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Marine Matters: River Obstacles to Meet Their Demise

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Feature Writer

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When is taking away better than adding to? When it involves dams.

New Englanders rarely met a dam they didn't like, at least in the old days. If energy comes solely from one's arms or the strength of a horse, then water power is the way to go. The many rivers of New England were quickly dammed by settlers eager to build a grist mill, a lumber mill or, later, enormous woolen and shoe factories.

The Penobscot River was one such dammed river. Throughout its 8,600-square-mile watershed, which stretches from the Quebec border to the Gulf of Maine, lie 119 dams. That may seem like a lot until you compare it to the more than 1,000 dams on the Connecticut River. Those numerous dams, built under 99-year leases from the federal government, continue to do what they are supposed to do: turn turbines that generate electricity.

But what's good for electricity users is not particularly good for migrating fish such as Atlantic salmon, alewives or shad. The Veazie dam, 30 miles inland from the Penobscot River's mouth, effectively cuts off many hundreds of miles of river habitat from these anadromous fish. Anadromous fish spawn in freshwater rivers or ponds. The newly hatched juveniles promptly turn around and head out to sea to grow into adults. When sexually mature, they return to their river of origin to start the whole process again.

When the fish can't get up a river to their spawning areas, there's an obvious problem: over time fewer and fewer fish will remember to return to that river. Eventually, the memory of having run up the Penobscot or the Connecticut or the dozens of other New England rivers once brimming with migratory fish will be lost.

Right about now I hear that cynical voice in my head saying, "So what? I can get farm-raised Atlantic salmon in the store for \$6.99. Alewives and shad are too boney for my taste. And I like electricity!" Keep in mind that fish don't belong to the people, despite the title of a recent documentary to that effect. Fish are food for creatures other than us, specifically, other fish.

Alewives, which formed an important food industry for settlers along the Penobscot River, are also food for cod, haddock and pollock. These groundfish once followed the alewives into Penobscot Bay and other Maine embayments in great schools. Shad also are eaten with gusto by groundfish as well as by sea birds, river otters, seals and pretty much anything else with a need for fatty oils in their diet. According to Bigelow and Schroeder's *Fishes of the Gulf of Maine* (1953), shad once migrated 90 miles up the Penobscot River before spawning; with construction of the Veazie dam, that migration halted. Other fish, such as blueback herring, short-nosed sturgeon (an odd fish plated with armor-like scales), eels and even striped bass also found their way up the Penobscot River.

So the Penobscot River Restoration Trust's successful efforts to remove three dams near the river's mouth must be greeted with applause. The trust raised \$25 million from private and public donors to purchase the Veazie, Great Works and Howland dams in 2008 from the power company that owned them. In June 2009, \$6.1 million in federal stimulus money was awarded to the trust through the National Oceanic and Atmospheric Administration (NOAA) to dismantle the dams (the Great Works dam is scheduled to be the first to go). NOAA has also kicked in \$1 million for monitoring the river as the dams are removed. The money will fund

research on water quality, channel geography, fish diversity and changes in the food web.

The Penobscot River Restoration Trust doesn't get much press in the midcoast area. Yet this collaboration among the Penobscot Indian Nation, American Rivers, Atlantic Salmon Federation, Maine Audubon, Natural Resources Council of Maine, Trout Unlimited, The Nature Conservancy, the Maine State Planning Office and Department of Inland Fisheries and Wildlife has done something that many a marine fisheries commission has not. It has paved the way for the anadromous fish of the river to return; with them will likely return the great schools of cod, haddock and pollock that once patrolled along the shores of Penobscot Bay.

For more information about the Penobscot River Restoration Trust, visit the Web site www.penobscotriver.org.

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