

## **ENVIRONMENTAL BENEFITS Of Edwards Dam Removal**

*“The thing about the Kennebec is that it’s so diverse. We saw uncountable numbers of brown trout, we caught alewives, as many small mouth bass as we wanted and an unbelievable number of stripers. We also saw eagles and osprey. With its gravel bars, ledges and waterfalls, the river is beautiful.” – Bob Dionne, Aardvark Outfitters*

### **Migratory Fish are Returning**

*Alewives can now swim freely to the top of the Sebasticook River*, 70 miles upstream from the former Edwards Dam. State fisheries biologists estimate the number of alewives returning to the Kennebec at approximately 2 million; which means it is among the largest river-herring runs in the United States! The Sebasticook River is the largest tributary of the Kennebec and enters the Kennebec at Winslow. Since 1999, fishways have been built at the two dams on the Sebasticook, at Benton and Burnham, and at the outlet of Sebasticook Lake in Newport. Alewives can now swim the entire length of the Kennebec and Sebasticook to their historic spawning grounds in the many lakes and ponds of the 1,000 square mile Sebasticook River watershed. The large historic alewife run of the Seven Mile Stream watershed in Vassalboro, at Webber Pond and Three Mile Pond, is now nearing full restoration, with the completion this year of a fishway at the outlet of Webber Pond.

*American shad*, the "poor man's salmon," are now travelling by the thousands upriver to Waterville and Winslow, where they have created a new recreational fishery at Fort Halifax park. American shad can reach 3 feet long and over 10 pounds. Kennebec River shad are now successfully spawning at many locations along the Kennebec from Waterville to Augusta, using habitat that was inaccessible and unusable before the removal of the Edwards Dam. With fish passage now in place on the Sebasticook River, American shad have access to their entire historic habitat on the Kennebec's largest tributary.

*Atlantic salmon*, the Kennebec's most famous and most endangered fish, are increasing in number at Waterville, where the adults are trapped and transported to their prime coldwater spawning grounds in the Sandy River. In 2006, Kennebec River Atlantic salmon swam and spawned in the Sandy River for the first time in 150 years. It is believed there are fewer than 50 Atlantic salmon returning to the Kennebec each year. Salmon were documented spawning in the Kennebec River above the Edwards Dam site as soon as the dam was removed. Kennebec River Atlantic salmon are now protected under the U.S. Endangered Species Act.

*Sea lamprey*, have sucker like mouths that allowed some of them to climb up over the Edwards Dam before it was removed. Sea lamprey are vitally important native fish of the Kennebec which serve as food for adult and

juvenile bald eagles and dig immense spawning beds in river gravel which assist female Atlantic salmon during their own spawning chores. The number of sea lamprey has dramatically increased since the Edwards Dam was removed and they are now a common sight at Ticonic Falls in Waterville during their early June spawning migration.

***Striped bass***, an angler's favorite, known in Maine to reach up to 67 pounds, have become the principal recreational fishery in Waterville and Winslow, 18 miles above the former Edwards Dam, and all along the river reach in Sidney, Vassalboro and Augusta.

***American eel***, the Kennebec's most abundant sea-run fish, now have full and safe access up and down the Kennebec River from Waterville to the sea and free access up the entire Sebasticook River. American eel populations have declined dramatically in the United States in recent years and have recently been considered for listing under the U.S. Endangered Species Act. American eel still suffer severe mutilation and mortality at the remaining hydroelectric dams on the Kennebec River. In contrast to the Kennebec, the owners of the two hydroelectric dams on the Sebasticook River have installed state of the art, fish-friendly turbine bypass systems that do not kill migrating eels.

***Atlantic sturgeon***, the Kennebec's largest fish, reaching over 10 feet in length, are now regularly seen leaping out of the river from Augusta to Waterville during their mid-summer spawning migrations. Atlantic sturgeon are a candidate species for protection under the U.S. Endangered Species Act.

***Shortnose sturgeon***, the smaller cousin of the Atlantic sturgeon, now swim all the way to Ticonic Falls in Waterville, their historic migration limit, to spawn during the spring. Prior to the removal of the Edwards Dam, scientists were unsure if both sturgeon species would use the entire restored 18 mile reach of the Kennebec. The sturgeon have now answered this question. Shortnose sturgeon are protected under the U.S. Endangered Species Act.

***Blueback herring***, which closely resemble the alewife but spawn in rivers, rather than ponds, have now re-occupied all of their historic habitat in the Kennebec River from Waterville to Augusta and are increasing in number. Bluebacks spawn in June in the Kennebec's shallow riffles and rapids, which have been restored to their natural condition by the removal of the Edwards Dam. Reaching a length of 10 inches, blueback herring are the primary early summer food source for striped bass, osprey, great blue heron and cormorants.

### **Wildlife Benefits**

***Bald eagles, osprey, egrets, great blue herons, kingfishers and cormorants*** rely on sea-fish for food and are now commonly seen fishing along the restored reach of the Kennebec River from Augusta to Waterville.

*Harbor seals*, which rarely venture far above saltwater, are now an uncommon but annual sight in Waterville and Winslow, where they feed on alewives and other sea-run fish. Waterville is 40 miles above saltwater on the Kennebec. Seals now travel farther inland on the Kennebec than anywhere else in New England. This is specifically due to the removal of Edwards Dam, which seals could not swim past, and the restoration of the river's fish runs, which is what attracts the seals to swim so far upriver.

*Shore nesting birds such as sandpipers and killdeer*, have gone from being non-existent to very common along the restored 18-mile reach of the Kennebec River from Augusta to Waterville. The Edwards dam impoundment flooded the river channel up to the tree-line, leaving no habitat or food for shore nesting birds. The restoration of the Kennebec River's natural flood plain and channel has created ideal nesting and feeding habitat for shore birds.

### **Water Quality has Significantly Improved**

*Water quality improves dramatically.* Before Edwards Dam was removed, the impoundment could not meet minimum water quality standards and could not begin to support a healthy river ecosystem. Just months after the removal of Edwards dam, state scientists documented a dramatic improvement in water quality. The river has been officially upgraded to class B to reflect the improvement in river health.

*Fish and Anglers alike will welcome the dramatic increase in mayflies and stoneflies.* Mayflies and stoneflies, rarely seen in samples before the removal of Edwards, have dramatically increased in numbers.