Locking through Narrows Lock into Big Rideau Lake

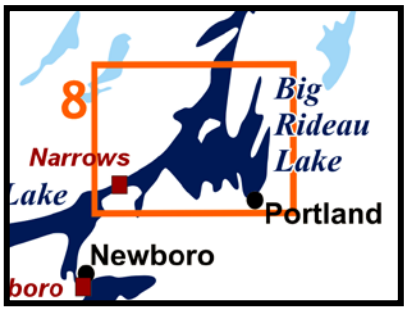
Rideau Paddling Guide 8
Narrows Lock to Tar Island

(Big Rideau Lake - south)

Rideau Canal National Historic Site & World Heritage Site, Ontario, Canada

by

Ken W. Watson



This is the main body of Big Rideau Lake, with Narrows Lock at the west end, the village of Portland on the east side and Tar Island (and also Murphys Point Provincial Park) at the north end. There is quite a bit of unsheltered open water, so paddlers, particularly canoeists, should ensure that they do a weather check to make sure the winds are light prior to heading out.

No specific route descriptions have been given for paddling the lake - you should explore it on your own. It's a big lake (hence the name) and has opportunities for several day paddles. The detailed map in this guide (which can be enlarged while viewing the PDF to any level of detail you desire) will allow for travel planning.

Water Access

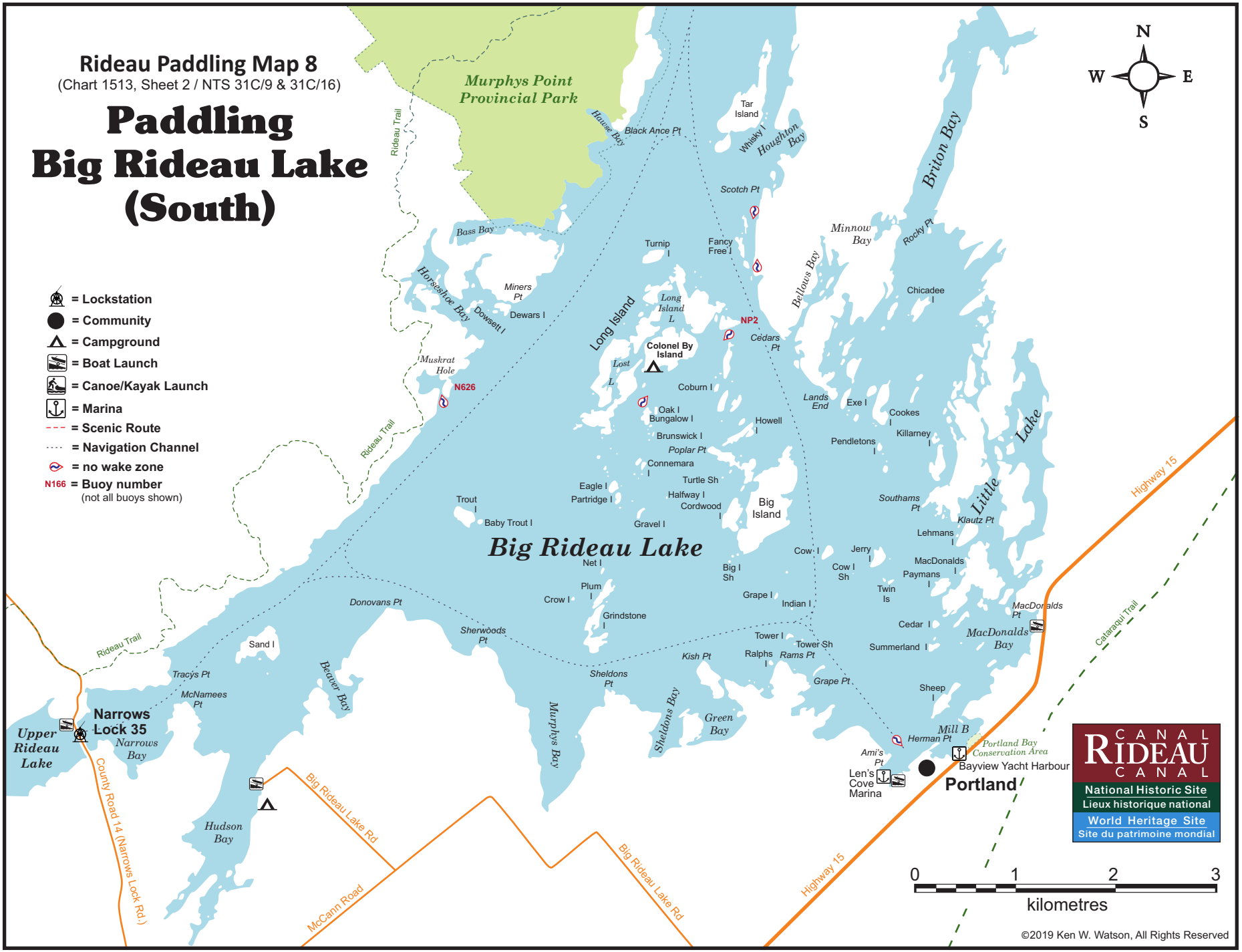
Big Rideau Lake (south): There are five points of access to this section of Big Rideau Lake; Narrows Lock, Hudson Bay ramp, Portland Public Ramp, MacDonalds Bay ramp and the ramp in Murphys Point Provincial Park.

At **Narrows Lock** it is a short portage to the canoe/kayak dock. The **Hudson Bay ramp** (44° 41.860'N - 76° 16.360'W) can be accessed from either McCann Rd (off of Narrows Lock Road) or Big Rideau Lake Road (off of Hwy. 15). It is located at the foot of Big Rideau Lake Road and consists of a grated steel ramp with limited roadside parking. In **Portland**, there are two public options. There is the public ramp right in town at the foot of St. Mary's Street (44° 41.935'N - 76° 11.550'W). Just to the north of town, there is a public ramp in **MacDonalds Bay** (44° 42.655'N - 76° 10.580'W). Portland is also home to two large marinas; Bayview Yacht Harbour and Len's Cove Marina. Just off the north end of the map in this guide is the ramp in **Murphys Point Provincial Park** (44° 46.815'N - 76° 13.030'W) - it is shown on the map in Guide 8.

Rideau Paddling Map 8

(Chart 1513, Sheet 2 / NTS 31C/9 & 31C/16)

Paddling Big Rideau Lake (South)



Facilities

Lodging: If you're paddling and camping, the lockstations and Colonel By Island are a good choice for camp spots (a camping fee applies). There are also a few campgrounds, many B&Bs and hotels (in Westport, Newboro and Smiths Falls). For information about local accommodations see: www.westportrideaulakes.on.ca, www.rideau-info.com/canal/ and general lodging sites (i.e. Airbnb, bbcanada, TripAdvisor).

Supplies: Local sources for supplies are Westport (grocery), Portland (grocery) and Smiths Falls (full services).

Big Boats

You'll be sharing the Rideau with big power boats (cruisers). The Rideau is generally not a crowded waterway and often you'll find the large boats in "packs" - travelling from lock to lock - once they pass by you won't see any for awhile. Some of these boats can generate a large wave. The general rule for a paddler and large waves is to meet them head on, this can actually be fun in a kayak (not as much fun in a canoe).

The main navigation channel is shown on the map as a blue dashed line - this is where the big boats will be travelling. So, if you wish to avoid these, pick a route away from the navigation channel. Many paddlers prefer paddling near shore, it's more interesting (i.e. wildlife, cottages) and it keeps you farther away from the waves produced by big boats.

There are several "no wake" zones on the Rideau - these have been marked on the maps. Boaters within these areas are supposed to be travelling at a slow enough speed (less than 10 kph) that their boat doesn't generate any potentially damaging or dangerous waves. .

Wind

A question often asked is which way does the wind blow? The prevailing wind, powered by the jet stream, is from the southwest. That's about the only rule of thumb. If a front is moving in then the wind can come from any direction. I've been on several paddles where I've been paddling into the wind on the way out in the morning and into the wind on the way back in the afternoon because the wind swung around 180 degrees (for some reason it never seems to work the other way around - at your back both ways). So, if you're going to travel the entire Rideau, going from Kingston to Ottawa improves the odds of having the wind at your back - but be prepared for anything.

Etiquette

Your trip planning should include a "leave no trace" approach - carry out what you carry in. Many areas are un-serviced (no garbage cans) – so plan to be self-contained. The lockstations provide waste disposal facilities.

Preparation & Safety

Please read the trip planning information on www.rideau-info.com/canal/paddling/. While these lakes are easy paddling, normal paddling preparations should be made (all required safety gear, maps, food, water, first-aid kit, etc.). Zebra mussels are present in many areas along the Rideau, so a pair of water shoes (to avoid cut feet) is recommended.

Please take all normal safety precautions, including checking the weather forecast before you head out and making sure that someone on shore knows your planned travel route and itinerary

Navigation

While the Rideau is generally easy to navigate, taking along a set of maps is a must (in addition to any GPS you might have). Although the map in this guide is an accurate 1:50,000 representation of the waterway (when printed to 8.5" x 11"), you may also wish to also have the 1:20,000 hydrographic chart for this section (Chart 1513). For power boat navigation, the charts are an absolute must (the map in this guide should not be used for power boat navigation). The charts are also very handy for the paddler, since they show the Rideau in great detail, including depths (which can be helpful when looking for wildlife habitat or just interesting places to paddle).

The charts also show all the navigation buoys. These are all numbered (red buoys have even numbers, green buoys have odd numbers) and so can be used as an aid in locating yourself on the map when you're on open water. A subset of those buoy numbers have been included on the paddling guide maps.

For those wishing to go off the beaten path or want to know more of the topography and geographic features of the surrounding countryside, the 1:50,000 NTS maps for this section is 31C/9 and 31C/16.

The Locks

Most Rideau lockstations offer facilities such as washrooms, water, recycling cans, waste cans and picnic tables. Most also allow camping for paddlers travelling the Rideau for a modest camping fee. Paddlers can portage the locks for free, but you owe it to yourself to lock through at least one lock in order to get the full experience of paddling the Rideau Canal. See www.rideau-info.com/canal/ for the current fee schedule.

Distances:

Circumference distances are approximate, following the main shorelines & bays. The navigation channel is shown on the map.

- Narrows Lock to Murphys Point Provincial Park (ramp) along the navigation channel = 11.2 km (7.0mi)
- Narrows Lock to Portland along the navigation channel = 9.5 km (5.9 mi)
- Portland to Murphys Point Provincial Park along the navigation channel = 9.5 km (5.9 mi)
- Narrows Lock to Colonel By Island = 7.0 km (4.3 mi)
- Portland to Colonel By Island = 4.7 km (2.9 mi)

- Colonel By Island to Murphys Point Provincial Park = 5.5 km (3.4 mi)
- Big Rideau Lake south circumference (Narrows Lock to Rocky Narrows): = 88 km (55 mi)

The Lakes

Big Rideau Lake

In the pre-canal era this was a single lake that stretched from Westport to Stonehouse Island (Stonehouse Point at the time). The dam at Poonamalie raised the water in the lake by about 6 feet (1.8 m). The lock and dam at Narrows created a separate lake (Upper Rideau Lake) from the western end of the original Rideau Lake. Big Rideau Lake has a maximum depth of 330 feet (100 m) with an average depth in the western part of the lake of about 100 feet (30 m) and in the eastern part of about 40 feet (12 m).

The western side of the lake features a large exposure of granite (the Rideau Lake Pluton) and much of the northern shoreline marks the trace of the Rideau Lake Fault. The north and west sides of the lake exhibit the rugged topography of the Frontenac Axis, the Pre-Cambrian rocks of the Canadian Shield while the south side of the lake exhibits flat-lying Palaeozoic rocks (mostly sandstone). See the map in the Geology Section.

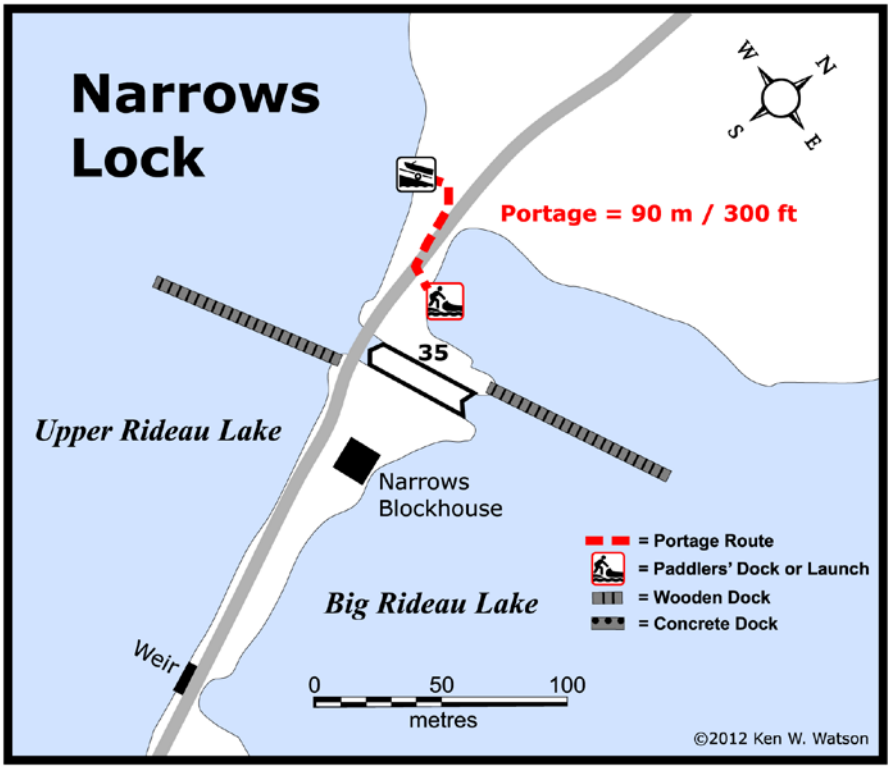
The land bordering the lake is mostly privately owned, the exceptions being federal land in the vicinity of the locks, Colonel By Island (federal), the Mill Pond Conservation Area (provincial - 437 ha), Murphys Point Provincial Park (provincial – 1243 ha) and the Portland Bay Conservation Area (provincial – 4 ha). Most of the lake has moderate density cottage and summer home development.

Points of Interest (listed south to north)

Narrows Lock: The lockstation here has a single lock (lift of 0.8 m /2.5 ft). It is located on a narrow spit of land, originally known as First Narrows, where the width of the channel in this area prior to the canal being built was only about 30 m (100 ft). For a short time it was used as a ford, connecting to a road (bridle trail) that led to Perth. By the time of lock construction (late-1820s) this path was out of use. The lift of the lock used to be about 4.8 feet (1.8 m) but the rebuilding of the dam at Poonamalie has raised the level of Big Rideau Lake, lowering the lift at Narrows to its present day 2.5 feet (0.8 m).

The lock was excavated into the bedrock of the spit, with the waste weir positioned near where the original channel existed. The spit was raised (dammed) to impound more water. A blockhouse, one of only four on the Rideau, was built here in 1832 to protect the lock. It is used today as the lockmaster's office (and public washrooms). The reason this lock is here, in the middle of a lake, is a story of disease and geology as recounted in *Tales of the Rideau.*

An interesting feature of this lock and also of Newboro Lock is that both were built without breastworks (an upper foundation). Colonel By didn't intend for these locks to be permanent. He thought that when conditions and technology permitted, his original plan, of simply having the isthmus at Newboro crossed by an open cut, with no locks here and at Newboro, could be implemented.



Big Rideau Lake: As with Upper Rideau Lake, Big Rideau Lake is a contrast of topography with the large granitic (syenite and monzonite) exposures on the west shore, low lying flat lands on the south shore (generally Paleozoic sandstones) and a bit more topography with Precambrian marble (crystalline limestone) on the east shore. The Rideau Lake Pluton (a large rounded area of igneous rock) is Precambrian, between 1.06 and 1.09 billion years old. It intrudes into older (1.3 billion year old) marbles and quartzites. Running along the west edge of the lake is the Rideau Lake Fault – the cliff faces that can be seen just north of Narrows are due to this fault. In the northern region of the lake (very generally in the area of Otty Lake and west of Nobles Bay - see Map 9) there was quite a bit of small scale mining done in the late 1800s and early 1900s, primarily for phosphate (apatite) and mica, plus a bit for graphite. See the maps in the Geology of the Rideau Canal section.

The lake has a long history of cottaging (from the 1870s) and there are some lovely old cottages to be seen along the route, a few of these are identified in the text below.

Donovans Point: An interesting part of local history is that it tends to get clouded with anecdotal tales – people, places and time periods get mixed up and erroneous conclusions are drawn. We have two such tales for Big Rideau Lake, that of Donovans Point and that of Murphys Bay. The tale for Donovans Point is that an Irish canal worker fell sick and on his deathbed requested that he be returned to Ireland so that he could be buried in Irish soil. There was no money to return him to Ireland, so instead a small plot of land was consecrated as being Irish and he was buried on the Rideau, in "Irish soil." A much more embellished version of this fictional tale appeared as a factual article in the Sept 2, 2007 edition of the Ottawa Citizen.

This tale has its roots in the burial of Dennis Donovan. Dennis, born in about 1795, immigrated to Canada from County Cork, Ireland. He may have ended up working on the Rideau Canal (not substantiated,

there is no actual evidence for this). What we do know for sure is that in 1842 he bought 50 acres of land in the area near Donovans Point. He and his family operated an apple orchard and truck (market) garden in this location. He died on December 18, 1851 (suicide) and was buried on his property. When his widow and son sold the property in 1860, it was for the entire 50 acres with the exception of a small parcel, 9 feet long by 6 feet wide, the burial place of Dennis Donovan. One story (not verified) goes that the deed for this 9 foot by 6 foot wide plot was given to the City of Cork in Ireland. These are the roots of the fictional "Rideau Canal worker buried in Irish soil" story. Donavan's headstone was found in 1970, it read "*DENIS DONOVAN departed this life Dec. 18, 1851 aged 56 years, a native of the County Cork, Ireland.*"

Murphys Bay: The tale here is that this was the original location for the route of the Rideau Canal – that the plan was to do a canal cut from here, cross country via Crosby, to Newboro Lake. It is said that a warehouse and wharf were constructed here at that time in anticipation of the canal coming through. While these structures may have been built, they certainly weren't to service a canal in this spot – the surveys and plans for the Rideau Canal in this area always showed it going through First Narrows and over the Isthmus (Newboro). There were never any plans to take it by way of Murphys Bay.

Murphys Bay also holds a role in the settlement of Perth in 1816. It was named after David Murphy, who had a farm here, but there was an earlier settler in this area, referenced as "old man Lindsay" in an 1879 book, in 1816 he would have been young man Lindsay. One of the earliest maps of the region, Joshua Jebb's 1816 map, shows the only road in the area to "Lindsay's," located at the head of Murphys Bay. The story of the settlement of Perth says that Lindsay operated a large scow and that he transported settlers in April 1816 down Rideau Lake to a landing in Beveridge Bay. We also have an account from John Kilborn (a young, 21-year-old military officer in 1816) that he escorted the settlers to Rideau Lake and "had to cut a road the last three miles, to reach the lake." He says the location they ended up in is that of today's Portland. Their actual destination was Old Landing, a spot a few hundred metres east of today' downtown Portland. The most likely scenario is that Lindsay overwintered his scow in the sheltered Old Landing Bay and this was the destination of the new road. The actual landing is now underwater, near the east side of Sheep Island. The settlers were then taken down Rideau Lake to a spot in Beveridge Bay (near where the locks are today) where they disembarked and went overland to the Tay River at a point above the lower set of rapids in the river, where they continued by scow into Perth, arriving there on April 17, 1816. We can imagine the trepidation of these settlers as they headed out onto the waters of Big Rideau Lake to make a new life for themselves in the newly established community of Perth.

Portland: This small community features two large marinas plus a public docking area. It has services such as a grocery store and bank. Originally known as Old Landing, it was settled in the early 1800s with a community forming by the early 1820s. In 1833 it was renamed Portland in honour of William Henry Cavendish Bentinck, the 3rd Duke of Portland. A feature building in the village is the Emmanuel Anglican Church, built in 1862, located at the south end of the village. A heritage walking tour brochure of the village is available in the village or on-line.

Colonel By Island: This is an island owned by Parks Canada. Paddlers can camp here (for a fee). There is a 3 km long hiking trail looping around the island. The two "inland" lakes, Long Island Lake and Lost Lake, make for nice sheltered paddling.

The island has an interesting history. It was originally known as the "Isle of Guernsey" and was used as a cow paddock. The first building, a hotel, was built by R.G. Harvey in about 1889. Harvey was one of the entrepreneurs behind the Brockville, Westport & Sault Ste Marie Railway. Despite the name, the actual railway, built between 1886 and 1888, only made it from Brockville to Westport (the company went bankrupt in 1894). This first hotel appears to have been partially or completely burned down in 1889 (shortly after it was built).

In 1893, the property was purchased by a syndicate, mostly men working for the CPR. It's a bit unclear whether there was a building on the site at the time or if they built a new lodge. It was operated as the CPR Angler's Club (or just Angler's Club) with membership limited to 100. To service the club, they had a fast steam launch stationed in Smiths Falls.

Sometime in the early 1900s, I.G. Ogden, the vice-president of the CPR, took over the lodge to use as his summer cottage. It burned down in the fall of 1915 and 1916 found Ogden busy building a new cottage, called the "Angler's Inn." This building was being "fitted with all modern conveniences," including a power plant to generate electricity and pump water.

The Angler's Inn was still there in 1920. It seems to have fallen out of use sometime in the 1920s.

The flat roofed building that you can see today on the Island is "Wag's Lodge," built by Danny Arnstein (co-owner of Yellow Cab in New York and Chicago) in 1949-50. The cottage features two massive "peanut rock" fireplaces and "driftwood plywood" walls. It was designed by architect Horace Roberts of Westport. Danny Arnstein had a number of famous visitors to the island including actor David Niven. Arnstein passed away in 1960 and the island passed into new hands. It was sold by its last private owner, Gerry Livingston, to the Government of Canada in 1979. The building is not maintained and is slowly falling apart (marked by Parks Canada with keep out signs).

Other Islands: Islands served many purposed on the Rideau. In the mid-late 1800s, many of them were used for cattle grazing (no fences required) and some were farmed (potatoes were a favourite crop). Cottaging on the islands of Big Rideau Lake started in the late 1800s and several of the present day cottages that you can see date back to that time. Those who like interesting cottage and boathouse architecture will have a great time paddling along the shoreline of the lake and to the various islands. For a history of several of the cottages on Big Rideau Lake visit the library in Portland and have a look at the book *Rideau Passages* by D. Jane Moore (1982). A bit of island history, much taken from Moore's interesting book, is presented below (going from west to east).

Grindstone Island: This was the summer home of Admiral Sir Charles E. Kingsmill, the first head of the Canadian navy (the Canadian Naval Service which later became the Royal Canadian Navy). The navy was founded in 1910 and he served as its head until 1920. He acquired Grindstone Island in 1914. He passed away here in 1935 and is buried in the Emmanuel Anglican Cemetery in Portland. The name derives from the fact that grindstone (sandstone) was mined here in the 1860s. Some small scale graphite mining was also done here in the early 20th century. A 6 acre part of the island is now the Lady Kingsmill Nature Reserved (Rideau Waterway Land Trust property).

Tower Island: The original cottage and tower on this island likely date back to the early 1900s. It has provided a visual landmark on the lake for many years.

Big Island: When the Rideau Canal was flooded with the building of dams (the slackwater system), forested land was flooded. When these trees died, they remained standing. Dead standing trees are used by the Great Blue Heron as a nesting spot (they build a nest of sticks at the top of the dead tree). By the mid-1800s there were thousands of herons (and also many osprey) nesting in the drowned forest lands of the Rideau. One such spot was Big Island, where the shallow "lake" on the west side of the island was host to many nests. Local history records two residents, Ernie Seward and Sim Scovill, once (likely in the late 1800s) counting over 550 heron nests in this spot.

Cow Island: This island is owned by the Big Rideau Lake Association, purchased by them in 1954. The original cottage on the island was built by the Gallagher family of Portland in the 1890s. The present building was constructed in 1962 by the BRLA.

Lands End: The point of land by Exe Island was the location of Garrett's Rest – a summer hotel built in about 1889 by S. Garrett of Smiths Falls. It had about 20 rooms for guests and at one point cabins were built on Exe Island to accommodate more visitors. The Smiths Falls Record in 1897 described Rideau Lake and Garrett's Rest: *"It is one of the most delightful spots in all Canada. For boating, sailing, fishing and scenery it has no equal. The accommodation at Garrett's Rest is number one. The house this year has been renewed with in and without and presents a charming aspect. The price is extremely moderate and the host and hostess the most genial and obliging to be found anywhere."*

The "Palace Steamers"; *Rideau King* and *Rideau Queen,* both had Garrett's Rest as a scheduled stop. A 1913 brochure shows accommodation at Garrett's Rest to be a bargain at only $1.00 to $1.50 per day. Other hotels in the regions such as the Hotel Kenney at Jones Falls, the Lake Opinicon Club House (the Opinicon) at Chaffeys Locks and The Fisherman's Rest in Westport were charging from $2.00 to $3.00 per night. The last owner, Albert Gallagher, died in 1934 and the building deteriorated, eventually being torn down in about 1946.

Wedding Cake Cottage: As you travel along the east shore of the lake from Lands End to Fancy Free, you'll be sure to notice the Wedding Cake Cottage, built about 1880. It was one of two of this unique style of building built on Rideau Lake, the second one used to be at Rideau Ferry, but it was destroyed (either burned or taken down) in the early 2000s, so this building remains as the only example of this style of architecture on the lake.

Fancy Free: The oldest standing cottage on the lake, the original cottage dates back to the 1870s. It was built by the Washburn family who lived in Smiths Falls. Although expanded a bit over the years, it still retains many of the features of the original building.

Muskrat Hole: On the west side of the lake you'll see a large building at the entrance to Muskrat Hole. This is the site of a failed business venture, Rideau Lakes Vacations, that set up shop here in the 1980s. They generated a great deal of controversy on the lake since, in addition to the lodge, they planned to have 56 large (40-foot) houseboats available for rent (parked in Muskrat Bay). They operated for a few years and then went bankrupt. The property was privately purchased in 1998.

Little Boys Camp: The island in front of Muskrat Hole is the site of Little Boys Camp, built by Charles Parker in 1908. Parker used to entertain many of his American friends here, and, according to local lore, the spot was named due to these men acting like "little boys."

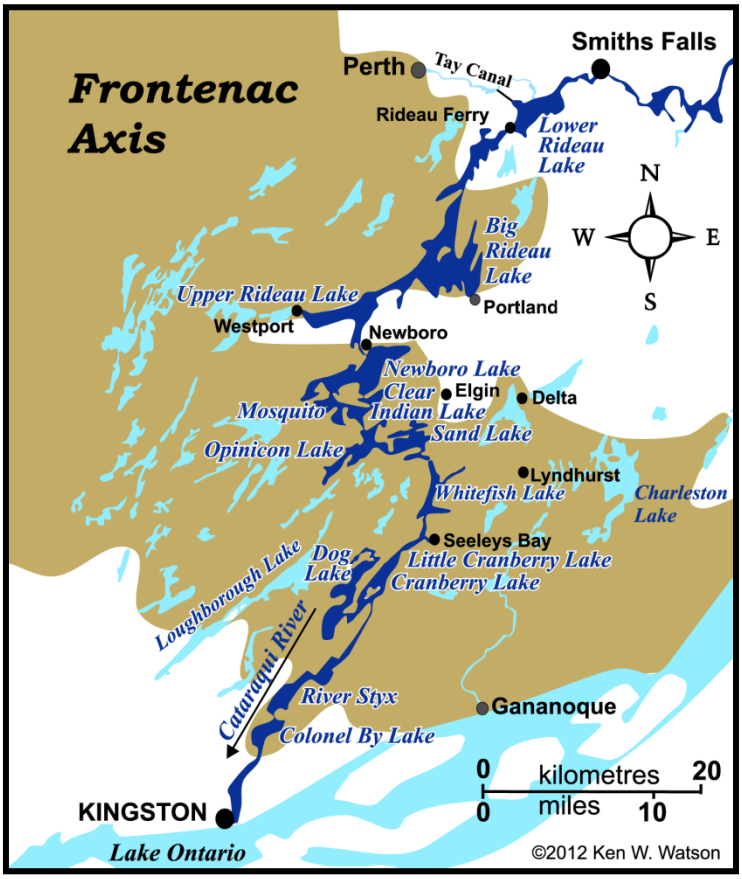
Murphys Point Provincial Park: This is a large provincial park with many interesting features. For the paddler, there are several boat-in campsites (including a couple of canoe/kayak only camping spots). It also features a number of interesting hiking trails (interpretive brochures are available in the park), the historic Silver Queen Mine (a phosphate and mica mine that operated from 1903 to 1920), old homesteads and an historic sawmill site (dating back to the 1820s). You can do a loop trip through the park from Hoggs Bay to Loon Lake to Nobles Bay and back to Hoggs Bay (12 km with 2 portages). The park is located on a beautiful spot on Big Rideau Lake and well worth a visit.

Route Suggestions

No specific route suggestions have been provided - but it is worth spending some time on the lake. If you are travelling through the Rideau, I'd recommend taking an extra day with a diversion to Portland and include in that a visit to the central group of islands (area from Long Island (incl. Colonel By Island) to Big Island. This island tour can also be done as a day trip by launching from Portland.

Geology of the Rideau Canal

As you paddle the Rideau Canal, the route you follow is defined by its geology. The area is underlain by part of an old mountain range, the Grenville Mountains, eroded down over many millions of years. Much of this eroded mountain range has been covered by younger sedimentary rocks, but portions of the old mountains are exposed, partly a result of their original topography and partially due to the eroding away of younger overlying rocks. This area is known as the Frontenac Axis. In essence, if you paddle from Kingston to Smiths Falls, you'll be paddling over a (very old) mountain range.



The Frontenac Axis can be thought of as a ridge connecting the extensive area of the Canadian Shield to the north and the Adirondack mountains to the south. On the Rideau, the southern irregular boundary of the Frontenac Axis is near Kingston Mills and the northern irregular boundary is on the northern reaches of Big Rideau Lake. The Frontenac Axis is made up of rocks formed 1.35 to 1.06 billion years ago (Precambrian: middle to late Proterozoic age) and then deformed and metamorphosed 900 million years ago. The rock types that you'll be able to see as you travel through the Frontenac Axis include granite, syenite, monzonite, migmatite, gabbro, quartzite, marble, gneiss and pegmatite. Many of the lakes are underlain by marble (crystalline limestone) which provides some buffering against acid rain.

To the north and south of the Frontenac Axis are younger, 520 to 460 million year old (Paleozoic: Cambrian to Lower Ordovician age) rocks including limestone, sandstone, dolomite, shale and conglomerate. Most of these rocks were laid down in a shallow sea that covered this area, which was near the equator at that time (part of Laurentia which eventually became part of North America due to continental drift). The rocks near Kingston are dominated by limestone which provided much of the building material for the early town (hence the nickname, Limestone City). In the centre part of the Rideau, on the margin of the Frontenac Axis, the younger sedimentary rocks tend to be dominated by sandstone. Beyond that, from Smiths Falls to Ottawa the rocks are mostly dolomite, limestone and shale.

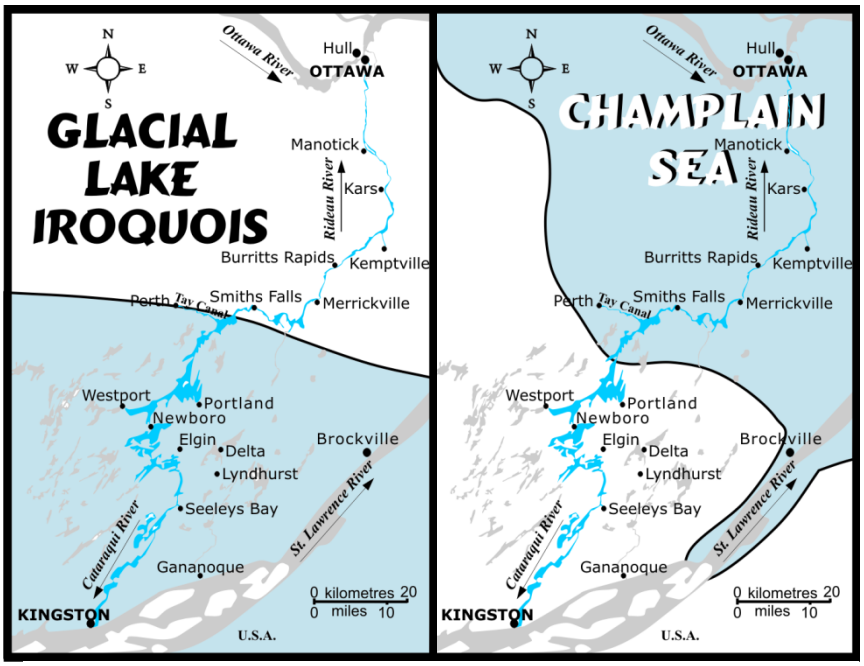
More recently, three events have impacted on the landscape - the ice last age, glacial Lake Iroquois and the Champlain Sea. During the last ice age, which peaked about 20,000 years ago, the Rideau area was covered by ice up to 1.5 kilometres (1.0 mi) thick. The ice polished and moved rocks, excavated some of the landscape and left large deposits of sand and gravel. The weight of the ice depressed the landscape by about 175 m (575 ft) below where it is today.

By 14,000 years ago, the climate began to warm up, melting the glaciers and forcing them to retreat. In the area of Lake Ontario, today's exit of the lake down the St. Lawrence River was blocked by ice and a large lake, about 30 m (100 ft) higher than today's Lake Ontario, formed. That lake, known as Lake Iroquois, extended as far north as Perth and Smiths Falls.

Evidence of that lake exist today in form of glaciolacustrine (a big word for glacial lake) deposits. These include near shore sediments such as gravel and gravelly sand, and deeper water deposits such as silt and clay. These deposits are found all over the southern Rideau, including on heights of land, such as near the top of Rock Dunder. This is because the overall landscape was depressed, and features such as Rock Dunder formed part of the bottom of this large lake.

By about 13,350 years ago a channel opened up in the ice dam (near Rome, NY), rapidly draining much of the lake. At the same time the land was rising as the weight of the ice was removed (this rising is called "isostatic rebound").

As Lake Iroquois and subsequent glacial lakes were getting smaller, the glaciers were continuing their retreat from the St. Lawrence lowlands. About 13,000 years ago this allowed waters from the Atlantic Ocean to mix with glacial melt-waters and river drainage to create a brackish sea known as the Champlain Sea which extended past (west and south) of Ottawa.



Very generalized representations of glacial Lake Iroquois and the Champlain Sea in the Rideau region.

The southern limit of this sea on the Rideau Canal was near Nobles Bay of Big Rideau Lake. If you were paddling the sea back then, you would have been enjoying it in the company of whales. The bones of a humpback whale were found near Smiths Falls and beluga (white) whale bones have also been found in Champlain Sea deposits. This sea retreated as the glaciers moved north and the land continued to undergo isostatic rebound. By about 11,100 years ago, the central Rideau had risen above sea level and the land that we see today was being revealed. Rivers and streams continued to modify the landscape up until the building of the Rideau Canal.

There are a some interesting geological features in the Ottawa area. The northern part of the Rideau River is the youngest part of the waterway (outside of canal altered sections) since, in the immediate post-glacial period, the Ottawa River had a channel to the south of where it is today, across much of urban Ottawa to the Mer Bleue area (where the trace of the old Ottawa River channel can be clearly seen). It eventually shifted north (due to isostatic rebound) to its present location and cut a deep channel. The faster excavation by the Ottawa River, through the underlying limestone rocks, compared to the Rideau River, formed Rideau Falls.

Another geological feature at Ottawa is that much of the area is underlain by a thick clay layer, a type of "quick clay" known locally as Leda clay (named after a type of small clam found in the clay deposits). Quick clay is a clay that is not well bonded and is subject to liquefaction, that is, when vibration is induced, it can turn into a liquid and flow. When undisturbed, it looks and acts like a normal solid form of clay. It was formed by glacial silt settling out on the bottom of the Champlain Sea. There it formed a stable type of marine clay, "glued" with salt. When the sea retreated due to the rising land, this clay was exposed to rainfall that removed much of that salt bonding, creating the unstable clay that is present in much of the region today. Earthquakes can cause this clay to liquefy, leading to landslides. Ottawa is a seismically active region (earthquake prone) and, in the future, an earthquake is going to play havoc with the city (if I lived in Ottawa, I'd check to see if my house is sitting on bedrock or on clay).

Mining in the Rideau Region

The rocks of the Frontenac Axis are host to some small mineral deposits, several of which were mined in the mid-late 1800s and in the early 1900s. In the Rideau Canal region, minerals such as apatite (for phosphate), mica, feldspar, graphite and iron were mined. A few of these old mining areas have been noted in the guides.

Some of the earliest mining in the region was for rocks to be used for the dams and locks of the Rideau Canal. Rocks of the Frontenac Axis were not suitable for this purpose (too hard and often fractured) and so quarries to mine rocks for the canal were established in the younger sedimentary rocks, mining sandstone or limestone. You can see the local sedimentary geology reflected in the type of rocks used for the building of the locks and dams along the Rideau; limestone in the southern area, sandstone (Potsdam sandstone) in the central Rideau and dolomitic limestone and limestone in the northern part.

The first mine on/near the Rideau Canal (excluding the small scale iron mining near Lower Beverley Lake in the early 1800s) was the iron mine on Iron Island near Newboro opened by the Chaffey brothers, John, Benjamin and Elswood, in about 1850. Phosphate mining (for fertilizer, most was shipped to England) started in the Rideau area in about 1867 and continued to the early 1890s. By the late 1880s, mica mining was also underway. Apatite (phosphate) and mica form in the same geological environment, so several mines which started off mining phosphate were later mined for mica. Mica mining ended in the 1920s as the value of the mineral fell to uneconomic levels.

Today, mining in the region is mostly surface quarrying for sand, gravel, and stone.

Wildlife of the Rideau Canal

The Rideau spans a wide variety of ecosystems, due in part to the underlying geology and man's activity in the last 200 years. The Frontenac Axis, a section of the Canadian Shield (Precambrian rocks - very old) underlies the Rideau from Kingston Mills to Lower Rideau Lake. These hard rocks form rugged topography (hills, ravines), including the basins for the lakes on the system. Most of the lakes are underlain by crystalline limestone which acts as a buffer against acid rain (hence the lakes are very productive for fish and other aquatic life). Outside of the Frontenac Axis, younger (Palaeozoic) flat lying sedimentary rocks form the underlying bedrock (it is from these rocks that the stones for the dams and locks were quarried).

The area has been actively logged since before the canal was built, the entire area cut over several times. Most of the region (including many of the islands in the lakes) was farmed or used for cattle pasture at

one time. By the early 20th century, small farms on poor Frontenac Axis lands were being abandoned in favour of better (more productive) pastures.

So today, along the Rideau you'll find forested areas (some now 100 years mature), active farmland, scrubland and abandoned farmland, low density cottage/summer home developed (rural) land and urban land. The forests are generally mixed, deciduous trees (oak, maple, ash, basswood, birch, elm) and conifer trees (most commonly white pine, white spruce and cedar). On flat lying topography you'll find cedar swamps, hardwood (black ash & silver maple) swamps, and bogs. Along the margins of the Rideau Canal you'll find cattail marshes. All these areas support a varied and healthy wildlife population.

The following is a list of the most common wildlife that you might spot on your Rideau journey. Note that photos of many of these birds and animals can be found on my Rideau website at: www.rideau-info.com/canal/ecology/fauna.html

Water Birds

Common Loon - on all the lakes, this bird is distinctive for its haunting call. It's a diving bird, swimming underwater to catch fish

Great Blue Heron - along the entire Rideau, a large bird usually seen wading near shore.

Green Heron - most commonly in the shallow water sections (Colonel By Lake, River Styx, Rideau River) this is a small heron. Usually seen perched in a tree.

Canada Goose- yes, we have these (more each year)

Ducks - most commonly the Mallard duck (quacks when flushed), American Merganser duck (a pointed red bill) and Wood duck (squeaks when flushed).

Pied-billed Grebe - In some areas you'll also spot the reclusive Pied-billed Grebe (a small diving bird).

Ospreys - now common along the Rideau - often spotted in their large nest made of sticks perched high in a pine tree or a power line stanchion. It dives to catch fish (quite spectacular to see)

Ring-billed Gull - a gull with mark on bill

Terns - the Common Tern, a large white tern with dark bill and the Black Tern, small tern with black body (adult)

Trumpeter Swans - An extirpated native species in this region, they were re-introduced in the 1990s. Favourite haunts include Opinicon Lake and Big Rideau Lake (near Narrows and Portland).

Other Birds

There are many other types of birds that you might spot in the near-water environment; red-tailed hawks, red-winged blackbirds, turkey vultures, turkeys, ruffed grouse and many more (bring along your bird book).

Reptiles and Amphibians

Turtles: we've got lots of turtles - most common are the Common Map Turtle (a peaked shell and yellow-orange lines on the skin and shell); Midland Painted Turtle (a flat smooth shell with bright red splotches along the edge) and the Common Snapping Turtle (can get very large, a prehistoric looking turtle). You'll often find Map and Painted turtles sunning themselves on logs and rocks. The Snapping turtle almost always stays in the water, you'll find it floating or slowly swimming near marshy areas. There are also three other less commonly seen turtles, the Stinkpot Turtle (aka Musk Turtle) a small turtle found in areas with aquatic plant growth; Blanding's Turtle with a "war helmet" type shell and bright yellow chin and throat, usually found in wetlands and the Spotted Turtle, a small turtle with bright yellow spots on its shell, usually found in areas with aquatic plants and a silt bottom.

Frogs: we have lots of frogs that will provide you with a nightly serenade. The two biggest are the bullfrog and the green frog. Also the leopard frog, spring peeper and many others.

Snakes: we do not have any poisonous snakes. The two largest snakes are the Northern Water Snake and the Black Rat Snake - both generally found near water. The common garter snake can also be found throughout the region.

Mammals

In the near shore environment you'll likely spot muskrats and beavers. You may even spot the somewhat reclusive river otter (found in the lakes here as well as rivers). And there are the usual Eastern Ontario mammals to be sometimes found near the water: raccoons, black, grey and red squirrels, chipmunks, foxes, coyotes, white-tailed deer and skunks. Black bears, although quite rare in the region, are present.

Fish

The Rideau is home to healthy populations of many fish species. The lakes and most of the rivers are home to species such as Large Mouth Bass, Small Mouth Bass, Northern Pike and Crappie. Lake Trout are present in some lakes that have depths in excess of 80 ft / 24 m (i.e. Big Rideau Lake). There are Walleye in some areas (i.e. Upper Rideau Lake and the Rideau River) and Muskellunge (Musky/Maskinonge) in some sections of the Rideau River.

Aquatic Plants:

The Rideau hosts quite a variety of aquatic plants.

Submerged Plants: Waterweed (like aquarium plants); Pondweed; Smartweed (holds flower above surface of water); Tape-grass (like underwater grass, flower on coiled stem); Coontail (like a thick furry coon's tail); Water-milfoil (one species an invasive plant).

Aquatic Plants (floating): White Water-lily (white fragrant flower); Bullhead Water-lily (round yellow flower); Frogbit (invasive alien, small floating leaf like water lily); Duckweed (food for ducks, tiny plant)

Aquatic Plants (emergent): Cattail (big brown seed heads); Pickerelweed (blue flowers on stalk); Flowering Rush (invasive alien); Arrowhead (arrowhead-pointed leaves, white flowers); Purple Loosestrife (invasive alien, now controlled by beetles in some areas).

Oh - and those amorphous green blobs floating under the water in near-shore areas. They are benign (not due to pollution), a type of filamentous green algae. Their abundance is due to zebra mussels which don't eat this type of algae, but do eat their competition (single-celled algae) - and so, by removing the competition, have allowed these blobs to expand in numbers and length of season.

My thanks to Simon Lunn and the Rideau Roundtable (www.rideauroundtable.ca) for assistance with the wildlife and aquatic plants information.

Those interested in some tips for taking good photos of wildlife should view "The Nature of Wildlife Photography" on my website at: www.rideau-info.com/canal/ecology/nature-photography.html

One photography hint, a very simple one, is to choose a paddling route that puts the sun to your back for most of the day. Try to choose a route that has you on a west shore in the morning, a north shore at mid-day and an east shore in the afternoon. For those doing the entire Rideau, this means going from Kingston to Ottawa rather than the other way around. This will put the wildlife that you see on your paddle in the best light.

Errors

If you find any errors or omissions in this guide, please let me know (rideauken@gmail.com) and I'll get them fixed.

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