Animals that eat these organisms accumulate mercury in their own tissues, and on up the food chain until reaching top predators like bald eagles.

DEC advises children and women of childbearing age not to eat certain fish from Catskill and Adirondack waters, as well as the upper Hudson River from Corinth to South Glens Falls.

Some of the fish that adult eagles feed their young comes from New York City drinking water reservoirs in the Catskills. Mercury levels in the reservoirs are too low to threaten human health, DeSorbo said.

"Mercury is not an issue for people swimming or drinking the water. It needs to be magnified up the food

chain and concentrated before it is a danger," he said.

While the eagles' elevated mercury levels are a cause for concern, there is no evidence yet that the birds are in imminent danger, said Peter Nye, head of the DEC Endangered Species Unit.

"This report is a warning sign. We are not sure how much mercury it takes to hurt the eagles and their young," said Nye. "With this study, we are getting ahead of the curve if the mercury levels continue to rise."

DeSorbo said elevated mercury levels have been shown to reduce reproduction in common loons, an Adirondack icon.

In the Catskills study, researchers examined 65 eaglets and 37 adult eagles through samples of blood and feathers. Nye and other researchers climbed up into bald eagle nests to take blood samples from chicks during the late spring and early summer, when the birds were between five to six weeks old.

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New York's bald eagles

The use of the pesticide DDT and other environmental pressures all but eliminated the state's population of bald eagles by 1975. In 1976, the state started a program to reintroduce eagles into the wild.

Year Eagle chicks counted

1996 37

2006 172

2007 153

2008 188

Source: State Department of Environmental Conservation