Restoring plants to the banks of the Fox River did more than improve habitat; it brought together a community.

How to Plant a River

Story By Bob Rung and Lyle Rolfe
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More than 60 volunteers of all ages sloshed along the shoreline of the Fox River through downtown Aurora one July Saturday morning.

Some carried spades to punch holes into the gravelly substrate where the water was only a few inches deep. Others gently lifted small seedling plants from flats and handed them to still other volunteers who buried the root balls into the newly dug holes. More volunteers kept sun-drenched workers supplied with bottled water while others pulled trash from the river so it could be picked up later for proper disposal.

In all, 2,000 water willow (*Justicia americana*) seedlings were transplanted into the same river from which their parents came and in excess of 1.5 tons of trash was removed from a 1.25-mile stretch of the river.

Many workers were veterans, having helped on at least one of the three previous planting projects. There also were novices, anxious to begin, listening intently during a demonstration on how to properly plant seedlings in the gravel. Some volunteers were new to the planting but not to the Fox River. They included members of the Sierra Club, Pigeon Hill Paddlers, Illinois Smallmouth Alliance and Conservation Foundation.

Children who accompanied their parents were fascinated by the iridescent colors of mussel shells found along the shore and amassed collections of them. Frequently, a scientist would pluck one from a child's pile to explain what variety it was and why the presence or absence of this particular mussel was an indicator of the river's health.

As the two-hour planting session drew to a close, it was obvious the volunteers enjoyed

Volunteers of all ages have worked for several years to reintroduce native plants to the shores of northern Illinois rivers.

Native plants evaluated for riverbank reintroduction

water willow	*Justicia americana*
lizard's tail	*Saururus cernuus*
stiff arrowhead	*Sagittaria rigida*
blue flag	*Iris virginica*
pickerel weed	*Pontederia cordata*
yellow pond lily	*Nuphar advena*
white water lily	*Nymphaea tuberosa*
common arrowhead	*Sagittaria latifolia*
arum-leaved arrowhead	*Sagittaria cuneata*
short-beaked arrowhead	*Sagittaria brevirostra*
common water plantain	*Alisma subcordatum*
bur reed	*Sparganium eurycarpum*
buttonbush	*Cephalanthus occidentalis*
great bulrush	*Scirpus validus*
river bulrush	*Scirpus fluviatilis*

themselves. From those opting for shore duty to those standing in soggy sneakers and wet to their knees—or boasting a muddy commemorative shirt after holding flats of plants—all felt a great sense of accomplishment.

Karen Christensen, Aurora's director of Downtown Development, initiated the event and has organized financial and in-kind support from nationally known companies and small businesses based in the Aurora area.

Christensen stood on the river bank, admiring a willow stand that had grown from seedlings. A dense, mature plant colony provided aquatic habitat and reduced shoreline erosion.

"So many great things have come out of this project," Christensen remarked. "We're restoring plants that were native to the Fox River but had disappeared. The plants have thrived and reproduced at a very high level. This could not have happened without the team of volunteers we've attracted—many who have lived in Aurora for years but never noticed the beauty of the river in an urban context.

"The number of agencies and organizations that have come forward to partner on this project over the past four years is extensive and it is especially heartwarming to know they are now collaborating on other activities," she continued.

Volunteers from a variety of organizations have helped establish mature colonies of native plants on the banks of the Fox River.

Interest in aquatic plant reintroductions resulted from research initiated by Department of Natural Resources fish biologists in central and northern Illinois in the late 1980s. Fifteen emergent plant species were evaluated in test plantings in ponds, lakes and 45 locations in the Fox, Des Plaines, DuPage and Skokie rivers, and Salt and Big Rock creeks. Plants were evaluated based on their habitat potential for fish and aquatic invertebrates, with key criteria including stem densities, stem mass, cover provided by foliage and ability to reduce shoreline erosion from wave action. Additional evaluation criteria included potential for a species to become a nuisance, sunlight requirements and the plant's flood tolerance or ability to tolerate total submersion for several days to weeks.

Plant colonies play a significant role in the primary productivity of a stream by collecting and trapping leaf and twig material. Bacteria and fungi that break down plant litter form the base of the stream food chain. In turn, the bacterial/fungal colonies are grazed on by aquatic invertebrates and omnivorous fish, which are preyed upon by larger fish.

The reintroduction of emergent plants, especially water willow, has enjoyed considerable success and established colonies have proven to reduce bank erosion and provide quality habitat for fish and aquatic invertebrates. Several northeastern Illinois streams and lakes have been planted with reintroduced native emergent plants—projects organized by various groups and agencies with work performed by volunteers. Since 2000, nearly 24,000 plants have been installed along the Fox River by the Fox Valley and Oswegoland park districts, the Friends of the Fox River and Illinois Smallmouth Alliance organizations, and the cities of St. Charles and Aurora. Volunteers also have completed similar projects on the Des Plaines River, Salt and Cress creeks, Skokie lagoons, and Shabbona and Pierce lakes.

Christensen encourages anyone who has been part of this project to walk along the banks of the river and see firsthand the products of their efforts.

"We've been fortunate to have many active sponsors join the project as volunteers," Christensen concluded. "Along with some of their employees and others from the community, they have shown their belief in what we were doing—and that what we are doing for the rivers of Illinois is important."

Bob Rung, a Department of Natural Resources streams specialist based in Plano, has provided technical expertise to the "Help Plant Aurora's Riverbanks" project each year, and is pleased with its success.

Lyle R. Rolfe, former director of Aurora's Public Access TV station, was a reporter and photographer for more than 40 years for the Beacon-News in Aurora and still does freelance writing for the Oswego Ledger-Sentinel.