

Urban Waters in Winter

by Cheryl Daigle, December 2008

In the last week, winter descended upon the waters near where I live and work. The Penobscot River froze over just above the Indian Island bridge in Old Town, and in downtown Bangor, the Kenduskeag Stream appeared as a solid block of ice on either side of the bridge on Central Street, with layers of ice folding here and there in definition of the constant thrust toward the river. In this location, the stream was split in half to accommodate urban development. Each half is confined by blocks of granite and concrete, and the ice tries to climb the sides for relief. Above where the Kenduskeag empties into the Penobscot, a train trestle crosses the river where large blocks of ice and compressed snow are already caught against the abutments, while flotillas of smaller chunks of ice drift by.



Each winter, it surprises me how much I am caught in this hold of the river and streams. They appear stopped in time, a trick of nature, because so much still goes on unseen below the ice, even within the ice itself. On the mainstem of the river, tomcod, also called frost fish, are moving upstream to spawn. They will pass over the remains of the Bangor Dam, which breached in 1976 and offers a glimpse throughout the year of what other stretches of river will look like when freed of dams. Tomcod spawn primarily in shallow freshwater near the head of tide, at stream mouths. On the Penobscot River, the fish currently are blocked from additional freshwater habitat by the base of the Veazie Dam. Presumably, one would find tomcod this time of year at the outlet of the Kenduskeag Stream, although the contours of this outlet are so changed from what it must have looked like 200 years ago. The stream travels through the heart of Bangor; where it broadens to reach the river, it is still flanked by concrete and pavement, and receives the insipid side effects of city life.



South of where the Kenduskeag and Penobscot meet is the location of the Bangor Wastewater Treatment Plant, and near the outlet where the treated water is released into the river is a recently discovered overwintering site for the endangered shortnose sturgeon. The presence of bottom-feeding fish such as shortnose sturgeon in the river is an indication of how much cleaner the river is compared to what it was like in the decades preceding the last documented catch of sturgeon in

1978. The Clean Water Act of 1972 and the efforts of many local residents has led to a healthier river for fish and people. Last August, the inner workings of the Bangor treatment plant were on display at their 40th Anniversary Open House. In the lobby, a large fish tank holds a small school of salmon smolts that have been raised in the water treated at the plant and will be released back to their home waters next spring. A side room held displays and information on sturgeon, the Craig

Brook Fish Hatchery, the Penobscot River Restoration Project, and compost that is created by sludge produced at the plant.

Students and local officials joined others in tours of the plant and a close look at the multitude of micro-organisms that make this clean water possible. They are surprisingly beautiful when peered at in a microscope! At the top of the staircase of a huge processing tank, you get a wide angle view of the Penobscot River, north toward the Kenduskeag Stream and downtown Bangor, and south to where the sturgeon wait out the cold. Looking down into the tank, one



can imagine millions upon millions of tiny organisms doing their work of processing our waste. The water looks dark here at the top, and as if nothing could possibly survive in it, belying the continuous activity that is underway. Nearby, in the tanks with processed water that will soon be released, ducks can often be seen during these winter months, finding respite in the open water. I wonder if these are from the same family of ducks that I see frequenting the split stream near Central Street bridge during the summer, urban dwellers that have found a way to enjoy city life year-round.

Tomcod spawn and sturgeon wait. Salmon parr and eels upriver find refuge in pockets of deep water that remain unfrozen beneath the top layers of ice. Other migratory fish – alewives, blueback herring, shad, striped bass, and rainbow smelt all returned to the estuary or open sea during the



summer and autumn months. Where the river runs free throughout the winter, waterfowl find places to feed and rest, and eagles watch for movement below to provide a mid-winter meal. And we go about the business of restoring the river to a time when we can see all of these fish and wildlife return in abundance. During this time of short days and cold nights, partners in the Penobscot River Restoration Project continue the work of fundraising, education, and

collaboration to bring more life back to this river by restoring the once magnificent runs of migratory fish. And we also wait out the winter months, driving alongside the frozen river, or crossing over Kenduskeag Stream, imagining hidden pools of life, and what the future will bring years from now when the waters again flow free.

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