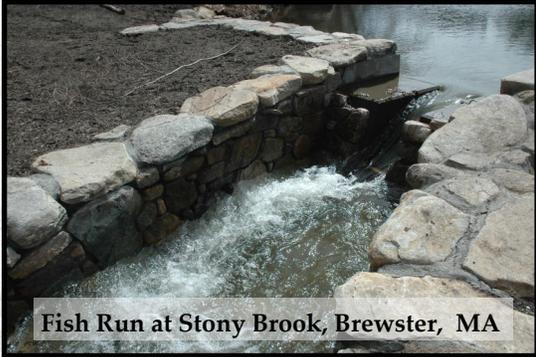




Fish Run Restoration

Association to Preserve Cape Cod

*Working to preserve, protect, and enhance
the natural resources of Cape Cod.*



Fish Run at Stony Brook, Brewster, MA

What is a Fish Run?

A fish run is a pathway along streams and rivers, from the ocean to freshwater lakes and ponds, that fish travel in order to reproduce. **Anadromous** fish live most of their lives in salt water but travel into freshwater ponds, lakes, and rivers to **spawn** (lay their eggs). Juvenile fish spend the early days of their lives in freshwater and then use the same fish runs to travel to the sea. These water connections from freshwater ponds to the ocean are a critical part of the life cycle of many fish species.

River Herring:

Alewife and Blueback Herring, are collectively called River Herring. River herring are an anadromous species of fish that swim upstream from early April to early June, depending on water temperatures, to spawn in our freshwater ponds. They face a treacherous journey, navigating through narrow culverts and shallow stream channels that may be littered with debris. And they face many a predator along the way, just waiting for an easy meal. Once in the pond, females lay their eggs and males release sperm to fertilize them.

A single adult female can produce between 60,000-300,000 eggs per spawning season!



River Herring at Stony Brook, Brewster, MA

Eggs hatch and juveniles remain in the warm freshwater ponds until late summer or early fall, when they migrate back out to sea. However, less than 1% of the eggs that are produced survive long enough to migrate to the sea. In addition, as many as 90% of adults die during or after the spawning season migration! This makes population recovery extremely difficult, even with a ban on herring fishing.



Brook Trout

Brook Trout:

Sea-Run Brook Trout, also known as Salters or Salties, are a species of fish that like to live in cold, clean water. They spawn in the fall when the waters get colder, and can grow up to 17 inches long. Like River Herring, the Salties are anadromous and live in salt water but travel to fresh water to reproduce.

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The Problem:

Fish populations that depend on coastal wetlands, streams and freshwater ponds are in decline. River herring populations have been declining in the mid-Atlantic and New England regions, since the late '90s. In 2005, the state of Massachusetts put in place a ban on catching river herring that still remains in place today. River herring are an important species commercially and ecologically! Herring provide an important food source for both wildlife and commercial fish species, so loss of this species hurts the environment and our economy. The numbers of Sea-Run Brook Trout, once a prized sport-fishing species across southeastern Massachusetts, have been reduced to limited populations living in tidal creeks and rivers. The building of dams, development resulting in restricted tidal flow, pollution of streams and ponds, and other factors have contributed to habitat degradation and rapid decline in the number of these important fish.



Solutions:

Removing barriers to fish passage such as dams and small pipes, and adding or improving **fish ladders** will help with passage.

Improve water quality by reducing nutrients and bacteria in our waters through better management of wastewater from septic systems and stormwater runoff, and by reducing fertilizer input from lawns.

Restoration projects that revert inactive cranberry bogs back into natural wetland and stream environments.

Habitat improvement to allow for more natural stream flow and cycling of nutrients and sediments, as well as to provide the necessary microhabitats important to each species (such as woody debris and cold shaded areas for brook trout).

Monitoring populations to track progress and ensure a stable recovery.

What APCC is Doing:

Since 2007, APCC has been an advocate for herring run monitoring. APCC provides training and coordination of annual **volunteer herring run monitoring** efforts across the Cape providing data from visual counts to the Massachusetts Division of Marine Fisheries to calculate annual run size. We have paid particular attention to planned or completed restoration sites.

In 2015, APCC established the **Cape Cod Restoration Coordination Center (RCC)**. The RCC is working with towns and community groups to fund, plan and implement restoration projects across the Cape.

We are educating the local community about the importance of river herring and brook trout restoration through lectures, workshops and other public events.

What You Can Do to Help:

Volunteer to monitor river herring in your area: Go to www.apcc.org/herring or contact Dr. Jo Ann Muramoto at jmuramoto@apcc.org for more information.

Support use of Town funds for restoration projects: One of the biggest barriers to implementation of these important restoration projects is funding. By voting to support funding for these restoration projects, you will help make sure they are accomplished.

Learn more about local fish populations and restoration efforts across the Cape: Join our email list or follow us on Facebook to get information about upcoming lectures, activities and events!

Share what you learn with neighbors, family and friends: This is not a problem one person or one organization can solve. We must all work together to support monitoring, funding, and implementation of restoration projects for our efforts to be a success.



Some Stony Brook herring monitors relaxing after a busy day of counting.

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