



Hubbard Brook Research Foundation, Hanover, NH

For Immediate Release

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NEW STUDIES IDENTIFY CAUSES OF MERCURY POLLUTION HOTSPOTS

Acid Rain-Impacted Adirondacks are a Major Biological Mercury Hotspot

Syracuse, NY – Scientists released the results of two new studies today that identify five known and nine suspected biological mercury hotspots in northeastern North America and suggest that coal-fired power plants in the U.S. are major contributors. One of the biological mercury hotspots occurs within the Adirondack Mountains of New York. The studies are the result of a three-year effort by the Hubbard Brook Research Foundation (HBRF) and scientists from Syracuse and Clarkson Universities, and are the cover story of the January issue of the peer-reviewed scientific journal *BioScience*.

The HBRF team of 11 scientists used an extensive data base of more than 7300 samples to quantify mercury levels in fish, loons and other wildlife at specific lakes and reservoirs from New York to Nova Scotia. Statewide fish advisories are a blunt tool that are useful, but don't demonstrate just how severely polluted some waters really are. Dr. Charles Driscoll, a lead author of one of the studies and the University Professor of Environmental Systems Engineering at Syracuse University said, "We were surprised to find that the Adirondack Mountains of New York had some of the highest mercury levels in fish and loons in the northeastern United States." Driscoll added, "The average mercury levels in yellow perch were more than twice the EPA human health criterion. The high mercury contamination in fish is reflected in Common loons. In the central Adirondacks 25 percent of the loons sampled had mercury levels in their blood in excess of wildlife health thresholds."

The HBRF team linked the biological mercury hotspots to sources of mercury pollution and found that mercury emissions to the air are the leading cause. It appears that decades of acid rain have made the Adirondacks particularly sensitive to mercury pollution. According to Dr. Driscoll, "The Adirondack Mountains are getting a double-whammy from emission sources such as coal-fired power plants. The Adirondacks have been altered by decades of acid rain, and the resulting acidic conditions have increased the impact of mercury pollution."

The authors of the studies attribute biological mercury hotspots elsewhere in the northeast primarily to airborne mercury pollution that is amplified in watersheds made sensitive to mercury pollution, reservoirs that undergo large water level changes, and locations where mercury deposition is particularly high such as near coal-fired power plants. The HBRF team also determined that mercury levels in wildlife can decline relatively quickly in response to decreased airborne mercury emissions.

The studies also present a new analysis showing that mercury deposition is five times higher near a coal plant in the vicinity of a New Hampshire hotspot than previously estimated by EPA – calling into question EPA methods and the appropriateness of the cap-and-trade policy in the EPA Clean Air Mercury Rule. “Our modeling results support a growing body of evidence that a significant fraction of the mercury emitted from coal-fired power plants in the U.S. is deposited in the area surrounding the plants,” said Dr. Thomas Holsen, Professor of Civil and Environmental Engineering at Clarkson University and co-author of the studies. The concern over local impacts has prompted several states to reject mercury trading and adopt more stringent emissions standards for coal-fired power plants in their EPA-mandated plans, potentially calling into question the viability of a national trading program.

The good news is that the HBRF team also determined that mercury levels in fish and wildlife can decline relatively quickly in response to decreased airborne mercury emissions within the region – a new finding for the Northeast.

Importantly, the results of these studies have prompted the writing of new draft federal legislation aimed at tracking mercury pollution and its effects.

“There is still a lot that we don’t understand about mercury, but it is clear that biological mercury hotspots occur and that mercury emissions from sources in the U.S., as opposed to China and other countries overseas, are the leading cause. Mercury emissions will have to be reduced substantially from current levels if we are to see recovery in sensitive watersheds in the Northeast,” said Dr. Driscoll.

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Available for interviews

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To request a copy of the studies, B-roll, photographs or other supporting material please contact Judy Brown at: 603-653-0390 x102 or jbrown@hbresearchfoundation.org

The studies and other material will be available on the HBRF website on Tuesday, January 9, 2007 at: www.hubbardbrookfoundation.org