Pride in Paradise: Celebrating Project Paradise after 10 years

Community pride is often measured by the awards it has received. The Gardens' list of awards for its conservation efforts through Project Paradise is long and impressive (see bottom of page six).

By now, long-time *PAPPUS* readers are familiar with the term Project Paradise—the restoration of the marshes of Cootes Paradise and the lower Grindstone Creek. This is a ground-breaking habitat rehabilitation project occurring throughout the Gardens' natural lands as an integral part of the Fish and Wildlife Habitat Restoration Project, one of six projects of the Hamilton Harbour Remedial Action Plan (RAP). Remedial action plans were designed to address severe loss of urban harbour ecosystems.

The timely restoration of these two important coastal wetlands is considered central to regaining healthy and self-sustaining native fish and wildlife communities in Burlington Bay and western Lake Ontario.

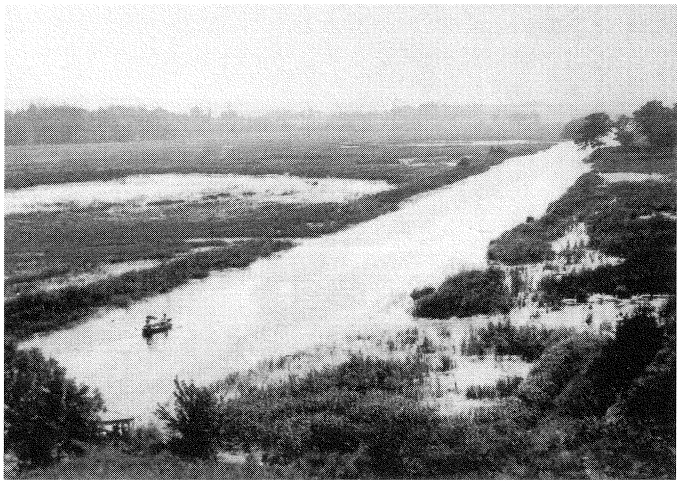
During the past decade, the Gardens and its Project Paradise partners—including many federal and provincial agencies—have worked extremely hard at making this ecological success-story-in-progress known to the public. Many articles, fact sheets, and more recently, Web site content, have been written about the RAP and Project Paradise. Visit www.rbg.ca and click on "Science and Conservation" to learn more.

The remarkable successes of Project Paradise are enormous achievements, which would not have been possible without strong political will and funding opportunities to implement an "ecosystem approach" —the underlying principle of the RAP. This holistic view to restoring damaged ecosystems integrates the management of land, water and living resources to promote conservation and sustainable use.

The Gardens is fortunate to have had access to all the components of a successful restoration project. These include a good science base, strong community support, a dedicated professional staff, and a network of like-minded individuals in other environmental organizations committed to the challenge.

A brief backgrounder

Like most urban wetlands in southern Ontario, Cootes Paradise and lower Grindstone Creek have been exploited by humans. The effects of a local human population reached such high levels that the marshes could no longer cope with the burden of so many damaging factors and simply lost their form and function.



Cootes Paradise and the Dundas canal. Circa 1925

In 1853, the Desjardins Canal was dredged through thick marsh vegetation to accommodate barge movement into Dundas from Hamilton Harbour. The canal then provided unrestricted access to the growing populations of Eurasian carp—a large, aggressive fish accidentally introduced to Lake Ontario in the late 1800s. The

Project Paradise Partners 2002/2003

FEDERAL
- Canadian Wildlife Service (CWS)
- Human Resources Development Canada (HRDC)
- Department of Fisheries and Oceans (DFO)
- Environment Canada—Great Lakes Sustainability Fund
- Hamilton Harbour Remedial Action Plan (HH-RAP)

PROVINCIAL
- Ministry of Environment (COA Fund)
- Ministry of Natural Resources (MNR)—Community Fish and Wildlife Improvement Program
- Ministry of Transport (MTO)
- Ministry of Tourism, Culture and Recreation

REGIONAL
- City of Burlington
- City of Hamilton
- Regional Municipality of Halton
- Conservation Halton
- Hamilton Region Conservation Authority
- Hamilton Waterfront Trust

PRIVATE AND NON-GOVERNMENT SUPPORT
- Auxiliary of Royal Botanical Gardens
- Bay Area Restoration Council (BARC)
- Burlington Community Foundation
- Dofasco Anglers
- Dofasco Incorporated
- Ducks Unlimited Canada
- Fish and Wildlife Habitat Restoration Project (F&WHRP)
- Hamilton Community Foundation
- Hamilton Naturalists' Club
- Lakehead University
- McBride Foundation
- McMaster University
- Ontario Great Lakes Renewal Foundation (OGLRF)
- SC Johnson & Son Limited
- Shell Environment Fund
- TD Canada Trust
- YMCA of Hamilton/Burlington—Career Development and Learning Centre

The Gardens' conservation awards

- Bay Area Restoration Council (BARC) Implementation Award for Conservation Effort in 1995 and 2000
- Burlington Chamber of Commerce Outstanding Environmental Initiatives 1996
- Ralph Sherwood Conservation Award 1997
- Excellence on the Waterfront Award 1997 and 1998 (Waterfront Center Washington DC)
- Gardens' nomination by Regional Municipality of Halton in 2001 for an award from the Solid Waste Association of North America for using recycled Christmas trees in Grindstone Estuary rehabilitation.
- Vision 2020 Hamilton Sustainable Communities Recognition Award for Excellence in Education 2002
- MNR Volunteer Recognition Awards 2002 to volunteer marsh planters
- BARC Recognition Awards to Project Paradise staff John DeZoete and Lyall Rudderham 2002
- Hamilton Naturalists' Club (HNC) Environmentalist of the Year 2002 to Corey Lewis (past Project Paradise summer student)

proliferation of carp in Cootes and similarly in the lower Grindstone was a major factor in the decline of both marshes.

Between 1907 and 1938, the effects of carp and sediment from farm and urban development resulted in about 20 percent of Cootes Paradise appearing as open water due to a loss of aquatic plant cover. Around the same time, sewage from the Town of Dundas was becoming a problem and by 1919 the first sewage treatment plant was constructed, discharging crudely treated sewage into the shallowest part of the west end of the marsh.

The alarming decline of plant cover in the marsh motivated early local conservationists to embark on a program to plant native aquatic species like wild rice and wild celery in the Westdale Creek area. The program failed due to the destruction of the plants by carp and declining water quality.

Early scientific investigations

By the late 1940s, McMaster University's biology department was organizing scientific investigations into marsh ecology, with focus on the causes of vegetation loss. Dr. E.M. Kay recommended that carp control be implemented throughout the marsh and that a "dam" at the Dejardins Canal should be considered. It was thought that a dam would prevent carp from entering the marsh from the harbour.

Eventually, the Ministry of Natural Resources and Toronto Anglers and Hunters assisted the Gardens by funding a netting program to remove carp, while fences kept them from newly planted areas in the marsh. From 1954 to 1960, the labour-intensive program removed over 300,000 carp from the marsh. However, it was realized that, for the program to succeed, a better method of carp control was needed.

Launching a habitat restoration program

In 1993, implementation of the Fish and Wildlife Habitat Restoration Project began. Project Paradise is that part of the "habitat" project strictly focussed on the shallow wetlands critical to the achievement of the RAP's fish and wildlife goals. A technical advisory committee—made up of a number of highly respected professionals from a variety of fields—was formed to help execute the ecosystem approach, which was considered experimental on such a large scale. The project had many facets, which needed to be integrated with the Gardens' conservation practices as well as to be sensitive to external interests, stakeholder expectations, and international and provincial wetland policies. These include the development of an interpretive and communication plan, improved access to recovering habitat, wetland-based educational programs, a dedicated research and monitoring program, and the analysis of the area's historical and

accumulating database. Of course, financial resources were needed to implement what would turn out to be one of North America's largest wetland habitat restoration projects using an ecosystem approach. It was a daunting task, even for a provincially mandated conservation organization. However, many groups and individuals rallied to assist the Gardens with intense focus and dedication.

Look at us now

Although the Fishway has played a dominant role in the progressive success of Project Paradise—its operation has helped reduce carp populations—there are many more success stories unfolding behind the scenes.

Water quality has shown steady improvement. With reduced carp populations, new plant growth is now sustained throughout the spawning season, which has resulted in increased native fish production. This is having a beneficial spin-off effect on the entire fishery of western Lake Ontario.

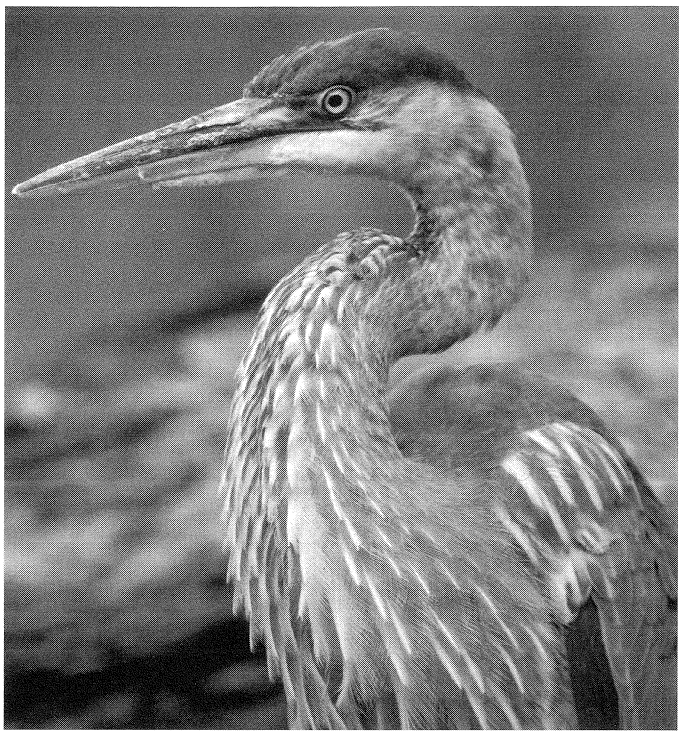
However, emergent wetland plants have lagged behind. Despite this, an estimated 20 percent of permanent new marsh habitat is evident in sheltered, shallow areas at the west end of Cootes. And the Grindstone Creek estuary, though also struggling, has shown an amazing ability to completely re-vegetate under favourable conditions.

Fall migratory waterfowl numbers have increased dramatically and breeding bird and amphibian communities have all benefited from the wetland habitat gains and perhaps more importantly, the quality of those gains. Some of the more sensitive and rare species, including Virginia rail and grey tree frog are beginning to re-colonize, and re-introduction programs for trumpeter swans and southern wild rice are showing signs of success.

The road ahead

Even with visible progress being made, the restoration work doesn't stop here. Much of the attention is now focused on refining the program's strategy on improving water quality.

Over the next year, an external research program will help a dedicated task group make decisions about critical water quality targets for the Cootes Paradise and Grindstone systems. Also, the management of the Lake Ontario–St. Lawrence water levels is under review by the International Joint Commission (IJC), and changes to current water level scenarios benefiting coastal wetlands are being studied.



Waterbirds, like the majestic great blue heron, can often be seen hunting for fish near the shore of Cootes Paradise.
PHOTO: JAMES SIDNEY

Several other habitat improvement projects are underway. These projects include a wild rice restoration program, the rehabilitation of the Long Valley Brook estuary (see page 17 to learn more about this project), and a plan for Prothonotary warbler habitat stabilization and expansion will be developed.

The success of these programs depends largely on support from private and government agencies. Recent major cutbacks make Project Paradise all the more challenging. However, despite these pressures, the overwhelming dedication, community pride and ownership in ongoing restoration efforts during the past decade have helped build momentum.

International recognition and thanks

During the past 10 years Project Paradise has been profiled on national and local television, and visited by international scientists, including many from the United States, South Africa, Europe, Russia and South America. Its been lauded by such notable figures as Roberta Bondar, David Suzuki and Joe McGinnis. In addition, staff have consulted on other restoration sites across North America, and have addressed groups seeking restoration advice from Japan, South America and Mexico.

The Gardens continues to exchange habitat restoration information with countless other organizations, and the aquatic nursery leads the industry in innovative products, marsh planting, and propagation techniques. A recent partnership formed with the Ontario Seed Corporation to produce wet meadow seed mixtures for use in the landscaping industry indicates strong confidence in the Gardens' expertise.

There are certain individuals whose enthusiasm and professionalism have emerged during the past decade and should be recognized. People like John Hall and Kathy Trotter at Environment Canada's RAP office, Vic Cairns from the Department of Fisheries and Oceans, past chair of fundraising Bill Nelson, past Gardens' staff Peter Rice, past Gardens' Board member Pat McNally, and current staffers John DeZoete, Lyall Rudderham, Tÿs Theÿsmeÿer and Brian Pomfret have been unwavering in their hard work and support of Project Paradise. Without these and many other individuals, it would have been impossible to advance Project Paradise beyond a concept.

The pioneers of the restoration movement contributed much to the early analysis of the problems affecting the marsh and the approach to its restoration. These include Gardens' conservationist John Lamoureux and colleagues with the Toronto Sportsmen, McMaster University's Dr. Ernst Kay, and Dr. Graham Harris whose research helped lay the foundation for many of the Gardens' current water quality programs.

Pride in Paradise

There are countless corporations, agencies, organizations, and individual volunteers in the bay area who deserve to be proud of Project Paradise. It seems just about every day a new environmental disaster appears in the headlines, but the marshes of Cootes Paradise and lower Grindstone Creek continue to buck the trend with their retreat from the brink of irretrievable loss. The progress shown in Project Paradise reaffirms one's faith in society's ability to change its own destiny when its collective spirit is focussed on a challenge as important as this one.