

## Woodward & George Griswold Preserve

### Lower Mill Pond Fish Ladder

There is a ladder for diadromous fish (primarily alewives and blueback herring, or "buckies") and an eel ladder on the property next to the dam on the Lower Mill Pond. The fish ladder was installed in 1998 through a cooperative effort between the Connecticut Department of Environmental Protection (CT DEP) and the Old Lyme Land Trust. The fish and eel ladder operation is monitored by the CT DEP, which issues weekly fish count reports during the fish run season. See the Connecticut River Salmon Association's web site ([www.ctriversalsalmon.org](http://www.ctriversalsalmon.org)) for a list of reports.

The fish ladder has a viewing window where it's possible to see the fish go up the ladder and into the pond by jumping from one step to another. There is a fish counter on the ladder to keep track of the number of fish using it. The eel ladder is a board with pegs and has a stream of water running over it. The eel wrap around the pegs as they move upward. Unlike the fish ladder, the eel ladder does not span the height of the dam. The eel drop into a bucket after traversing the ladder and are deposited in the pond by DEP staff.

### Why a fish ladder?

Diadromous fish are species that live in both saltwater and freshwater and engage in extended spawning migrations back and forth. Anadromous fish begin their lives in freshwater, migrate to sea as juveniles, mature at sea, and return to the stream of their origin to spawn. Well-known examples include salmon, shad, alewives, sturgeon, and sea lamprey. By contrast, Catadromous fish (which, in Connecticut include only the American eel) begin their lives in the ocean, migrate to freshwater as juveniles, mature in freshwater, and migrate back to the ocean to spawn.

Rivers in Connecticut supported significant fish runs until the late 1700's. But during the Industrial Revolution, dams were built on these rivers to power mills and hydroelectric projects, creating barriers that many fish could not get around. This blocked their access to spawning sites and caused degradation of downstream habitats. In some cases (such as the alewife), it reduced their population size greatly. In other cases (such as the Atlantic salmon in Connecticut), all spawning habitat was upstream of the dams and it resulted in the species' extermination.

Government agencies such as the CT DEP are working to restore runs of diadromous fish to streams in New England. The best thing to do is remove dams but that is often not possible. The next best thing to do is build a fish ladder to allow fish to swim up and around the dams and access historical habitat. The CT DEP enthusiastically cooperates with local groups like the Old Lyme Land Trust to build and operate fish ladder to support fish restoration to our local communities.

### Fish Ladder on Upper Mill Pond on the Mill Brook

In addition to its involvement with CT DEP in the installation and maintenance of the fish ladders on the Lower Mill Pond, Old Lyme Land Trust cooperated with CT DEP on a fish ladder to get around the dam on the Upper Mill Pond. The ladder was completed in 2002.

The dam on Upper Mill Pond has existed since before 1750. The property on which the dam is constructed can be traced back to around 1650. It became part of the First Ecclesiastical Society (1665-1850), the first community to inhabit the Old Lyme settlement after it moved here from Old Saybrook. The dam gave the area its first economy and was the site of two mills, a grist mill and a hydraulic hammer that forged iron found close by in the nearby meadow. Extensive exploration of the archeological site, prior to establishing the site of the fish ladder, provided insight into the footprint of the former mills.