Long before the first dam was built on the Ipswich River, there was a natural waterfall referred to as the Upper Falls, a cascade at the head of the tide. This site was a bountiful fishing place for Native Americans and early colonists, passing millions of herring, shad and even salmon and other migratory fish each year. According to historian Thomas Franklin Waters,* "Up through these falls or rapids the salmon, shad and alewives forced their way to the spawning grounds in the still waters above, in great schools." The early name of Ipswich, Agawam,"…denoted places where fish of passage resorted." **

The first dam and mill on the Ipswich River were built at the Upper Falls in 1635-36. The "liberty" to build the dam and fish weir required the sale of half the catch to the other colonists for 5 shilling per thousand fish. (The fish were used for fertilizer, at a rate of 1000 herring per acre; however, restrictions on such use began as early as 1639.) During the 1600s, dams were built downstream at the Lower Falls and upstream at what is now Mill Road. As a result, Waters reported that "in the course of years, three dams have changed the free, swift stream into a series of sluggish, muddy millponds."

The dam was reconstructed several times over the centuries, most recently c.1880. The site of the current dam is a short distance downstream of the natural Upper Falls, which are "drowned" by the mill pond.

Today, the Ipswich Mills Dam is a relic of our early industrial past. It does not perform its original function, but blocks fish migrations and fills the natural flood storage upstream. The original fish ladder was a poor design, so the fish ladder was rebuilt in 1995-96. The new ladder allows river herring, sea lamprey, sea run trout and some other species to ascend into the pool behind the dam; however, the warm, ponded water behind the dam is not good habitat. Other migratory species, such as rainbow smelt and American shad, do not use the ladder. This year, our volunteer herring counters documented 48 herring swimming up the ladder, which corresponds to an estimated return of 493 herring. This is a tiny fraction of the historic herring run.

This formidable structure also requires regular maintenance. According to a 2009 report, the dam is currently classified as a "significant hazard," meaning that if it failed, there would be property damage and possibly loss of life. The dam is currently in "satisfactory" condition, with $33,600 in recommended repairs (2009). There is no written operating and maintenance plan.

The dam may still perform an important function in keeping the pilings of the adjacent mill buildings from decaying. IRWA is a partner in a new study to investigate this question, as well as the dam’s impact on downtown flooding and whether there are contaminated sediments behind the dam. This study is a preliminary step, necessary before the Town and its partners can consider whether the dam should be removed.

There are more than 70 dams in the Ipswich River watershed, many of which were built in the 1800s to power industrial mills, but no longer serve this purpose. IRWA’s fish and habitat restoration program focuses on identifying restoration opportunities at dams and culverts, public education about fish and aquatic life, and collaboration with communities and other partners on restoration.

For more information about our work on dams and culverts, contact Brian Kelder, our new Restoration Program Manager, at bkelder@ipswichriver.org or 978-412-8200. IRWA will also present a free lecture on the history of the mills along the Ipswich River as part of the 2011 Trails & Sails Events on September 17th at 10am. Check out our website for more details.

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*"Ipswich River: It’s Bridges, Wharves and Industry" by Thomas Franklin Waters, Ipswich Historical Society, 1923

Mutualism is one of those chicken and egg conundrums. A good example is the relationship between the grape and the Baltimore Oriole. My favorite grape is the River Grape because it is so fragrant in flower and offers itself on the floodplains of rivers where American Elms grow. American Elms are the preferred perch for nesting Baltimore Orioles. Orioles build wonderfully shaped pendulous nests from the tips of weeping Elm branchlets. These are often situated over open water such as the Ipswich River, where refuse from the young in the nest drops to the river to be washed away - foiling the senses of predators below. I speculate that the Oriole sees our paved roads as rivers to nest over, and there was a time when Orioles adorned the majestic elms lining our streets. It could be that they just like to nest in elms and our planting of the elms along streets was enough to lure the Oriole.

The grape in this story has a much more entwined relation with the Oriole. The grape has a very stringy, exfoliating bark, easy to peel off. The oriole uses these grape bark strings to hang its nest from the outer branches of the elm. The grape seems to attract the Oriole by offering this type of bark because when the Oriole arrives in Spring and begins nest building, the grape is setting out its fragrant flowers. The grape’s early flowers are foodstuff of a leaf-rolling caterpillar which spins a web around the flower cluster encasing it with the newly unfurling leaves. Safe in its cocoon, the caterpillar will eat the flowers and the grape will bear no fruit in the fall. I have watched Orioles visit my grapes to collect the special nest material and to become distracted by the cocoons of the leaf-roller. The Oriole gently unfolds the cocoon of leaves, eats the caterpillar and releases the flowers to be pollinated. The grape is then allowed to bear fruit (and seeds within).

The story is not over. Orioles prefer to eat grapes at the end of their nesting cycle when they are getting ready to migrate. While foraging the riverbank for ripe grapes, it scatters the seeds of the grape to new areas for germination. Hence we have mutualism, but which came first, the Oriole or the Grape?
Save Water this Summer

The Ipswich River watershed provides drinking water to 335,000 people and thousands of businesses in 14 communities. In summer, water use doubles (or worse) in many communities. This means that the most water is used when the River’s flows are naturally lowest. The stress of the resulting unnatural low-flow periods can kill fish and other creatures, degrade the river ecosystem, impair water quality and make the river unsuitable for recreation. Reducing the amount of water taken from the Ipswich River is the first priority in restoring it to health.

Summer lawn watering is the #1 reason that the Ipswich River is in danger. The most river-friendly way to water your yard is not to water it all in the summer. It’s normal for grass to go yellow and dormant in the hot summer months. It isn’t dead, it’s just hibernating! Your lawn will come back and green up in the fall. If you need a green summer lawn, try watering in the early morning before the heat of the day.

Tall grass is green grass in both senses of the word. Tall grass develops a stronger root system so needs less water to stay healthy. One way to have taller grass is to mow less often, but if you like the well trimmed look — just raise the height of your lawnmower blades.

IRWA Receives EPA Merit Award

IRWA was honored at Faneuil Hall in Boston on May 11th with an Environmental Merit Award from the New England Office of the U.S. Environmental Protection Agency. The award recognizes outstanding environmental advocates who have made significant contributions toward preserving and protecting our natural resources. “The Ipswich River Watershed Association has endeavored to restore and protect the Ipswich River and nearby waterways for over two decades. It has engaged in advocacy, education, scientific research and monitoring to help restore the river,” the agency said in a press release.

“We are very honored to receive this prestigious award and thank the Town of Ipswich for nominating us,” said Kerry Mackin, IRWA’s Executive Director. “The award really belongs to our whole team, including our outstanding volunteers, board, members, donors and professional staff, all of whom play an important part in protecting the Ipswich River.”

Fish Count Makes Waves

The results are in and the 2011 fish counters recorded three times last year’s herring numbers. Forty-eight fish were observed, and the statistical model calculated this to be a total run size of 493. Our summer intern, Renee Mallonek, is assisting us with the analysis of this year’s data and will analyze past data as well with this new statistical software. We’ll be able to bring more attention to the herring problem by looking at all of the past runs with this new program.

Kate Hone, our volunteer fish count coordinator, awards Ben Flemer the Golden Fish award for the most counts this spring (71). Thanks, Ben!
Summer 2011 Calendar

2011 Source to Sea Canoe Trips
Spend a summer Saturday morning on the Ipswich River for a paddle led by local experts. All trips are BYOB (bring your own boat), PFD, water & snacks.
July 30: Topsfield (Magical Mystery Tour)
Sept 10: Ipswich (Pavilion Beach and surrounding estuary)
Contact cingelfinger@ipswichriver.org or 978-412-8200 for details. PRE-REGISTRATION IS REQUIRED.

Writing Down the River
Please join us for a Writers Workshop with Jason Kiley. Participate in the Ipswich River Watershed through writing — bring a paper and a pen as we will spend time writing along the river and sharing our work.
July 30: 1-4pm at Riverbend, 143 County Road, Ipswich $25 per person, refreshments will be served. RSVP to cingelfinger@ipswichriver.org or 978-412-8200.

Trails & Sails Event: Milling Around the Ipswich
This free lecture on Ipswich River mills is sure to be grist for the history buff from Ipswich to Wilmington. Sept 17: 10-11am at Riverbend, 143 County Road, Ipswich RSVP to cingelflinger@ipswichriver.org or 978-412-8200.

Annual Meeting
SAVE THE DATE! October 1: 4-6pm

IRWA Welcomes New Restoration Program Manager
IRWA is happy to announce the addition of Brian Kelder as the new Restoration Program Manager. Brian will take over the program manager responsibilities for dam removal projects and the Restoration Partnership. Brian is an aquatic ecologist with expertise in fisheries research and habitat restoration. Most recently, he served as the Staff Scientist for the Seatuck Environmental Association in Islip, NY, where he played a leadership role in advancing migratory fish restoration on Long Island. His previous work includes projects focused on salmon recovery in the Pacific Northwest, walleye spawning habitat in the Great Lakes, and endangered sturgeon in the Hudson River. Brian holds a MS in Aquatic Ecology from SUNY ESF and a BS from Cornell.

Summer Volunteers Lend a Hand
This summer three outstanding volunteers are working with Ryan O’Donnell, Programs Coordinator (far right). Left to right: Matt Bonventre, an Environmental Science student at UMASS Amherst, is posting our RiverWatch data to a public server for analysis. Renee Malionek is assessing our 2011 Herring Count Data. She is studying Environmental Conservation at UNH, focusing on Sustainable Agriculture. Diana Davis, a biology professor at North Shore Community College, is helping us on a macroinvertebrate monitoring study.