

PENOBSCOT RIVER SCIENCE NEWS

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New Research

The Maine Forest Service, in partnership with U.S. Fish and Wildlife Service and others, has received funding to identify and prioritize **fish passage** barriers in the lower Penobscot watershed. In the summer of 2007, crews will survey approximately 1,000 road crossings using the Maine Road-Stream Crossing Survey Protocols. As part of this effort, the MFS hopes also to collect information on dams and natural barriers on all perennial streams in the lower watershed, possibly with the help of volunteers (via the Lower Penobscot Watershed Coalition). Contact: Jed Wright, jed_wright@fws.gov.

In a related project, The Nature Conservancy's summer planning assistant, Sarah LaPlante, will be coordinating several teams to **inventory stream crossings** in the Lower Penobscot River Watershed to identify areas that are likely to be barriers to fish and wildlife movements. These data, combined with that from the MFS/USFWS project mentioned above, will allow prioritization of crossings for restoration, for example identifying a subset of crossings that block passage to the most miles of otherwise interconnected fish habitat. TNC is looking for volunteers for this effort who could commit at least three days to conduct standardized surveys of road crossings in the lower (tidal) portion of the watershed. If you are interested and can block out three or more days to volunteer this summer, please email Sarah LaPlante in the next two months at slaplante@tnc.org.

Steve McCormick from USGS Conte Anadromous Fish Laboratory has deployed diffuse gradient in thin film (DGT) samplers in downeast Maine rivers to measure ambient, cumulative **aluminum levels** in Maine rivers. Sample locations in the Penobscot drainage include Cove Brook, Pleasant River, Piscataquis River, and the mainstem in Bradley and Eddington. Contact Trent Liebich, NOAA field staff, at trent.liebich@gmail.com.

Alice Kelley, University of Maine and Robert Marvinney, Maine Geological Survey will be mapping the **surficial geology** of the Old Town quadrangle this summer.

Stephen Fernandes, Gayle Zydlewski, and Mike Kinnison will be continuing year two of their assessment of **Atlantic and shortnose sturgeon** in the estuary.

Noah Snyder of Boston College has been awarded NSF funds to use remote-sensing data, field surveys and mapping, and fluvial models to study **stream formation** and processes in northern New England. Study sites in the Penobscot basin include the Pleasant/Piscataquis river drainage. A Project Summary is available on the Penobscot Synthesis Web site.

Under contract with the PRRT, Eastern Maine Development Corp. is working on **community development** issues related to the Penobscot, including an overview of assets along the river from Bangor/Brewer to Lincoln. The asset inventory is available on the Web sites of EMDC and the Penobscot Synthesis.

Aram Calhoun from the University of Maine will be advising the Maine student chapter of the Society for Conservation Biology in a **survey of wetlands** in the Penobscot River between Bangor and Old Town. This work continues research by Catherine Amy Kropp (see publications, below) to field-check NWI maps, document presence of instream and bordering wetlands, and inventory vegetation species in each wetland. Support provided by Maine Sea Grant and The Nature Conservancy. Contact Aram at calhoun@maine.edu.

The Town of Orrington has received preliminary approval for a grant from the Gulf of Maine Council on the Marine Environment Habitat Restoration Grants Program to provide matching funds for design of a **replacement structure for the Meadow Dam** on Sedgeunkedunk Stream that includes fish passage for Atlantic salmon, alewives, and other migratory fish species. The funds (up to \$20,000) must be matched 1:1 by non-federal sources, such as municipal funds and contributions by other partnering organizations. Meadow Dam is presently the second dam on Sedgeunkedunk Stream; the first, Mill Dam, is located downstream in Brewer and is scheduled to be removed within the next two years by the City of Brewer, as part of a larger redevelopment project for the Eastern Fine Paper mill site. Removal of this dam will provide migratory fish access up Sedgeunkedunk Stream all the way to the Meadow Dam, which provides no fish passage for salmon or alewives at this time and is presently in poor condition. Mill Dam, Meadow Dam and Brewer Lake Dam once were used to provide water to Eastern Fine Paper, which closed in 2004.

New Publications

Jin, S. and S.A. Sader. 2006. Effects of ownership and change on forest harvest rates, types and trends in northern Maine. *Forest Ecology and Management* 228: 177-186.

Kropp, C.A. 2007. A survey of riverine and estuarine wetlands on the lower Penobscot River, Penobscot County, Maine, USA. School of Forest Resources, University of Maine (with assistance from the Maine student chapter of the Society for Conservation Biology and Dr. Aram Calhoun).

Nicolar, Joseph. 1893. *Life and Traditions of the Red Man*. (Republished in 2007 by Duke University Press with a history of the Penobscot Nation, Introduction, and Commentary).

Pawling, Micah (ed.). 2007. *Wabanaki Homeland and the New State of Maine: The 1820 Journal and Plans of Survey of Joseph Treat*. University of Massachusetts Press.

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