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BELFAST BAY WATERSHED NEWS

It's Salmon Adoption Time!

Tom delivers eggs to Belfast Area H.S.

"Awwww… aren't they SO CUTE! Look at their little eyes, those tiny dots!" was the refrain of the day at eleven schools in the Mid-coast area on February 6.

Each year the BBWC sponsors local participation in "Salmon-in-Schools," a salmon egg adoption program offered through the US Fish and Wildlife Service. BBWC Board President Tom King formerly directed the Craig Brook National Fish Hatchery in Orland, where the program started in 1992. Since joining our Board, Tom has made the program accessible to more and more schools each year. A few schools own their aquarium-chiller set-ups, but BBWC has funded most, adding one per year as costs can be borne.

Out of curiosity, I decided to ride with Tom on Delivery Day. We left Belfast at 7:30 am, stopped at Craig Brook NFH for insulated jugs, and drove to Green Lake National Fish Hatchery (GLNFH) north of Ellsworth to pick up hundreds of orange salmon eggs. They look, you guessed it, just like caviar. Each jug left with 200 eggs, pure spring water at 34 degrees, and chunks of ice to maintain it for the long day's journey. When the eyes appear, a tiny window of time allows for delivery, before eggs develop further. They have to be transported quickly and poured into their chilled, oxygenated "homes" for the next two months, all in one day. Waiting longer can be lethal, so all classrooms must be ready with pure aquarium water at 34 F. A required Endangered Species permit stays with the fish throughout their development, and teachers report back to the USFWS where and when they release their fish.

At each school on the route, we were greeted enthusiastically by the expectant class. Tom had to trouble-shoot a couple of the delicate chiller mechanisms, and explained the process of salmon egg rearing to the students, who were thrilled to be trusted with the responsibility.

Belfast schools participating in 2017 are the High School, Middle School, Captain Albert Stevens, East Belfast, and the Homeschool Coop. Other mid-coast participants include Ames in Searsmont, Drinkwater in Northport, Lincolnville Central School, Prescott in Washington, Appleton Village School, and Camden-Rockport Elementary.

Each school receives 200 eggs, a list of instructions for incubation, and access to lesson plans. The eggs will hatch about six weeks after delivery, and begin to look like tiny fish, called yolk sac fry or alevin, with a huge belly yolk sac. The yolk gradually disappears as the fry's sides grow around, enclose, and digest it. By this time, the fry actively swim around developing their muscles.

In early May when Maine brooks begin to warm, the class raises the temperature of the aquarium over a period of two weeks to get the salmon fry ready for their new home in nature.
Critical to releasing the fry is an undammed brook they can learn is their "natal stream" or birth stream, to which they will return if they live long enough to come back to spawn. The brook must have natural habitat and unobstructed flow to the ocean to allow for a full life cycle.

The release site needs school bus access as well. An ideal release site in Waldo on Wescot Stream, a tributary to the Passagassawakeag River which forms Belfast Harbor, receives the fry each year. BBWC engages in a triennial water quality survey of the site by Lotic, Inc., which reports it to the state.

Students check the temperature of the stream to make sure it matches the water they brought the fry in, then proudly, and very gently, release their adopted "children" into the stream. Some teachers conduct various experiential science lessons at the site, investigate the water quality, study the surrounding riparian habitat, and some include sketching in journals. A count of the fry is tallied for the USFWS report, and a spirit of celebration catches hold of everyone.

The life of an Atlantic salmon is perilous from the start, especially in the early freshwater stage. If a fish makes it to the smolt stage and runs out to sea, its odds of living improve greatly. Adult salmon return to their natal streams to spawn when they are about four years old. Unlike Pacific salmon, the Atlantics do not die after spawning, and can return several times to reproduce.

Who knows? Maybe some day salmon will return to our coastal rivers. Meanwhile, students are learning important lessons about cycles of nature and the need to care and stick up for it.—*Cloe Chunn*