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ENGINEERING HISTORY PAPER #66

“Six Steamboats Still Sailing”

by Andrew H. Wilson

(previously produced as Cedargrove Series #41/2016 – July 2016)

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Abstract

The first effective steamboats began to appear in North America and Europe in the early 19th century. As a medium for boat and ship propulsion, steam served well during the balance of that century but began to give way to gasoline and diesel, and later still to diesel-electric units.

Not many older steamboats remain in service in the 21st century. This paper describes the careers of a half-dozen of them.

About this Series

Principally, the Cedargrove Series is intended to preserve some of the research, writings and oral presentations that the author has completed over the past half-century or so but has not yet published. It is, therefore, the modern-day variant of the privately-published books and pamphlets written by his forebears, such as his paternal grandfather and grandmother and his grandfather's brother John.

About the Author

He is a graduate in mechanical engineering and the liberal arts and has held technical, administrative, research and management positions in industry in the United Kingdom and the public service of Canada, from which he retired 30 years ago.

He became actively interested in the history of engineering on his appointment to chair the first history committee of the Canadian Society for Mechanical Engineering in 1975 and served both CSME and the Engineering Institute of Canada in this capacity for varying periods until 2003. He has since then researched, written and edited historical material for both organizations and for the Canadian Society of Senior Engineers. He is a past president of both CSME and EIC.

Preamble

My paper, Cedargrove Series #43/2016, and the talk on which it was based, discuss some of early Canadian lake and river steamboats. I intended originally that it should end with brief descriptions of six steamboats still sailing in the 21st century in Canada and in Europe. I found, however, that this addition would make #43 too long and divert attention from its particular messages. On the other hand, the six are still of considerable interest. Hence this Cedargrove 'extra.'

In general terms, in both papers I define steam *boats* as smaller, usually wooden-hulled vessels that sail/sailed inland lakes and rivers, and steam *ships* as their larger, iron-hulled sea- and ocean-going sisters. Of the six boats discussed in this paper, one could now be considered to be a ship!

The numbers of lake and river steamboats in use world-wide diminished quite rapidly after 1900. In part, this trend was due to the growth of the railroads, to the emerging automobile and aircraft systems, and to the use of gasoline and diesel engines. But steamboats did not disappear altogether and a few are still in use today. What follows are brief descriptions of the careers of half-dozen that are still operating in the 21st century.

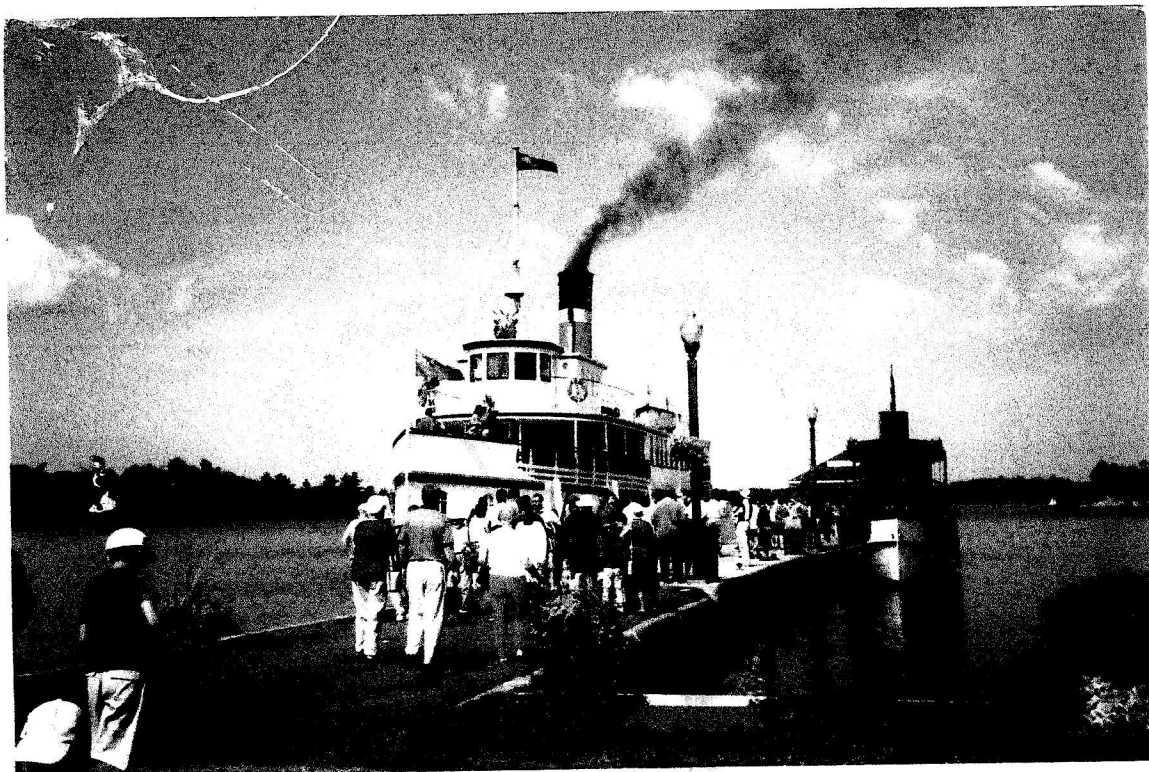
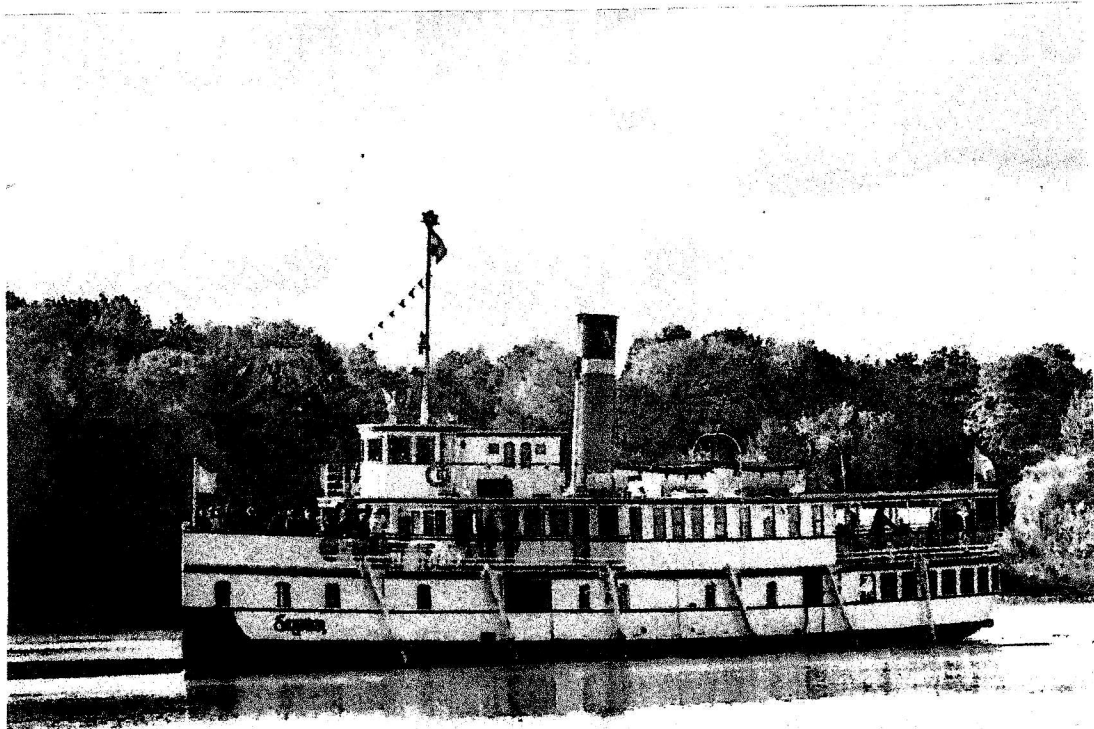
RMS *Segwun*

This vessel is still sailing in summertime from Gravenhurst on Ontario's Lake Muskoka.

Built in 1887 in Glasgow, Scotland, it crossed the Atlantic ocean in pieces and was reassembled at Gravenhurst. It was originally the wrought iron-hulled, walking-beam-engined side-paddler *Nipissing II* that delivered passengers, freight and mail to towns, homes and cottages around the Muskoka Lakes. It replaced the original *Nipissing*, which had been destroyed by fire the previous year. It inherited its engine from the original vessel.

Withdrawn from service in 1914, this began again in 1925 after some work had been done to its superstructure, and twin counter-rotating propellers and two Doty compound steam engines had replaced the paddlewheel arrangement. A new Scotch marine boiler was also installed. It was renamed *Segwun* and remained in service until 1958, when declining business, competition from highways and an accident led to its retirement. However, in 1962 it became a floating museum at Gravenhurst.

Refurbishment work began again in 1973 with the help of the Muskoka Steamship & Historical Society (which still owns the vessel) and the Ontario Road Builders. The ship was 're-launched' the following year. It was further refurbished in 1981 as a Muskoka Lakes cruise ship, with a sailing season of 145 days. It is now North America's oldest hand-fired steamer, 125 feet long, with a beam of 22 feet and a draft of 6 feet, a gross tonnage of 271 and speed of 12 knots, with a carrying capacity is 97 passengers plus crew. It can also be privately chartered.



RMS Segwun

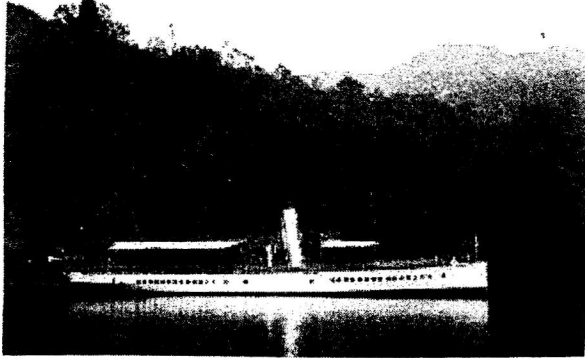
SS Sir Walter Scott

Loch Katrine provides a significant part of the water supply for the city of Glasgow, Scotland, and has been doing so since the 1860s. The steamboat *SS Sir Walter Scott* has been cruising the Loch, part of the scenic Trossachs region, since 1900.

Built by William Denny and Brothers at Dumbarton and tested for seaworthiness on the River Clyde, it was - like the *Nipissing/Segwun* - disassembled and transported in pieces, this time by barge and horse-drawn cart, to Loch Katrine where it was reassembled at Stronachlachar, with rivets rather than bolts. The transportation cost was almost half of the total cost of the vessel.

Never a paddler, it is still powered by its original Matthew Paul & Company three-cylinder triple-expansion steam engine, is screw propelled, and fired by two locomotive boilers which, until the 2007 refit, were hand-stoked. It once used coal but now uses bio-fuel to avoid polluting the waters of the Lake. During this refit, some alterations were also made to the superstructure.

The vessel is 110 feet long, with a beam of 19 feet, and its gross tonnage is 115. It has a crew of five.



SS Sir Walter Scott, pre- and post-2007 refit

SS *Bigwin*

This vessel was originally steam-driven and wood-fired, but never a paddler. It was built at the Polson Iron Works in Toronto as a private boat in 1910 and called the *Ella Mary* after the owner's wife. In 1924, 1945 and 1960 it was sold as a ferry boat to several owners and renamed *Bigwin* after the Inn it served on Ontario's Lake of Bays. It was abandoned in the 1970s and allowed to rot, submerged in a slip next to the Inn. It was raised in 1991 and stored on land for several years.

A massive restoration began at the Clayton Property at Dorset in 2002 with the financial support of many individuals and organizations, the owners now the Lake of Bays Marine Museum & Navigation Society. This work was completed in 2013. It included: the repair of all the steel frames; the replanking of the hull; the replacement of the keel and deadwood; repairs to the deck and the wheelhouse; and the installation of new windows. In other words, it was rebuilt.

Originally a steam-driven propeller boat, the *Bigwin* was converted to diesel power in the 1950s with a GM 115 bhp diesel engine. During the 2000s restoration, the original 105 bhp Polson triple-expansion steam engine was re-purchased and re-installed, but the Museum was unable to buy a suitable boiler. So the steamer sat at its dock for several years until the decision was made to power it with a battery-driven 40 hp Elco electric motor, with a cogged belt drive to the propeller shaft. The 108 volt, two-bank, 18 battery power pack can be recharged at dockside or, if necessary, using an on-board diesel generator on longer trips. The restored steamer was tested in November 2012. It was returned to service as a cruise ship on the Lake of Bays in 2013.

The vessel is 66 feet long with a beam of 12 feet, a gross tonnage of 42, and a capacity of 32 passengers and crew.



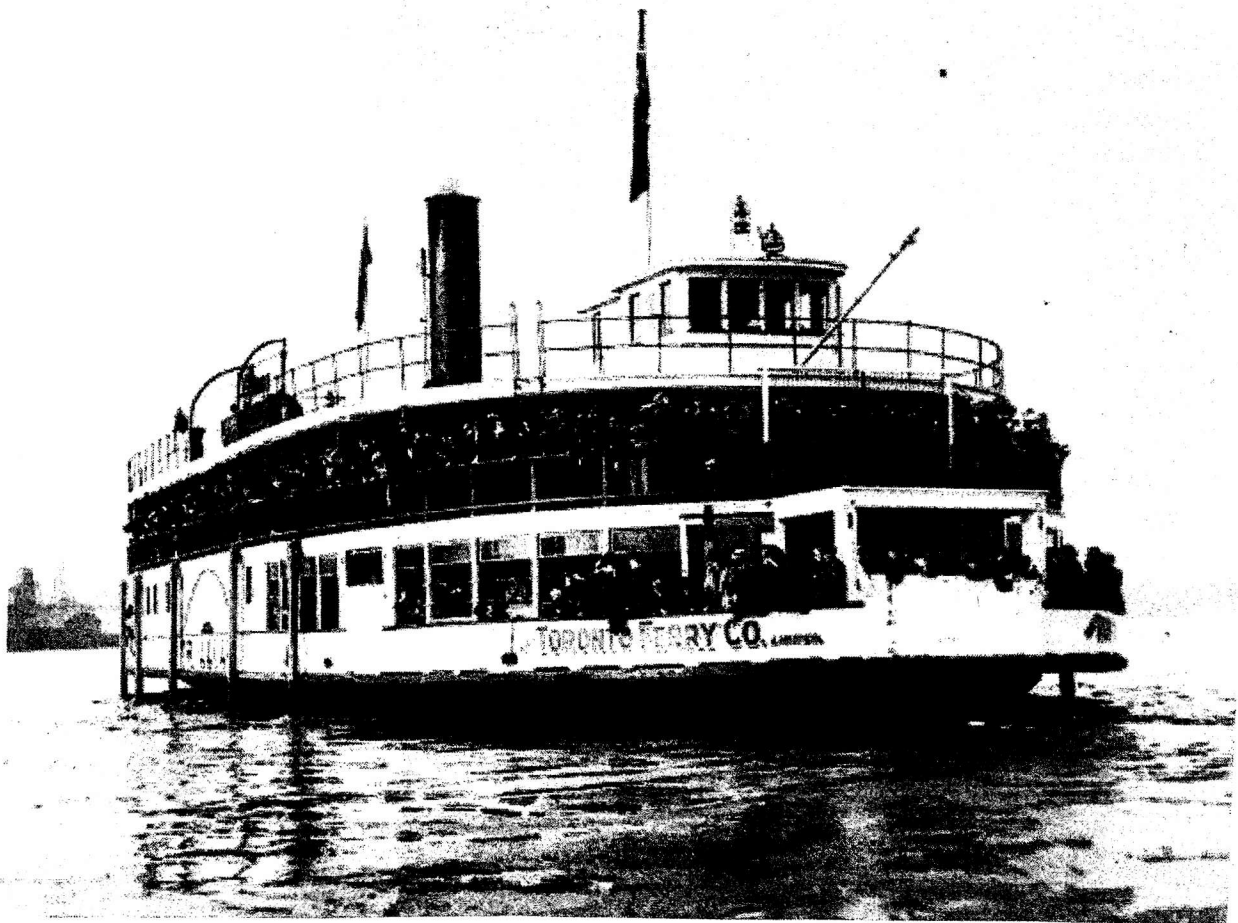
SS *Bigwin* in 2012

PS Trillium

This vessel is still a steam-driven side-paddle ferry operated by the Toronto Ferry Services in the waters between the city and its Island. Also built in 1910 by the Polson Iron Works, for the owner of the Toronto professional baseball team, in part to carry Maple Leaf fans to and from games at Hanlan's Point. It was one of four 'flower' ferries that served the city and its Island at this time.

Taken over by the city in 1927, the double-ended vessel was eventually replaced by diesel-driven ferries. It was retired in 1957 and allowed to sink and rot in a lagoon on the Island, but was salvaged, towed to Port Colbourne, and restored by Champion Engineering beginning in 1972. It was returned to charter service in 1978, looking like it did in 1910.

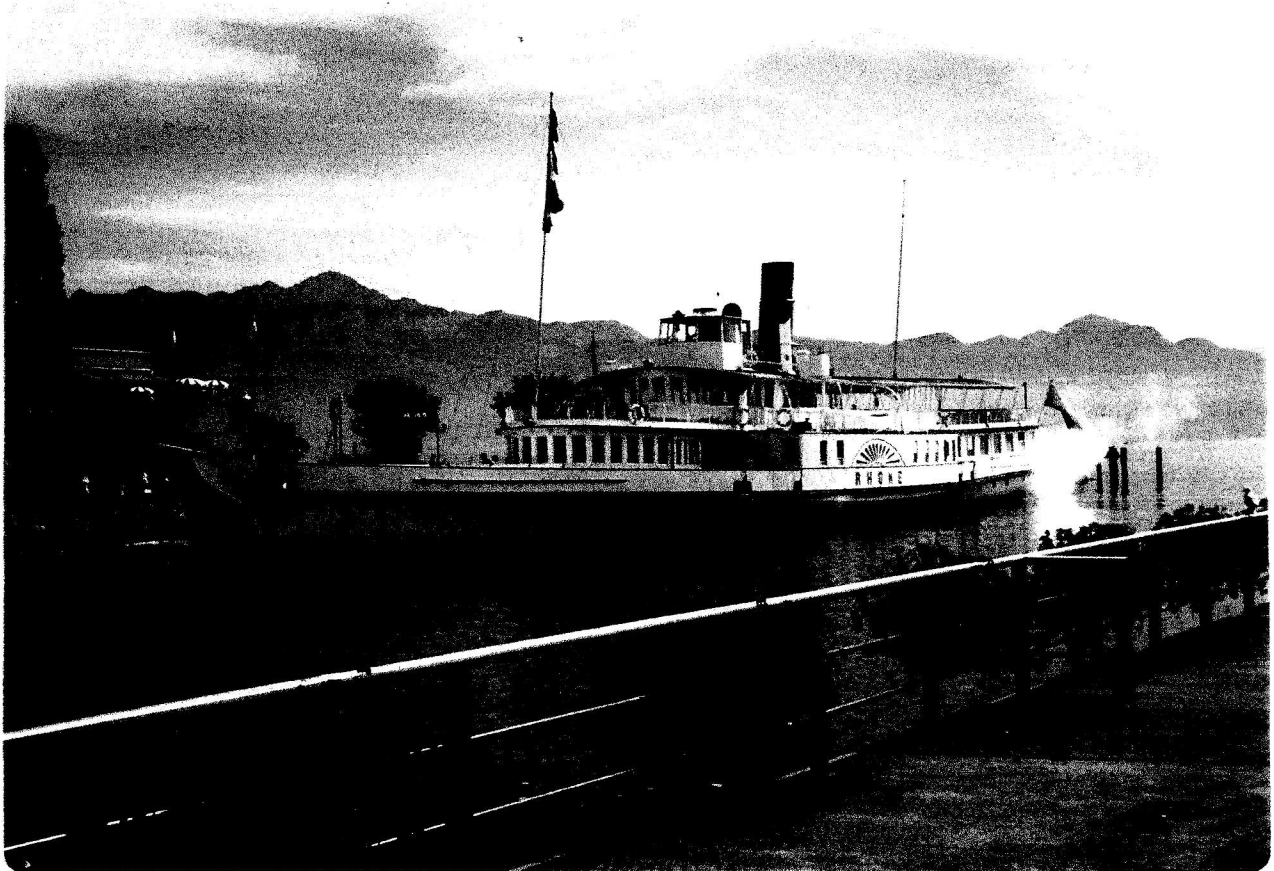
Its original engine, with two cylinders and a 4 foot stroke, and side-paddle wheels are still in place. A new Scotch boiler has been installed. Its original passenger capacity was 1450, but this was reduced to 955 when the vessel returned to service. *Trillium* is 150 feet long and 30 feet wide, with a capacity of 673 gross tons. It is much slower than its diesel-driven ferrymates!



PS *Rhône*

The PS *Rhône* is one of a small fleet of elegant paddle steamers that still sail Lake Geneva between France and Switzerland and are owned by CGN. The eight-boat fleet was built by Sulzer in Switzerland between 1904 and 1927, the last of them in being the *Rhône*.

This vessel is over 200 feet long and has capacity for 650 passengers. Several in the fleet, like the *Rhône*, still have their original steam engines. The *Rhône's* generates 850 hp and is visible to passengers through transparent hoods. Restoration and repair are constant activities within the fleet as a whole.



PS *Waverley*

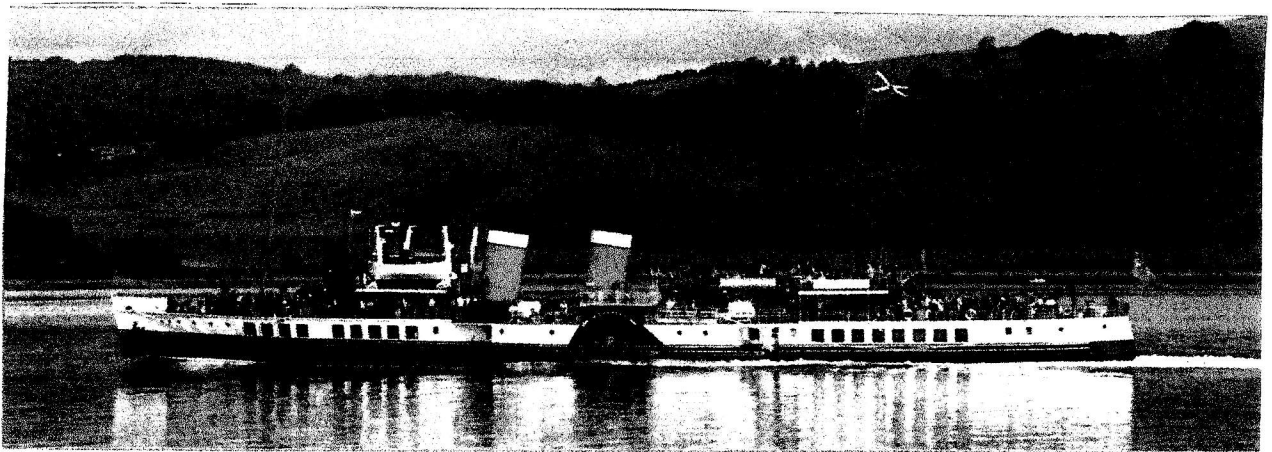
Finally, the present-day paddler PS *Waverley* is another Scottish-built steamboat with a connection to Sir Walter Scott.

The original *Waverley* was one of the pre-World War II fleet of railway company paddlers that served the various towns and islands in the Firth of Clyde. I sailed in it several times (and I also sailed in the *Sir Walter Scott*) pre-War. It was commandeered for war service in 1939 and was sunk at Dunkirk a year later.

The second *Waverley* was built in 1947 when the Firth fleets were being revived in the postwar years. It was designed and built by A. & J. Inglis at Pointhouse, Glasgow. It has a steel hull, is 250 feet long, with a beam of 58 feet.

In 1975, at the end of its working life on the Clyde, the *Waverley* changed ownership and began a second career as a tourist vessel, cruising all round the British Isles, becoming the world's last sea-going paddle steamer. A major restoration beginning in 2003, based on grants and private funds, returned the vessel to the style in which it was built. Originally designed to carry 1300 passengers, it now carries 860.

The vessel has a diagonal triple expansion engine built in 1947 by Rankin & Blackmore of Greenock, developing 2100 hp. Its service speed is 13 knots at 44 rpm. The paddles are 18 feet in diameter and 11 feet wide. Originally fitted with a Scotch boiler, this was replaced in 1981 by a Babcock & Wilcox and, in 2000, by two Cochran Thermax 180 psi fully automatic fire tube boilers.



Sources

All six vessels: Wikipedia

Bigwin: Kevin Johnson, Lake of Bays Marine Museum & Navigation Society

Photo Credits

Segwun: Muskoka Tourism, *Ottawa Citizen*, September 24, 2015; and the Author

Sir Walter Scott: Wikipedia

Bigwin: the Author

Trillium: Wikipedia

Rhône: the Author

Waverley: Wikipedia