

# Mercury Contaminates Eastern Songbirds

## Researchers Map "Hot Spots"

by Jennifer Uscher

On a ridge covered in pitch pines and blueberry bushes in New York's Shawangunk Mountains, researchers set up mist nets, catching a hermit thrush and common yellowthroat. The seemingly pristine setting of [Sam's Point Preserve](#), managed by The Nature Conservancy, masks the disquieting nature of the research: Blood and feather samples taken from the insect-eating songbirds reveal that mercury is accumulating in their bodies.

"Mercury contamination is like the DDT of the 21st century," says biologist Tim Tear of the Conservancy's Global Conservation Approach Team. "The more we look, the worse it gets." Most environmental research on mercury has focused on its increasing levels in aquatic ecosystems. But Tear and avian ecotoxicologist David Evers of the Maine-based BioDiversity Research Institute are showing that mercury is a growing threat on land as well.

Their work builds on a study, published in the March 2005 issue of *Ecotoxicology* and co-authored by Evers, that was the first to document the presence of mercury in four species of songbirds in the northeastern United States and eastern Canada. During the summers of 2005 and 2006, a Conservancy team took samples from 26 species of birds at several Conservancy preserves and more than 20 other sites throughout the Northeast and Southeast. One of the goals is to use the birds' blood mercury levels as a way of mapping contamination "hot spots," and, in turn, demonstrating the need for stricter mercury standards.

According to atmospheric studies, much of the mercury comes from coal-fired power plants in the Midwest and is carried on prevailing winds to the Northeast states, where it mixes with water in the environment and is converted to toxic methylmercury through bacterial activity. Scientists believe that methylmercury gets bound in the leaf litter of mountain forests, where it is consumed by insects that are then eaten by the songbirds.

So far, the team has found that of the 26 species in the study, those with the highest mercury levels, such as the wood thrush and Louisiana waterthrush, are experiencing the biggest population declines. The declines may not be caused by mercury alone, the researchers say. Acid rain also is affecting the chemistry of the ecosystem and thus the birds.

Charles Driscoll, an environmental engineer at Syracuse University, studies mercury cycling at some of the same Northeast sites alongside the Conservancy team. Says Driscoll: "Following up on the earlier study on mercury and songbirds and expanding it to more species is intriguing and much-needed work."

<http://www.nature.org/magazine/winter2006/misc/art19275.html>