

Nature on the Toronto Islands: *An Explorer's Guide*

Joanna Kidd



TABLE OF CONTENTS

Preface by David Crombie	1
Welcome to the Toronto Islands Park	2
The Islands as a Place of Healing	4
You Are Standing on a Sandspit	6
<i>Point of Interest:</i> The Sand Dunes at Hanlan's Point	8
A Haven for Birds	10
<i>Point of Interest:</i> The Trout Pond	12
Lagoon Life	14
<i>Point of Interest:</i> The Cottonwoods at Gibraltar Point	16
Map of the Islands	18
Mammals	20
Amphibians	21
Meadow Plants of the Toronto Islands	22
The Islands' Environmentally Significant Areas	24
Changing Lake Levels	25
<i>Point of Interest:</i> The Boardwalk	26
Naturalization and Habitat Creation	28
<i>Point of Interest:</i> Ward's Beach	30
Some Characteristic Island Plants	32
Further Reading	33

A WELCOME TO EXPLORERS

When I was a boy, I loved going to the Toronto Islands. The adventure began with the Red Rocket trundling down Bay Street to the docks. Arriving at the harbour, we found another world from the City – a world bustling with planes, boats and people. Then came the ferry ride, experiencing the vast expanses of sky and water. And when we landed on the Islands, there were so many choices to make from the amazing diversity of places and activities.

Some places, like Mugg's Island, were just for the birds and my mother would exhort us to leave them alone. You could swim at the beaches, have a picnic, or go to Centre Island for games and rides. There were water sports, and rowboats and canoes jostling their way along Long Pond. And you could explore the island villages, full of character with weather-beaten homes and whimsical gardens. But wherever you went and whatever you did, nature was ever present in the weather, the waves, the trees, birds and wildflowers.

Then, as now, the Toronto Islands were a gathering place, appreciated by every generation and every culture from around the world: a place to relax, to meet, to play, to renew the body and spirit.

This Explorer's Guide does much more than provide information, it will enchant and inspire you. So much beauty and diversity, so accessible to the City, so near and yet so far. Try it in all seasons. I know you won't be disappointed.

David Crombie
Founding Chair,
Waterfront Regeneration Trust

Welcome to the Toronto Islands Park

This guide is designed to encourage you to explore the many special and beautiful natural areas on the Toronto Islands, and to help you understand their importance and value.

The Toronto Islands are one of the city's most treasured green spaces. Formed from one of Lake Ontario's largest sandspits, they are an archipelago of 14 islands, some 325 hectares in size. About 230 hectares of the Islands are maintained as public parkland by Toronto Parks & Recreation.

Some 40 hectares remain in a natural state. Within these natural areas, there are unique landforms, unusual vegetation communities and productive aquatic habitats. These areas support rare plants, a thriving fishery, and many species of birds, mammals, reptiles, amphibians and invertebrates.

For those who like walking, this guide outlines a route that highlights many of the natural features of the Islands. The walk starts at Hanlan's Point in the west and finishes at Ward's Island in the east, but can be started at any point. A complete tour could take two or more hours. Others, more inclined to dabble, may choose to explore only one or two aspects of the Islands' treasures.

Whatever way you choose to explore the natural features of the Islands, we hope you enjoy your stay and that you will visit often.

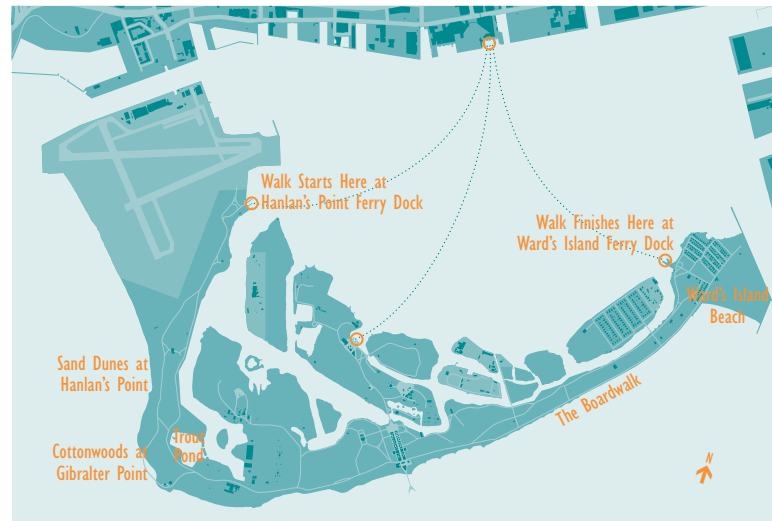
Please Follow These Simple Rules

The plants and wildlife found on the Islands are distinctive, both because of their high quality and their rarity. This is why six parts of the Islands have been designated as Areas of Natural and Scientific Interest and Environmentally Significant Areas.

We ask you to help us protect the Islands' fragile habitats by please doing the following:

- ❖ Stay on trails within the natural areas to avoid trampling fragile plants.
- ❖ Refrain from taking away plants or seeds. Although it is tempting to cut blossoms and collect plants and seeds, please enjoy them in their natural setting.
- ❖ Refrain from disturbing wildlife.
- ❖ Avoid littering and better still, pick up any litter you find in natural areas.

Key map of walk with Points of Interest



The Islands as a Place of Healing

For perhaps as long as 10,000 years, the Islands have been cherished as a place of healing. Although the First Nations peoples did not live here, they used it for hunting, fishing and spiritual purposes.

In 1793, Lieutenant Governor John Graves Simcoe arrived to found the Town of York as a new capital for Upper Canada. His wife, Elizabeth, immediately embraced the Peninsula, the forerunner of our present day Islands, which she referred to as her “favourite sands”. She often came to the area to walk, to ride her horse, to picnic or to paint. Her observations as an amateur naturalist and diarist were acute. A few days after her arrival in the fledgling settlement she wrote about her first visit in her diary:

“We rode on the Peninsula so I called the spit of sand for it is united to the mainland by a very narrow neck of ground. We crossed the Bay opposite the Camp, & rode by the Lake side to the end of the Peninsula.

We met with some good natural meadows & several ponds. The trees are mostly of the Poplar kind covered with wild Vines & there are some fir. On the ground were everlasting Peas creeping in abundance of a purple colour. I was told they are good to eat when boiled & some pretty white flowers like lilies of the Valley”.

The Islands have changed dramatically from the Peninsula of Elizabeth Simcoe’s day. Today, they serve many functions. Ward’s and Algonquin Islands are home to one of Toronto’s oldest residential communities. The Islands also contain an airport, a Natural Science and Public School, and Toronto’s oldest water filtration plant. They host three yacht clubs and a public marina. The Toronto Islands Park provides recreational opportunities for residents of Toronto and

beyond. About 1.25 million people visit the Islands each year to experience their tranquility, to picnic, to cycle, skate or walk, to fish, to birdwatch, to sail or canoe, and to enjoy its unparalleled vistas.

With care, the Islands will function forever as a haven in which people can escape the stress of urban living, experience spiritual renewal and become reconnected with nature.



“Cried all the day,” Mrs. Simcoe noted in her diary on July 21, 1796, the day she left York to return to England. “Little wind, soon became calm,” she noted, which enabled her to make this final sketch of York beyond the storehouses on Gibraltar Point.

(Gibson, 1984)

Photograph provided courtesy of Toronto Reference Library.
[PC (C-13927)]

You Are Standing on a Sandspit

Welcome to one of Lake Ontario's biggest sandspits. Other examples in the Great Lakes can be found east of Toronto at Presqu'île, and at Long Point and Point Pelee in Lake Erie.

The Toronto Islands were created over thousands of years by the deposition of sand eroded from the Scarborough Bluffs. The thick sedimentary layers of sand on the Bluffs were laid down by glaciers during the last Ice Age, when Toronto was covered with a sheet of ice more than a kilometre thick. After the retreat of the glaciers about 15,000 years ago, the erosive forces of wind and waves began to remove sand from the Bluffs. This sand was carried westward by currents and deposited in the shallows off the shore of what is now downtown Toronto to form a sandspit.

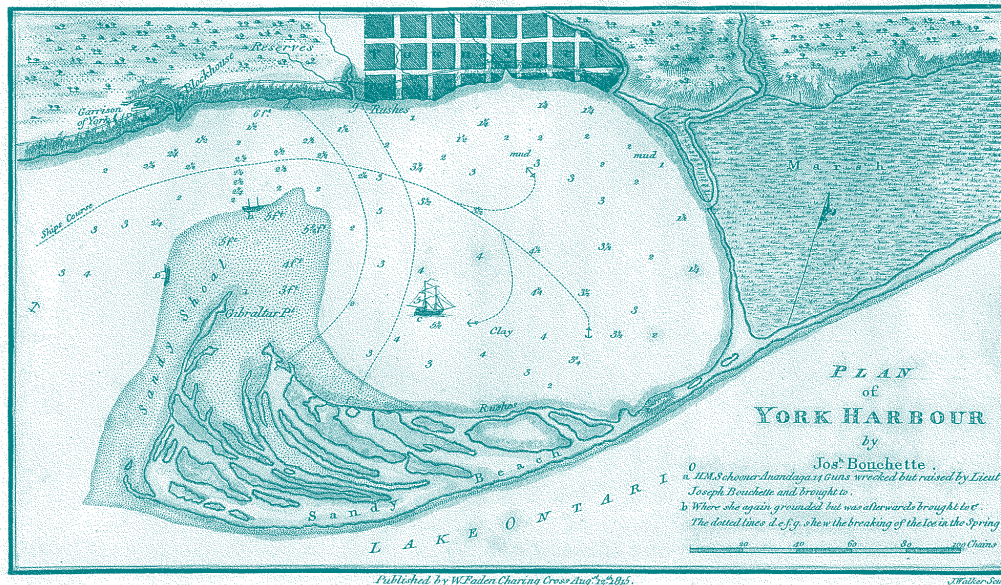
Sandspits are dynamic landforms that are constantly changing with sand being deposited on one side and eroded on the other. They are at the mercy of wind, ice, currents and water. The sandspit or "Peninsula" that Elizabeth Simcoe observed in 1793

and which created such a fine natural harbour was a hooked formation stretching nine kilometres from its base at the foot of present-day Woodbine Avenue. A spine of sand on the outside of the sandspit kept Lake Ontario at bay; on the inside, finger-like spits, wetlands and ponds stretched out to the northwest.

The Peninsula became the Toronto Islands on April 14, 1858. On that night, a violent storm breached the neck of the sandspit, opened up what is now the Eastern Gap, and forever severed the Islands from the mainland.

Since that time, human hands have greatly changed the sandspit we call the Islands. To counter Lake Ontario's erosion, most of the Islands' shorelines have been armoured with rock, protected by revetments and groynes, or encased in seawalls. The shape and size of the Islands has been altered and expanded by dredging and filling. The construction of the Leslie Street Spit (Tommy Thompson Park) has cut off the source of sand that created and sustained the Islands. Despite these changes, the Islands retain much of their beauty, uniqueness and character.

Joseph
Bouchette's
plan of
York Harbour
1793



Plan courtesy of
City of Toronto
Archives.

Point of Interest: The Sand Dunes at Hanlan's Point

The sand dunes at Hanlan's Point stretch about 2 kilometres from the Toronto City Centre Airport south to Gibraltar Point. These dunes (and the smaller ones at Ward's Island) are regionally unique; the nearest similar dune system is 150 kilometres east at Sandbanks Provincial Park near Picton. Dune systems are fragile. Please stay on the trails and avoid trampling the dune grasses as it will make the dune vulnerable to erosion from the wind.

To establish a dune you need three elements: a source of sand, onshore breezes to move the sand inland, and vegetation to trap and anchor the sand.

Open sand dunes are a harsh and unforgiving environment for plants. Those that survive are those that can adapt to drought, full sunlight, strong winds and ever-shifting sands. One of the first species to colonize is marram grass. Once this hardy species is established, sand collects around it and dunes begin to form. Without plants such as marram grass, dunes will not grow in height and width.

Marram grass is a remarkable plant that can reproduce both by seed and underground root-like stems known as rhizomes. If buried by sand, it sends new shoots to the surface. It can roll up its leaves during dry periods to conserve moisture, and develops a root system up to five metres long.

Great Lakes coastal dunes are usually divided into four distinct zones: beach, foredune, trough and backdune. Each of these has distinct plant communities and they clearly show the principle of succession —

the progression of plant life from pioneer species to a climax forest.



marram grass
(*Ammophila*
breviligulata)

At Hanlan's Point, you will find marram grass, many other grasses and sedges and the provincially rare bushy cinquefoil. Behind these colonizing species, in the foredune zone where the sand dunes are higher, you will find hardy shrubs such as woolly-headed and sandbar willow.

Farther inland is the wetter trough zone that gets periodically flooded when water levels are high. Here you will find plants such as cattails that “like to keep their feet wet.” Beyond the trough you will notice the mature eastern cottonwoods and hybrid crack willows that characterize the backdune area.

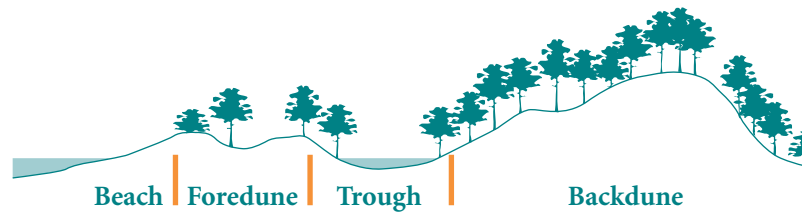


Diagram of zones of dunes

With their undulating shapes and varied plant life, the Hanlan's Point dunes attract humans and wildlife alike. Killdeer often nest in the area, and the shoreline is a great place for observing semi-palmated plovers and spotted sandpipers during spring and fall migration.

This area is extensively used by birdwatchers, swimmers, and those frequenting Toronto's only clothing optional beach.

A Place for Birds

The Toronto Islands are a haven both for birds and birdwatchers. This is because of the size, richness and variety of natural areas here, and the location of the Islands in the overlapping zones of the two major North American flyways, the Atlantic and the Mississippi. Over 200 species of birds have been observed on the Islands and as many as 60 species may nest here.

Spring

During spring migration, the Islands and the Leslie Street Spit are often the first landfall for birds exhausted from flying across Lake Ontario. In the Islands' woodlands, dense thickets, meadows, dune communities and lagoons, migrants find food, refuge, and a place to rest before continuing their northward journey.

Good birding areas in spring include the Hanlan's Point dunes, Gibraltar Point, Snake Island, and the Ward's Island ESA. Keen birders can expect to see many varieties of warblers, wrens, flycatchers, sparrows and vireos. Since 1978, bird banding has been carried out in spring by the Toronto Bird Observatory.

Summer

One of the most prominent summer residents is the black-crowned night heron.

The local population was devastated in the 1950s and 1960s by chemical pollution in the Great Lakes, but it began to recover in the 1980s, and there are now hundreds in the area. These short-legged, comical birds can readily be seen, perched on overhanging branches, patiently hunting for small fish.



black-crowned night heron
(*Nycticorax nycticorax*)

The only nesting locations in Toronto for these colonial birds are on the Islands and the Leslie Street Spit.

Other species that nest on the Islands include the red-winged blackbird, tree swallow, barn swallow, Baltimore oriole, blue-gray gnatcatcher, house wren, Carolina wren, willow flycatcher, killdeer and eastern kingbird.

Fall

One of the Islands' truly spectacular sites is the fall migration of bluejays. At the height of their migration, thousands fly daily along the Islands on their way to the western end of Lake Erie where they will turn and head south. Many migrating hawks can also be seen, along with large numbers of monarch butterflies and green darner dragonflies.



monarch butterfly
(*Danaus plexippus*)



Winter

Winter is a wonderful time to view the northern sea ducks that overwinter in the bay and lake. Tens of thousands of these can be seen, rafting together and wheeling in flight. The most common species seen are bufflehead, long-tailed duck, common goldeneye and white-winged scoter.

Other prominent winter visitors include the greater black-backed gull, the common merganser and the tiny northern saw-whet owl, for which the Islands are famous.



northern saw-whet owl
(*Aegolius acadicus*)

Point of Interest: The Trout Pond

The Trout Pond was originally created in 1968 by the former Metro Toronto Parks Department as a “put and take” trout pond. An earth and rubble berm was built to seal the pond off from Lighthouse Pond, and a system was installed to circulate cold water. Every year, trout were stocked and excess weeds removed. By the early 1990s, it was decided that the costs of maintaining the artificial pond outweighed its benefits.

The Toronto and Region Conservation Authority developed a plan to restore the pond to a more natural, self-sustaining condition. In 1992, they created three breaches in the berm that isolated the pond. This allowed water and fish to circulate freely into and out of the pond and allowed water levels to fluctuate as the level of Lake Ontario changed.

To improve pike spawning habitat, a series of shallow “fingers” were created by placing fill at the northwest corner of the pond. These fingers were then planted with aquatic plants and shrubs. When water levels rise in the spring, northern pike use the shallows between these “fingers” as spawning grounds.

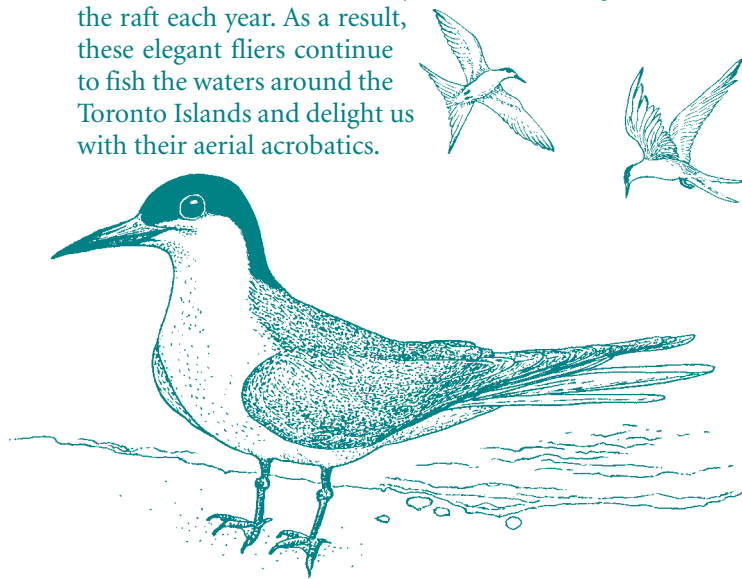
The alterations made to the Trout Pond have had dramatic results. Because water circulation has improved, excess growth of the aquatic plants has been reduced and the need to cut weeds has been eliminated. Instead of a monoculture of stocked trout, there is now a self-sustaining and vibrant community of fish. There has been an increase in both the number of fish species and the total population of fish, and the pond has become a productive nursery for pike and other species of fish.

The best place to observe fish is at the breaks in the berm on the eastern side of the pond. Fish are attracted by the constant flow of water through the openings, which brings food in the form of plankton, invertebrates and smaller fish.

Why is There a Raft in the Middle?

The raft in the middle of the Trout Pond is a simple and elegant solution to a serious problem. The problem, first noticed in the 1980s by scientists at the Canadian Wildlife Service, was that the local population of common terns was decreasing sharply. The terns were being pushed out of their nesting areas on Tommy Thompson Park by more-aggressive ring-billed gulls and the spread of vegetation along the beach areas.

The reef raft was installed in the Trout Pond in 1993 to provide alternative nesting habitat for the terns. Earth, sand, pebbles and driftwood were added to create a suitable surface for nesting, and wooden decoys were used to attract terns. The results have been excellent, with over fifty tern chicks fledged on the raft each year. As a result, these elegant fliers continue to fish the waters around the Toronto Islands and delight us with their aerial acrobatics.



common tern
(*Sterna hirundo*)

Lagoon Life

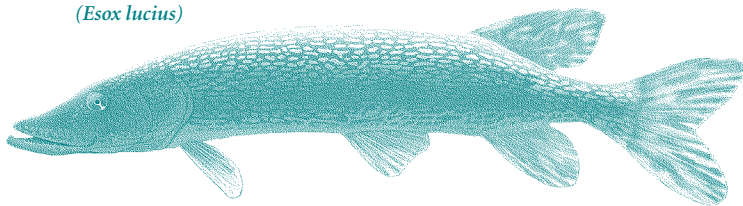
The Islands' lagoons provide some of the best aquatic habitat in the Toronto area. Water quality in the lagoons has improved significantly over the last thirty years. In these protected waters, fish find aquatic plants, rocks and submerged logs for shelter, shallow back bays for spawning and deeper pools for overwintering. In many areas, densely vegetated shorelines help keep water cool and provide cover for young fish. Because of their shallowness, the lagoons provide thermal refuge to fish such as brown trout that cannot survive winters in the frigid waters of Lake Ontario.

One of the best ways to observe the Islands' lagoon life is to travel through them by rowboat or canoe. With luck, you can see the stony nests made by pumpkinseeds, many species of forage fish (fish that eat plankton), and schools of minnows and young-of-the-year brown bullhead.

About 35 species of fish have been found in the Islands' lagoons. This is comparable to the diversity found in the fertile Humber and Rouge marshes. Many anglers are drawn by the presence here of the resident top predators such as smallmouth bass and northern pike. Long, narrow and powerful, the northern pike likes to lurk in weedy bays, waiting for unwary prey fish to swim by. Specimens more than a metre in length are routinely found in the Islands' lagoons.

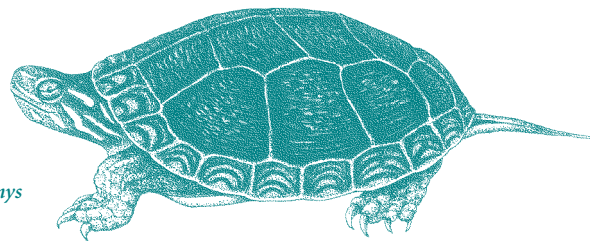
northern pike

(Esox lucius)



The life in the Islands' lagoons is not limited to fish however. There are considerable populations of Midland painted and snapping turtles. Painted turtles emerge from hibernation around the end of March.

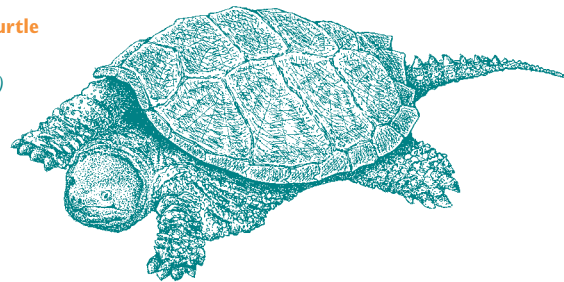
Midland painted turtle
(Chrysemys picta)



They can be commonly seen during the summer in the Islands' lagoons and ponds, sunning on exposed logs. Painted turtles feed on a wide range of insects, earthworms, fish, snails, frogs, carrion and most species of water plants.

Snapping turtles are found throughout the Islands' lagoons. The prehistoric looking "snappers" with their bony shells have not changed much since they emerged during dinosaur times 70 million years ago. They eat a wide variety of plants and animals including crayfish, snails, fish, frogs, tadpoles and carrion. Snapping turtles typically emerge from hibernation in May, breed soon after and lay a clutch of 20 to 40 eggs in June or early July. The young snappers hatch in September and early October, just in time for their first hibernation.

snapping turtle
(Chelydra serpentina)



No tour of the Islands' lagoons would be complete without mentioning the fish-eating birds that depend upon them for food. The black-crowned night heron and great blue heron are numerous, and occasionally a green heron will visit. The common tern can be readily seen and heard as it flies along the lagoons, searching for fish. The belted kingfisher is another common sight, swooping from tree to tree as it screeches its raucous call.

Point of Interest: The Cottonwoods at Gibraltar Point

The principal tree of the Toronto Islands is the eastern cottonwood (or poplar), a Carolinian species that is at the northern limit of its range here. The cottonwood is characteristically found in naturally disturbed floodplains and in shoreline sand dunes in the Great Lakes; it will eventually be the dominant tree on the Leslie Street Spit. The only other major stands of cottonwoods in the Toronto area are found east of the Islands at Clarke Beach Park (Cherry Beach). This is perhaps not surprising as Clarke Beach was connected to the Islands before the storm of 1858 formed the Eastern Gap.

The eastern cottonwood is a tall, fast growing, relatively short-lived species of tree. In June, it releases its fluffy white seeds (dubbed by locals “fluff”) which are carried by the wind and cover the ground like snow. The cottonwood stand at Gibraltar Point is one of the finest examples on the Islands.

When you walk through the woodland, you will notice the characteristic dense understory of red-osier dogwood and willow. If you look up, you can see the gentle arching shape of the cottonwoods, not dissimilar in shape to the elms that were once so plentiful in Ontario. Viewed at a distance, you can see that the mature cottonwoods form a super canopy that stands high above all the other trees on the Islands.



eastern cottonwood
(*Populus deltoides*).

The Lighthouse



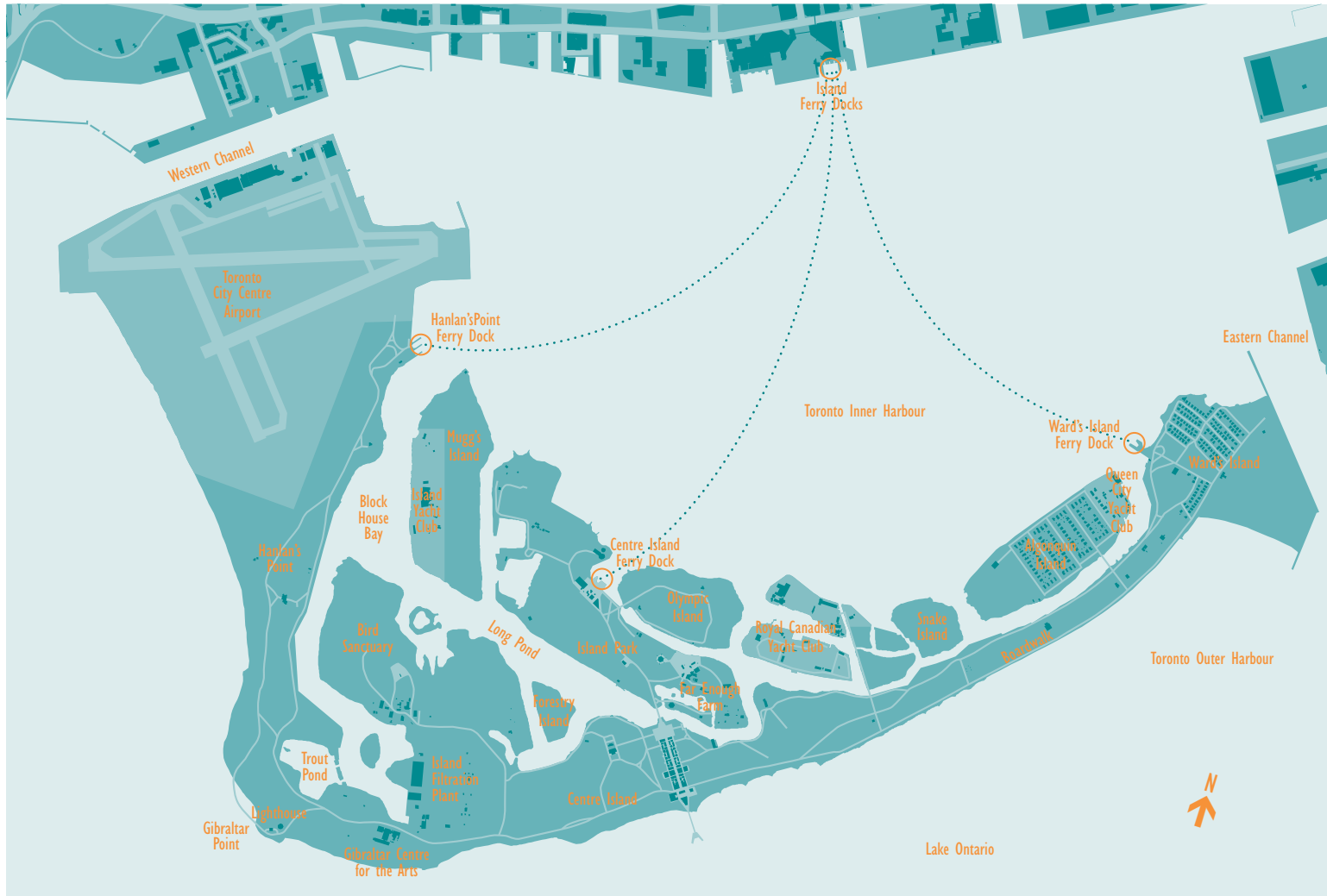
Gibraltar Point Lighthouse, November 5, 1909
Photograph courtesy of City of Toronto Archives.

The Gibraltar Point lighthouse is the oldest stone building in Toronto and Canada’s oldest standing lighthouse. It was built in 1808 to mark the entrance into the harbour. Despite its beacon, many ships have foundered on the notoriously shifting shoals that lie off the Islands.

The lighthouse was built from limestone hauled across the lake from Queenston and its height was increased to eighty-two feet in 1832. It was operated for 150 years from 1808 to 1958, first using oil from sperm whales, then coal oil and finally electricity for its lamps.

Legend has it that the lighthouse is haunted by the ghost of J.P. Rademuller, the first lighthouse keeper who vanished in 1815. The story goes that he was involved in the illegal liquor trade and was beaten to death by two soldiers from the Garrison at Fort York when he refused to sell them whisky. The soldiers were eventually acquitted at trial for lack of evidence. Rademuller’s body has never been found.

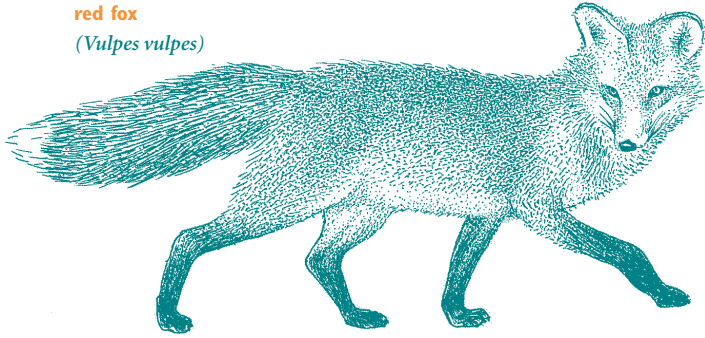
Map



Mammals

Despite the number of park visitors and the extent of mown grass, the Islands support a rich variety of mammals. Grey squirrels and raccoons are resident here as elsewhere in Toronto. The raccoon population has grown significantly in recent years as they have few predators and abundant food.

red fox
(*Vulpes vulpes*)



The population of rabbits, once high, is now low because of predation from feral cats and a relative newcomer, the red fox. Foxes likely reached the Islands by travelling across the ice from the Port Area in winter and are now well established. The sly and agile foxes are a familiar sight on the Islands, and the patient viewer is sometimes rewarded with a glimpse of a fox with her kits.

Resident muskrats are often seen on the Islands, swimming through the lagoons, en route to their bankside dens. In recent years, many beavers have found their way to the Islands, likely from the Humber or Rouge Marshes. Most of these have been passing through, but some have stayed, living in the banks of the lagoons and feasting on the Islands' trees and aquatic plants such as cattails and sedges.

The changing mammal population on the Islands and the presence of occasional visitors such as the striped skunk and the coyote illustrate the dynamic nature of wildlife populations, even in urban centers.

Amphibians

In a world in which amphibian populations are generally in decline because of pollution and habitat destruction, it is encouraging to know that the Islands continue to support populations of two amphibians: the American toad and the northern leopard frog.

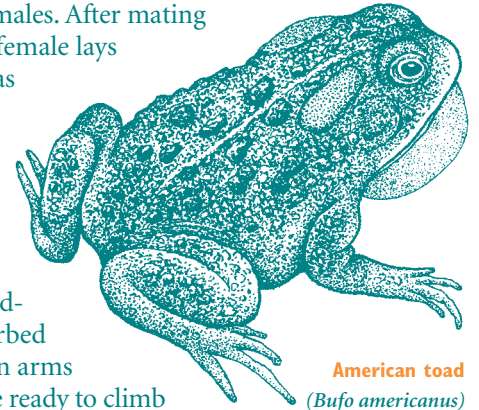
Both species of amphibian breed in the Islands' seasonal ponds and wetlands. Their populations can vary dramatically from year to year, depending on lake levels, rainfall and number of resident garter snakes.

The American toad is primarily terrestrial except when breeding. During late April or early May, the males sit in ponds and trill their distinctive song, hoping to attract females. After mating takes place, the female lays strings of eggs, as many as 7,000

at a time. In two or three days, these hatch into tadpoles. By July or August, the tadpoles have absorbed their tails, grown arms and legs, and are ready to climb

out of the pond and start terrestrial life.

During "big toad years", you can see thousands of tiny toads, only a quarter of an inch long, migrating across the Islands' roads. When ready to mate for the first time at two years of age, the toads will return to the pond in which they were born to begin the cycle again.



American toad
(*Bufo americanus*)

Meadow Plants of the Toronto Islands

Along with their cottonwood stands, beach strands, dune communities and lagoon edges, the Islands are known for two other distinctive plant communities – wet and dry meadows. These are scattered throughout the Islands.

Wet Meadows

As their name suggests, wet meadows are flooded in the springtime and gradually dry out as lake levels drop over the summer months. The edges of

the Islands' wet meadows are typically dominated by grasses and sedges. In the wetter parts, you can find Baltic rush and the green, jointed stems of Nelson's horsetail, both regionally rare species. Horsetails are an ancient group of plants that reproduce vegetatively by underground roots. Because of its high silica content, the plant was once commonly used for scouring pots and pans and is sometimes referred to as "scouring rush".

Nelson's horsetail

(Equisetum X nelsonii) The peak time to visit any of the Islands' wet meadows is late summer/early fall, when most of the wildflowers are in bloom. If lucky, you can see the large pink spikes of false dragonhead, the violet flowers of Kalm's lobelia and the electric blue swirls of fringed gentian, all of which are regionally rare species. The locations of species and their extent will vary from year to year depending on how wet the meadows are.



Dry Meadows

Dry meadows, or tallgrass sand prairies, were once quite common in the Toronto area. Unfortunately few of the plants associated with these areas have survived urban development, making those that remain especially valuable.

The explorer will find many common plants in the Islands' dry meadows — plants such as wild strawberry, gray goldenrod and common milkweed. The unassuming common milkweed plant plays a major role in the life cycle of the orange and black monarch butterfly, forming the major food for its caterpillars. After metamorphosing to its adult form, in late summer/early fall monarchs gorge on nectar and gather in fields and meadows along the north shores of the Great Lakes to start their 4,000 kilometre long migration south to Mexico, where they will overwinter.

The Islands' dry meadows also contain many regionally rare species. Prairie cord grass, switch grass and cup plant are just some of noteworthy natives of the tallgrass prairies that are found on the Islands.

The cup plant is easy to spot as it grows to about 8 feet in height and has yellow composite flowers that look like giant daisies. The plant derives its name from the way its leaves surround the stalk to form a shallow cup. Even on the hottest summer day, dew can be found collected with these miniature green receptacles.



cup plant

(Silphium perfoliatum)

The Islands' Environmentally Significant Areas

Six natural areas on the Toronto Islands have been designated Environmentally Significant Areas (ESAs) by the Toronto and Region Conservation Authority. They have also been designated Areas of Natural and Scientific Interest (ANSIs) by the Ministry of Natural Resources.

These areas are on the east side of Mugg's Island, the dunes at Hanlan's Point, the Wildlife Sanctuary north of the Filtration Plant, the Snug Harbour/Snake Island area, the western end of Algonquin Island, and the eastern end of Ward's Island. All of these relatively undisturbed areas are important because they contain habitats that are of high quality, have limited representation in the region, and support rare species of plants. As ESAs and ANSIs, these areas are protected from development.

Environmentally Significant Areas



Map provided courtesy of Toronto and Region Conservation Authority

Changing Lake Levels

The water levels in the Great Lakes fluctuate annually as the seasons change and over longer cycles lasting many years. Over thousands of years, native shoreline plant communities have adapted to this changing water regime. However, the damming of the St. Lawrence River in the 1950s to create the St. Lawrence Seaway moderated the natural fluctuations of the lakes. This has affected coastal plant communities that depend on fluctuations in water levels, and the wildlife communities such as shorebirds that take advantage of these changes.

On the Islands, the plant communities that have been most affected by the moderation of lake fluctuations are shoreline plants and those that inhabit wet meadows and seasonal ponds. In the low water years at the end of the 1990s, emergent plants – plants with leaves that extend above the water's surface such as sedges, grasses and rushes – began to get established on some of the Islands' previously barren lagoon edges. This provided improved habitat for frogs, fish and insects. At the same time, however, low levels of water in the Islands' ponds reduced the breeding success of toads and frogs. This is an illustration of how nature at the same time can often both “giveth and taketh away”.

**broad-leaf
arrowhead**
(*Sagittaria
latifolia*)



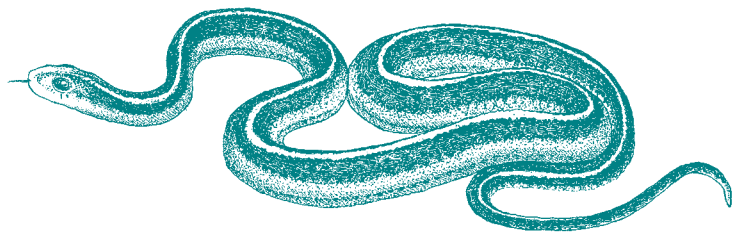
Point of Interest: The Boardwalk

The boardwalk that runs from Centre Island to Ward's Beach is a favourite route for walkers and joggers. From about 1900 until 1969, there were summer cottages all along here. Plenty of evidence remains of the cottagers' gardens, and their battles against the power of Lake Ontario.

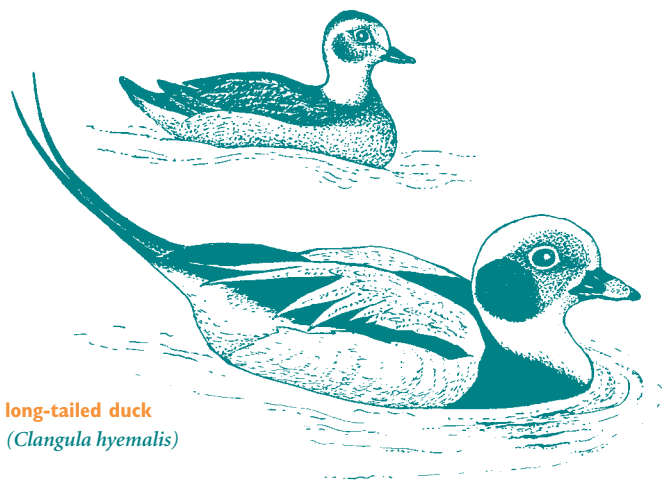
At the western end of the seawall, you can see what looks like old wooden palisades in the lake. These are the remains of the original seawall that was built in 1884 of seven-inch square cedar piles. The present day sea wall was built to the height of the boardwalk in 1935. A massive structure, it consists of a continuous sheet pile wall 7 metres in depth topped with a 2.1 metre high, curved concrete wall. In 1951, a one-metre extension of concrete was added above the level of the boardwalk to provide additional protection.

North of the Boardwalk look for walls built by individual homeowners as secondary lines of defense against the lake. In high-water years and during storms such as Hurricane Hazel in 1954, even these defenses were not sufficient to keep the Islands dry.

The area beside the boardwalk has been allowed to naturalize and functions as a wildlife corridor. It contains an interesting mix of native plants (such as dogwood, willow, and horsetail), ornamental shrubs from the old cottage gardens (such as lilacs, forsythia and flowering cherry), and invasive species such as Japanese knotweed. Many of the trees along this stretch are draped with wild grapevines.



common garter snake
(*Thamnophis sirtalis*)



long-tailed duck
(*Clangula hyemalis*)

Birdwatchers enjoy the boardwalk in all seasons. During spring migration, the shrubs can seem to be alive with colourful warblers, especially early in the morning. On the lake, you may see common loons, black ducks, blue-winged teal, and other spring visitors. In spring, walkers often come across harmless garter snakes sunning on the boardwalk. Less frequently, one may find the rare black (or melanistic) form of garter snake.

During the summer, Canada geese, mallards, gadwalls and mute swans graze close to the seawall. At night, dozens of black-crowned night herons can be seen perched on the seawall or on nearby rocks.

In winter, the boardwalk experience can be quite exceptional. After snow has fallen, cross-country skiers carve trails along its length. Rafts of sea ducks (bufflehead, goldeneye and long-tailed duck) and common mergansers ride the waves just offshore and dive for zebra mussels. Some years, when large winter storms come from the southwest, breakers crash over the seawall and sculpt massive ice sculptures on the boardwalk itself and the trees and shrubs beside it.

Naturalization and Habitat Creation

In recent years, park managers in North America have moved away from the manicured parkland that was popular thirty years ago to embrace more natural approaches to landscaping. On the Islands, the grass is no longer mowed in certain areas. This allows a diversity of plant species to get established. When this happens, a broader range of wildlife is attracted and supported.



place. In some places the lagoon edges, once mowed to the edge, have been planted with water-loving trees and shrubs such as willows, dogwoods, poplars and ash. These re-vegetated banks provide habitat for wildlife, cover for fish, and protect against erosion caused by boat traffic.

On the more exposed, bay side of the Islands, in the early 1990s, shoreline protection was carried out with an eye to also improving wildlife habitat. Instead of rebuilding deteriorated vertical sea walls, they were buttressed with rock placed alongside them in the bay. This produced more natural looking shorelines and also improved fish habitat. Over time, grasses and shrubs will become established on the shorelines; this will further improve their look and ecological functioning.

Plans are underway to expand and create new wetlands on the Islands to replace those that have been lost through shoreline alteration and filling. This will

add to the naturalization improvements already made at the Trout Pond and will improve habitat conditions for fish, amphibians, turtles and birds.

The purpose of the naturalization and restoration projects, (both planned and completed,) is to improve, expand and better connect natural areas on the Islands. All this will make the Islands better for wildlife and even more valuable as a place where people can explore, appreciate and reconnect with nature, now and in the future.

Battling Invasive Plant Species

On the Islands, as in other Toronto parks, invasive plant species are becoming an increasing concern. Invasive plant species are species that aggressively colonize natural areas and force out native plants. Most of them were introduced into North America for agriculture, medicine, horticulture, or erosion control, although some are native. Invasive plant species tend to have few natural enemies, reproduce very quickly, and take advantage of disturbed conditions (such as forest edges).

How best to deal with invasive plant species such as Japanese dogwood, purple loosestrife and dog strangling vine is a great challenge. Managers use a variety of approaches to control these plants, depending on the particular species. Some respond well to mechanical methods of control such as cutting or hand-pulling and others to biological controls such as insect predators. Careful and selective applications of herbicides are required for control of the most troublesome invasive species.

Point of Interest: Ward's Beach

The Ward's Beach area has a lot to offer the explorer. The beach – consistently one of Toronto's best in terms of water quality – is a lovely place to swim or stroll. As you walk inland from the water's edge, you can see plant succession at work, starting with the pioneer species that have colonized the beach and ending with the mature woodland to the north.

Along the beach strand you will find the regionally rare sea rocket, a plant of the mustard family with succulent stems and small purple flowers. This species is found only on the Atlantic coast and in parts of the Great Lakes. Alongside this you can find bushy cinquefoil, with its highly dissected leaves and five-petaled yellow flowers. Bushy cinquefoil is only found in a few sites in Ontario, on sandy shorelines along Lake Ontario and Lake Erie.



bushy cinquefoil
(*Potentilla paradoxa*)

This is a particularly good place to find golden warblers during spring migration.

In the depression behind the beach, there are a series of ponds and wet areas. The water level in these ponds is directly related to the spring lake levels and varies significantly from year to year. Vegetation is dominated by sedges and common bulrush. As in many other wetlands in North America, purple loosestrife, a beautiful but invasive exotic plant has found its way here. The ponds are used in the spring

by toads and frogs for breeding, and they are a popular place for great blue herons to feed.

Walking inland you will come across a series of old gravelly shorelines. Their presence illustrates how the Islands grew to the south as sand from the Scarborough Bluffs was deposited along the shore.

The wet meadow north of the old shoreline is beautiful in all seasons but can be quietly spectacular in the fall when the wildflowers are in bloom. With luck (and optimum water levels) you may see the small white flowers of nodding ladies tresses, the blue swirls of fringed gentian, and the bell-like blossoms of purple gerardia. The open wet meadow is a good place to see kestrels and ground feeders such as the common flicker.



sandbar willow
(*Salix exigua*)

Plant succession ends with the eastern cottonwood forest to the north of the wet meadow. Like the other stands on the Islands, this one has a canopy of eastern cottonwoods, a sprinkling of crack willows, and an understory of red-osier dogwood. During spring migration, this is a fine place for morning birdwatching. In the summer, it is a good place to look for roosting black-crowned night herons.



great blue heron
(*Ardea herodias*)

Some Characteristic Island Plants

Woodland plants:

eastern cottonwood (*Populus deltoides*)
hybrid crack willow (*Salix x rubens*)
red-osier dogwood (*Cornus stolonifera*)

Beach and dune plants:

bushy cinquefoil (*Potentilla paradoxa*)
marram grass (*Ammophila breviligulata*)
sandbar willow (*Salix exigua*)
woolly-headed willow (*Salix eriocephala*)

Dry meadow plants:

cup plant (*Silphium perfoliatum*)
gray goldenrod (*Solidago nemoralis*)
prairie cord grass (*Spartina pectinata*)
wild strawberry (*Fragaria virginiana*)
switch grass (*Panicum virgatum*)

Wet meadow plants:

Baltic rush (*Juncus balticus*)
false dragonhead (*Physostegia virginiana*)
fringed gentian (*Gentiana crinita*)
Kalm's lobelia (*Lobelia kalmii*)
Nelson's horsetail (*Equisetum X nelsonii*)
nodding ladies tresses (*Spiranthes cernua*)
purple gerardia (*Agalinus purpurea*)

Further Reading

Specific references that may be of interest:

Sally Gibson, 1984. *More than an island: A history of the Toronto Islands*. Irwin Publishing, Toronto.

Joanna Kidd, 1998. *A living place: Opportunities for habitat regeneration in Toronto Bay*. Toronto Bay Initiative.

Norm Murr, 1999. *Favourite birding hotspots: The Toronto Islands, Ontario Federation of Ontario Naturalists News*, February 1999.

Steve Varga, 1987. *Toronto Islands: Plant communities and noteworthy species*. Toronto Field Naturalists.

General guides that may be useful:

Newcomb's Wildflower Guide
Familiar Amphibians and Reptiles of Ontario
Peterson's Field Guide to the Birds East of the Rockies
Birds of Toronto and Vicinity

Acknowledgements

I would like to extend my appreciation to the individuals who generously shared their time and knowledge to review the material in this Explorers Guide, to Leslie Coates for her imagination, patience and editing skill, and to Zile Zichmanis for her beautiful illustrations.

What the explorer will find on the Toronto Islands

◆
Unparalleled vistas of the City and Lake Ontario

◆
**A variety of plants, many of which are considered
regionally or provincially rare**

◆
**Beautiful woodlands, wet and dry meadows, and
dune plants that are rare or unique in the
Toronto area**

◆
**Over 200 species of birds and many species of
mammals, reptiles, amphibians and insects**

◆
**Monarch butterflies on their migration south in
autumn**

◆
**A diverse and thriving aquatic community that
boasts 35 different kinds of fish**

◆
Canada's oldest standing lighthouse

◆
And much, much more!

Toronto Parks and Recreation acknowledges the support of the Great Lakes Sustainability Fund in the printing of this publication.

