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by

Edward Forbes Bush

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Commercial Navigation on the Rideau Canal, 1832-1961

History and Archaeology 54 by Edward Forbes Bush

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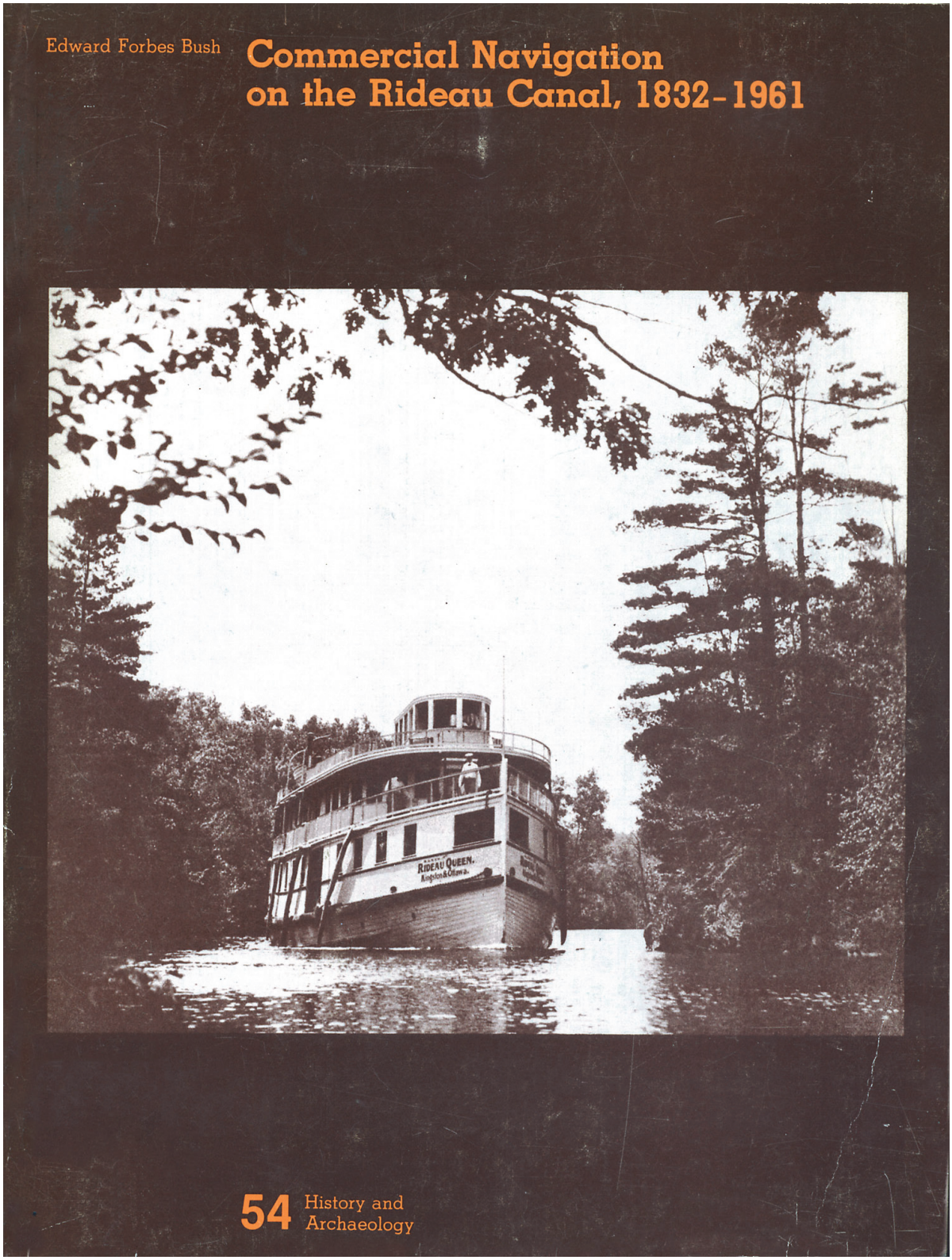
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COMMERCIAL NAVIGATION ON THE RIDEAU CANAL, 1832-1961

by Edward Forbes Bush

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COMMERCIAL NAVIGATION ON THE RIDEAU CANAL, 1832-1961

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ABSTRACT

This paper is in three parts. The first deals with the evolution of the various types of vessel used on the Rideau Canal during the period when it served as a commercial route. The second treats the waterway - its operation, facilities, and regulations. The concluding section describes the forwarding trade in the context of the economic conditions pertaining at different periods, the traffic patterns developed, and the volume of various commodities carried where comprehensive statistical data is available. Data on individual vessels known to have been in the Rideau service is found in Appendix A, followed by various appendices of statistics used in the text.

Submitted for publication 1977, by Edward Forbes Bush, National Historic Parks and Sites Branch, Parks Canada, Ottawa.

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OPENING OF THE RIDEAU CANAL

At four o'clock on the afternoon of 22 May 1832, the steamer *Pumper,* preceded by the naval cutter *Rattlesnake,* approached the southern entrance to the Rideau Canal at Kingston Mills. Renamed *Rideau* for the occasion, the 80-foot *Pumper* was about to begin the voyage to Bytown which would officially open the recently completed waterway. Aboard were Lieut.-Col. John By, Royal Engineers, his wife and two daughters, Captain Briscoe, R.E., and Robert Drummond, builder of the *Pumper* and the contractor for the Kingston Mills locks. A large and enthusiastic crowd had come out from Kingston for the send off,[1] to mark the occasion of the completion of an arduous and expensive five-year project to link the Ottawa and St. Lawrence rivers via the Rideau and Cataraqui river systems. Powered by a 12-horsepower engine and with improvised accommodation the *Pumper* reached the head of the 81-foot flight of eight locks at Bytown on 29 May.[2] Steam navigation on the length of the Rideau had been inaugurated.

The *Pumper* was built at Kingston in 1829,[3] and its early history was intimately associated with the introduction of steam transport on the Rideau waterway. Some six weeks after its first historic run the *Pumper* cleared Kingston for Bytown on 12 July with a load of 200 barrels of flour and 60 barrels of pork, together with an undisclosed number of passengers. This was the first commercial navigation of the whole line of the canal.[4] From this date commenced the approximate 130-year history of the Rideau Canal as a commercial waterway, a history which embodies the steamers, barges and tugs, together with the forwarders, who carried on this trade.

THE ORIGINS OF STEAM NAVIGATION

At the time of the opening of the Rideau Canal the steamboat as a viable commercial proposition was about a quarter-century old. Its origins in the primitive little prototypes which puffed and paddled about the canals and rivers of France, Britain and the United States, go back much further than that, notwithstanding the erroneous crediting of Symmington's *Charlotte Dundas* or Fulton's misnamed *Clermont* with this distinction.

The properties of steam were studied by Hero of Alexandria as early as 120 B.C.[1] The concept of propulsion by means of a revolving paddle-wheel, hand-operated or driven by draught animals hitched to a capstan, dates from antiquity, although little application was made of it. A 15th-century description of a vessel fitted with multiple paddle-wheels is extant, but this ranks as little more than a curiosity. Some authorities credit the English clockmaker, Jonathan Hulls, with the invention of the first practical steamboat. Hulls secured a patent in 1736 for an adaptation of a Newcomen engine fitted to a little craft which was tried on the river Avon. Her trials were not impressive, and historians generally consider Hulls' claim at best inconclusive.[2] At an even earlier date (1707) Denis Papin, professor of mathematics at Marburg, operated a steamer on the Fulda which aroused the hostility of rivermen. As a result Papin's craft was seized and destroyed on the Weser in his attempt to navigate it to England;[3] such incidents were not uncommon in the early days of the Industrial Revolution.

A strong claim to the introduction of the first practical steamboat lies with the Frenchman, Claude de Jouffroy d'Abbans whose *Pyroscaphe* operated against the current on the Saône in 1783. Powered by a French-constructed Watt engine utilizing chain transmission, the *Pyroscaphe's* claim to be the first practical application of steam power on the water is one generally accepted by knowledgeable marine historians.[4]

Early Steam Engines: Britain, France, America

The first steam engines developed in 18th-century England were stationary engines used to pump water from mines. From this engine evolved both the marine and the

locomotive engine, which together worked a transformation in travel throughout the world in the 19th century.

Tracing the steam engine to its primitive mechanical origins is difficult since contemporaneous developments were taking place in divers places as the world moved into the Age of Steam. Already in 17th-century England the first tinkering with the new power is apparent. In 1698 Savery patented a mine-pumping engine, and in 1705 Thomas Newcomen produced his atmospheric engine. The name most people associate with steam is that of James Watt, who patented his first experimental steam engine in 1769. The engine installed in *Pyroscaphe,* though constructed in France, was as has been noted, a Watt engine; that is to say, the piston was double acting, the cylinder was connected to a separate condenser and the engine was a low-pressure engine which relied upon the partial vacuum created by the condensation, rather than the expansion, of steam to move the piston. This type of engine was low powered, and by today's standards, a voraciou fuel consumer; for this reason the early steamboats were confined to the placid waters of rivers and canals and thus posed no threat to the magnificent square-riggers which had dominated the high seas since the far-ranging voyages of discovery in the 15th century. With the advent of the much more economical compound engine, first patented by Jonathan Hornblower in 1781, and coming into general use by the 1840s, the steamboat became a serious competitor with sail on the Atlantic. The principle of the compound engine was that of two cylinders using steam successively, and in Hornblower's prototype, operating by means of connecting rods on an overhead beam. Beam engines and modifications thereto were subsequently widely used for paddle-wheelers with upright cylinders. Arthur Woolf improved the compound engine in 1804, and the first such engine was installed in an American river steamer in 1825, and subsequently in French vessels.[5] With successive developments towards higher pressures leading to triple-expansion then quadruple-expansion engines, the stately clippers, specially designed square-riggers embodying sleek hull design with an unprecedented spread of canvas, were superseded even in the "roaring forties" of the southern hemisphere, where steady westerly gales drove skilfully manned sail at record speeds.

In general canal and smaller river steamers stayed with the single-cylinder engine until late in the century.[6] This type of engine developed two basic variations which are pertinent to this subject: the low-pressure, already mentioned, and the high-pressure. The low-pressure engine was the first to be developed in both England and America. Steam at relatively low pressure was passed into a large vertical double-acting cylinder (i.e. steam could be admitted at both ends of the cylinder), after which the steam was condensed by means of a jet of cold water in a unit known as the condenser. This process produced a partial vacuum, which with some slight assistance from the initial

direct action of the steam, was used to drive the piston. This type of engine required cylinders of large dimensions to develop adequate power. The low pressure engine was more costly to build but more economical to operate than the rival high-pressure engine. The low-pressure was quieter, and above all safer before the development of improved boilers and enforcement of stringent safety regulations rendered the early high-pressure engines less hazardous.[7]

Pioneer work in the initial development of the high-pressure engine was done by the Cornishman, Richard Trevithick, whose first patent was taken out in 1802, and by Oliver Evans. The principle of this type of engine was the elimination of the separate condenser (which had been used to create a partial vacuum) and the utilisation of the direct action of steam at much higher pressure to drive the pistons. The exhaust steam was discharged into the air through an exhaust valve mounted on the stack which had the advantage of creating better draft for the boiler. The cylinders, at first mounted vertically and later horizontally, were much smaller, and hence the engine was more compact and allowed for more cargo space or passenger accommodation.[8] The high-pressure engine was noisier, with a barking exhaust perhaps similar to that of a railway locomotive. It had a much greater reserve of power, limited only by the strength of the boilers, steam pipes and cylinders, not to mention the common sense of its operators. On the sedimentary waters of fast-flowing western rivers the high-pressure engine offered an additional bonus in that there were fewer maintenance problems than with the low-pressure type.[13]

Generally speaking, on American waterways the low-pressure engine retained favour in the east, and the high-pressure in the west. Accidents occurred with both types, although the low-pressure was much the safer of the two. In the early days on the Hudson River the curious innovation of the “safety barge”, an unpowered craft fitted up with passenger accommodation and towed by a steamer, offered mute testimony to the confidence reposed in early steamboats. As boilers and steampipes became more rugged the safety barges were relegated to the carriage of freight or live stock.[10] In passing it may be noted that on the Rideau Canal the high-pressure engine superseded the low-pressure from the 1860s on.

A further differentiation on American waterways regarding engines is seen in the eastern preference, in common with European designers, for the short-stroke, high-speed engine; by contrast western boat builders preferred the long-stroke, low-speed piston action.[11]

A salient feature of the Eastern American river boat (and of early steamboats in Canadian waters, judging from contemporary illustrated newspaper advertisements) was the prominent seesawing "walking beam" which with its vertically acting connecting rods, projected through the top deck. The

design originated with the English firm of Boulton & Watt, which supplied many of the engines for early steamers at home and abroad. Eastern American river men adhered to the walking beam because of its reliability, ease of maintenance, economical operation and long life.[12]

This type of installation had obvious disadvantages for a vessel operating in less sheltered waters than the lengthy American rivers. The side-lever engine was an early Clydeside development, enbodying two beams mounted on either side of a vertical cylinder near the base of the engine. The side-lever, offering greater stability, an enclosed top deck, but a larger and heavier engine overall, was widely used in paddle-wheel steamers in Britain 1820-60.[13] The side-lever installation allowed design of a very stable, seaworthy vessel.

The beam engine and the side-lever engine had one thing in common: both operated on the principle of indirect drive - the piston and/or connecting rods were not attached directly to the drive shaft crank but to an intervening beam or lever. No example of either type of steam engine has been found in the documentary sources for Rideau Canal steamers. The direct-acting steam engine, wherein the piston and connecting rods are connected directly to the driveshaft via a crank, appears to have prevailed in the later periods. These direct-acting steam engines came in both vertical (upright) and horizontal (fore and aft) layouts. On the basis of information contained in Appendix A the vertical engine would appear to have predominated on Rideau steamers. However, the sample is so small that this finding should not be treated as conclusive.

The Boiler

Basic to the operation of any steam engine on land or sea is the boiler, a cylindrical cast-iron or (later) steel water tank containing water to be converted to steam by means of the furnace or fire-box. Without the boiler the steam engine would be merely an inert complex of cylinders, valves and connecting rods. The design of sound boilers was as vital for engine performance as that of the power plant itself.

The first boilers were simply water tanks set in brickwork.[14] The standard boiler for the period and region under study was the Scotch boiler, the basic steam generator of the 19th century for use with the reciprocating engine - so-called the Scotch boiler because it was developed on the Clyde by Scottish shipbuilders. The Scotch boiler consisted of a cylindrical shell, internally fired, with a working pressure of about 175 pounds to the square inch (psi).[15] Boilers in the 19th century were of two basic types - firetube and watertube - the Scotch boiler

being of the former design. In the firetube boiler hot gasses heated by the furnace or fire-box passed through tubes or flues and converted the water into steam. The Scotch boiler had the advantage, in its day, of being able to use impure water without undue maintenance problems, but it is now considered obsolete because of its bulk and weight, and the design is impractical for pressures over 220 psi. In the watertube boiler, water in the tubes is heated by the hot gasses in the boiler.[16]

Boiler explosions were a very real hazard, particularly in American waters in the early years, partly through defective design, and perhaps more from the general absence, and one suspects often ignorance of, safe pressures to which boilers could be driven. The gradual introduction of steam gauges and enforcement of safety regulations is dealt with in a later context.

Boiler design improved, along with engines, through the century which made so many demands on the development of steam power. The Douglass safety steam boiler, an 1849 Canadian patent, is a case in point. It was designed to prevent the formation of a vacuum within the boiler next to the fire, and thereby reduce the risk of explosion.[17]

Some manufacturers produced both engines and boilers, others specialized in one or the other. Boiler makers and engine works flourished in Ottawa, Kingston and Montreal, among which were the Vulcan Iron Works, 424-8 Wellington Street, Ottawa, and the Canada Boiler Works, 771 Craig Street, Montreal. D. McEwen & Son was active in Kingston. (Appendix F)

The Screw Propeller

A rival, and in general, greatly superior propulsion device to the paddle-wheel was the propeller, which will figure largely in the account of the Rideau Canal steamer. As with the steam engine itself, the origins of the screw propeller, used to propel water craft from the giant leviathans of the "Western Ocean" to the outboard motors used on canoes and punts, are a little obscure. An Austrian forester, Joseph Ressel (1793-1857), obtained a patent for one in 1827. With an associate he completed in 1829 the propeller-driven *Civetta* for the Venice-Trieste service on the Adriatic, but a ruptured steam line ended her trials and discredited her builder. In the same year an Englishman, Charles Cummerow, took out a propeller patent in the same region, possibly the same individual of that nationality who operated a propeller-driven craft successfully on the Dalmatian coast. Another Englishman, Francis Pettit Smith, secured a propeller patent in 1836; the following year Smith fitted his propeller to a launch bearing his own name, and operated her on the Paddington

Canal.[18] The first propeller to see service in American waters was the *Robert F Stockton,* built by Laird Bros. in Birkenhead in 1838. She was taken to the United States in 1840 and re-named the *New Jersey.* She spent a busy 30 years towing barges on the Delaware River and Raritan Canal.[19]

John Ericsson (1803-89), a Swede who emigrated to England in 1826, is the most significant early proponent of the propeller for this study; in any case early propeller-equipped steamers on the Rideau are often described in lock records as "Ericssons." In England Ericsson was engaged on a number of engineering projects, including the design of a steam locomotive and a fire-engine. In conjunction with T.P. Smith in 1836, Ericsson developed a craft, the *Francis B Ogden,* with the novel feature of two propellers mounted on a single shaft. The *Ogden* gave an impressive demonstration of her effectiveness by towing an Admiralty barge on the Thames from Somerset House to Blackwall and back at a speed of ten miles per hour.[20] Ericsson failed to maintain the priority of his patent, and in the sequel received only a fifth part of the Admiralty award for his feat. In 1839 Ericsson went to the United States. The naval vessel *Princeton* built in 1842 was fitted with an Ericsson propeller with great success. It would be erroneous to ascribe the invention of the propeller to Ericsson, but his work in America must be considered of major significance on this continent.

The superiority of the screw propeller to the paddle-wheel, although resisted by traditionalists for a time, was readily apparent on the high seas. This was, however, less obvious on inland waters, with the exception of the Great Lakes. Particularly with river and canal boats, where manoeuvrability and shallow draught, rather than sea-keeping qualities were essential, the paddle-wheel enjoyed a long vogue, whether as a side- or a stern-wheeler. The paddle-wheel offered the added advantage of operating equally well in reverse, which was not true of the propeller. Nonetheless propellers from as early as the 1840s on displaced the paddle-wheelers on the Rideau, sheltered inland waterway though it was.

EVOLUTION OF THE STEAMBOAT ON INLAND WATERS

American and British Forerunners

Probably John Fitch's claim is as good as any on this side of the Atlantic to the distinction of pioneering the first practical steamboat. A compatriot, Robert Fulton, who drew his inspiration from Fitch, has generally been accorded the accolade as the "inventor" of the steamboat in American waters. As early as 1786 Fitch was working on a steamboat, and the following year launched a 45-foot, 60-ton craft on the waters of the Delaware. For a time he held the sole right to operate steamers in these waters, and in 1790 he placed a steam ferry in service between Trenton and Philadelphia, the first on record anywhere.[1] Fitch fell on hard times, was deserted by his associates, and in 1793 went to France. Before leaving for England to try his fortune, he left plans and specifications for his projected steamboats with the American consul in Lorient, who subsequently made them available to Robert Fulton. He at once recognized their value. In 1796 Fitch returned to America, continued work on steamboats, but in a fit of depression, took his own life two years later. Fitch's proper recognition came twenty years later, at the hands of the New York state legislature:

> The steamboats built by Livingston and Fulton were in substance the invention patented to John Fitch in 1791, and Fitch during the term of his patent had the exclusive right to use the same in the U.S.[2]

Another early American, Samuel Morey, is worthy of mention; in 1790 he produced a steamer with the paddle-wheel fitted in the prow, which operated on the Connecticut River at the modest speed of 4 miles per hour. In 1797 Morey introduced a side-wheeler on the Delaware.[3]

In the interests of chronological continuity, and in due recognition of a widely acknowledged steamboat pioneer, the scene shifts to Scottish waters. In 1788 William Symington (1763-1831), civil engineer, with two associates, designed and built a twin-hulled craft propelled by a centrally- mounted paddle-wheel. Symington is best known, however, for his famous *Charlotte Dundas,* a stern-wheeler powered by the first horizontal direct-acting engine, which towed two barges on the Forth and Clyde Canal a distance of 19.5 miles in six hours. The *Charlotte Dundas,* despite her spectacular success, had a short

career; she was withdrawn from service on the grounds that her wash damaged the canal banks.[4] The successor to Symington's boat was Henry Bell's *Comet,* built in 1812. Operating between Glasgow and Greenoch on the Clyde, she has been credited by W.A. Baker with being the first commercially successful steamer in Europe,[5] a statement, however, contradicted in an earlier work by R.A. Fletcher, who stated that the *Comet* was not a financial success.[6] By 1815 there were ten steamers operating on the Clyde, which was later destined to become the scene of a shipbuilding industry second to none in the world.[7]

The successors of these earliest craft in British waters were an early indication of the prime place British steam navigation would attain by mid-century. The *Margery* built by Archibald MacLachlan & Co. in 1814, was the first steam packet on the Thames and the first to cross the English Channel. Sold in 1816 to French interests, she was renamed the *Elise* and continued her career on the Seine.[8] The 70-ton paddle-wheeler *Thames*, whose paddles measured nine feet in diameter, was the first steamer to undertake the considerable coastal voyage, 1,500 miles in all, from Glasgow to London, rounding the exposed promontory of Land's End in the process. Her comfortable cabin accommodation was matter for comment.[9] Certainly she must have been a good seaboat to undertake that voyage. Cross-channel service began with the *Hibernia* operating from Holyhead across the Irish Sea in 1816, and the *Rob Roy* inaugurated the famous Dover-Calais ferry in 1820.[34] English riverboat captains on the staid Thames developed the same propensity for racing that their more flamboyant American colleagues did on the Hudson, the Ohio and the Mississippi, although one doubts whether the English ever went to the extent of their American contemporaries, one of whom ordered the saloon furniture and combustible drapes and hangings fed to the hungry fire-boxes in order to better a rival.

On the American side the best known steamboat entrepreneur undoubtedly is Robert Fulton, born in 1765 in Pennsylvania. Like Fitch, Fulton first sought his fame in England and France, where he attempted to sell his novel schemes for submarines and torpedoes to the two warring powers. In France he formed a close association with Robert Livingston, at the time American Minister to France, who became Fulton's financial partner and backer. In 1806 Fulton returned to America, having first purchased an engine from Boulton & Watt in England for delivery to America. Every American schoolboy must know the story of the *Clermont,* erroneously called such by a succession of historians: her proper name was the *North River Steamboat of Clermont*, a name probably shortened simply to *Clermont* in popular usage. The 150 foot vessel, built by one Brownne, was a crude craft, devoid of paddle-boxes, covering for the boiler or bulwarks. Nevertheless she made the 150 mile run from the North River to Albany on 17 August

1807 in just 32 hours. After undergoing modifications she was re-named the *North River,* and in 1809 she undertook a regular Albany-New York service on the Hudson past the scenic Pallisades, a route which by the 1840s would develop one of the fastest and most luxurious riverboat services in the world. She was followed on the Hudson by the *Car of Neptune,* also a Fulton boat.[11] Fulton produced the *New Orleans* in 1811, the first steamer to operate on the mighty Ohio-Mississippi system, and in 1813 the *Vesuvius,* 150 feet in length, with a 60-foot main cabin and about 60 berths; she operated, beginning in 1814, between Louisville and New Orleans. By the year 1833 (the second year for the Rideau Canal) about 300 steamboats were operating on the inland and coastal waters of the United States.[12] By this time the American riverboat had left its primitive origins well astern, and so it may now be of interest to comment briefly on the development of the palatial American riverboats which came into their own through the 1840s and 1850s.

The Apogee of the American River Steamer

The American riverboat evolved as a craft with shallower draught, greater length and loftier superstructure than its English and European counterpart. Speed and comfort became the goals of fiercely competitive lines. On the eastern rivers side-wheelers embodying fine lines and powered by the bulkier low-pressure engine vied with one another for ever faster schedules. On the fast-flowing and obstruction-ridden western rivers, on which shoals and sand-bars were an ever present challenge, stern-wheelers of minimum draught, with long narrow hulls, straight sides and flat bottoms, dominated the scene. These steamers utilized the more compact high-pressure engine. In craftsmanship and appearance alike the eastern river boat was superior to the western, but the latter, developed by a process of trial and error, was peculiarly well adapted to its setting. In the words of Thomas Tredgold, an English engineer:

> The steamers built for these waters carry a greater amount of freight and accommodate a greater number of passengers upon a given draught of water than those constructed in any other part of the world; at the same time, their cost of construction and outfit per ton of freight capacity, or for passenger accommodation, is very much less.[13]

The hull design and compact high-pressure engine of the western steamboat increased freight capacity. A crudely built craft compared with its handsomer eastern counterparts, the western stern-wheeler had a comparatively short life span but made a good deal of money. Both the

side- and stern-wheeler enjoyed a longer vogue on inland rivers, where maneouvrability and load capacity were essential, than on the high seas where sea-keeping qualities took precedence. For example the last trans-Atlantic paddle-wheeler was the Cunarder *Scotia* built in 1861.[14]

The 1840s have been called the golden age of Hudson River steamboating and there were 20 steamers on the New York-Albany service by the end of the decade. There was, as yet, no railway competition which was later to sound the death knell of river passenger service. Both the size and speed of the steamers increased. By 1828 the *De Witt Clinton* exceeded 500 gross tons. The crack Fall River Line made its debut in 1847, offering the best in speed and luxury in the Hudson River service into the next century. In 1861 the 260-foot *Mary Powell,* with paddle-wheels 31 feet in diameter, attained a speed of 27 miles per hour on the picturesque Hudson, a speed unsurpassed on water prior to the torpedo boat. In 1850 the *Daniel Drew* made the 160-mile run Albany-New York in 7 hours 20 minutes. By 1904 one Hudson River steamer, the *C W Morse*, exceeded 4,000 tons.[15] These river leviathans, needless to say, had little in common with Rideau Canal steamers other than increasing comfort.

Canal Boats: American and British

The canal boat, often unpowered, which plied the small canals in Britain and the United States, developed no counterpart on the Rideau. The fact that so much of the so-called Rideau Canal consisted of lakes and connecting rivers, coupled with the fact that the Rideau was never a tow path canal, meant that the Rideau boat in fact evolved as a small river steamer, although in popular parlance called a canal boat to distinguish it from vessels too large to pass the Rideau locks. Since the small American and English canals were of similar dimensions to the canal portion of the Rideau, it may be of interest to treat briefly these canallers, to which only the scows and unpowered Rideau barges bore any resemblance.

The smaller American canals, as with their counterparts in England, and in contrast with the Rideau, made heavy use of towpaths and draught animals. On the American canals many of the smaller craft were propelled by poles. Such were the early "arks" on the Susquehanna, the first of which was built in 1800. The "ark" was a scow, roughly 75 feet in length by 15 to 16 feet in breadth, pointed at bow and stern, and propelled by "long pine sweeps" mounted on sternposts.[16] The Durham boat was used at an early date on the Rideau and other canals; as was the bateau, both of which were poled although sail was carried.

Distinctive canal boats were developed in both the United States and the United Kingdom. Typically these boats had snub-like bows and squared or snub-like sterns. Length to beam ratios were reasonably large, and cargo could be carried in the hold. Some were open but a large number were decked over; only on the largest canallers did the superstructure extend above one deck.

Charles Dickens has left a description in his *American Notes* (1842) of the make-shift accommodation on one passenger-carrying canal packet:

> It resembles a small Noah's ark - a houseboat whose only deck is the roof of the cabin. In the bow, carefully cut off from the rest of the boat, is a tiny cuddy for the crew. Next back of this is the ladies cabin, sometimes a separate room, sometimes cut off from the main cabin only by a red curtain. Next is the main cabin, 36 to 45 feet long, which was saloon and dining room by day and men's dormitory by night. Back of this is the bar, and finally, at the very stern, is the kitchen, almost always presided over by a negro cook, who is usually the bartender also. The other members of the crew are the captain, two drivers, two steersmen, one each for the night and day shifts.[17]

In fine weather passengers would sit on the cabin roof, or upper deck, of these curious craft, ducking their heads on the approach to a low bridge. Under these conditions canal travel could be quite pleasant, but the overnight accommodation and dining facilities rankled with the more fastidious traveller. Recalling her trip on the Erie Canal another English visitor, Mrs. Frances Trollope, mother of the celebrated novelist, wrote that she could "hardly imagine any motive of convenience powerful enough to induce me again to imprison myself in a canal boat under ordinary circumstances."[18] Criticism of the canal boat's accommodation was not restricted to fastidious and perhaps patronizing Englishmen: Phillip Hone, president of the Delaware and Hudson Canal, described conditions in scarcely more commendatory terms:

> The sleepers are packed away on narrow shelves fastened to the side of the boat, like dead pigs in a Cincinnati pork warehouse. We go to bed at 9 o'clock, and get up when we are told.[19]

In England the first steam tugs were introduced on the Trent Canal and on the Severn in 1814.[44] English canal boats on the small canals, as distinct from what may be termed ship canals, resembled American. On the Leeds and Liverpool Canal (a very considerable engineering feat crossing the Pennines) the "short boat," a 45-ton craft, 62 foot by 14 foot, evolved, and in south Wales a double-ended craft of about 20 tons was developed. The Grand Junction

Canal, which ran through the whole length of the industrial midlands to the Thames near London, developed 60-ton flat-bottomed barges with square bows and stern, which seem to resemble the general description of the Rideau barge. Elsewhere the smaller canals were plied by the "tub boats," 4-ton craft 20 feet in length by 5.5 feet in breadth.[21] These English canallers were poled or horse-drawn, and in negotiating the numerous tunnels "legging" was resorted to, a method whereby the crew of two would lie on their backs and push the craft along with their feet against the tunnel wall. Needless to add that "legging" required considerable skill and could be dangerous. On the other hand, some of the small English canal boats were powered, and with quite sophisticated engines, judging from those operating on the Leeds and Liverpool which were described by L.T.C. Holt as "diagonal double tandem compounds", in which high- and low-pressure cylinders in pairs shared a common piston and connecting rod, each engine being made up of two such units in V-formation. These boats travelled the 127 miles from Leeds to Liverpool, through 92 locks, at an average speed of 2 miles per hour.[22] Rolt states that commercial navigation on Britain's narrow canals petered out about 1963, more or less simultaneously with that in Canada. In 1967 the British government decided to preserve the small canals as a recreational amenity.[23]

To sum up, by the 1830s the steamboat was well established as a commercial carrier on the rivers, canals and coasts of the British Isles, United States and western Europe. The steamboat was about to offer its first tentative challenge to sail on the high seas, but mariners of the traditional mould refused to take the ugly little "puffers" seriously until the marked improvement in engine power and range at mid-century. Yet such was the pace of technology that by the 1890s transatlantic steamers were dispensing with square rig entirely.

In the development of steam power on both land and water, a process which would change the way of life almost beyond recognition, the Canadas were far from behindhand, particularly in the introduction of steam to their vast inland waterways.

THE RIDEAU STEAMBOAT AND BARGE

Steam on Canada's Inland Waters

Colonel By had envisaged the Rideau as a steamboat canal, and to this end fought vigorously and finally successfully for enlarged locks to accommodate steamers. The absence of towpaths is testimony that the Rideau Canal was designed primarily for steamers. Indeed when the canal project was undertaken in the summer of 1826 the steamer was no stranger to Canadian waters.

The forerunner of this numerous company was John Molson's *Accommodation,* completed in 1809, a vessel 85 feet in length with a 16-foot beam, powered by a 6-horsepower engine. Her builder was David Bruce. The *Accommodation,* with ten passengers aboard, made her first run from Montreal to Quebec in 36 hours.[1] She had accommodation, probably fairly spartan, for 20 passengers, and the fare was $8. She made it back to Montreal in four days, but she hove to at night. Her successor on the Montreal-Quebec route was Molson's *Swiftsure,* built in 1811, a slightly larger craft, with a 28-horsepower Boulton & Watt engine. Molson organized a steamship line, the St. Lawrence Steamboat Co., and by 1818 had five steamers in service including the *Lady Sherbrooke,* 170 feet in length, powered by a 63-horsepower engine. By 1818 steamboats monopolized the Montreal-Quebec service.[2] In 1826 a second concern, John Torrance & Company, began service. The typical early St. Lawrence steamers were wooden-hulled vessels, up to 170 feet in length, and generally between 150 and 300 tons burthen. They were powered by single-cylinder beam engines, and fired by wood burning boilers. Like the early Rideau steamers, these were dual purpose passenger and freight boats.[3]

Steam navigation on the Ottawa River opened with Philemon Wright's *Union of the Ottawa* in 1819, making the Hull-Grenville run in 24 hours.[4] The first steamer on Lake Ontario (1817) was the American-built *Frontenac* (built at Ernestown by Henry Teabout), a 700-ton paddle-wheeler, with a 50-horsepower Boulton & Watt engine, supplemented with schooner rig. The *Frontenac* was put on the York-Prescott service; she was burnt at Niagara in 1827. She was followed by the somewhat smaller *Queen Charlotte* in 1818, which plied between Prescott and the Bay of Quinte, and by the 350-ton *Dalhousie,* which ran through the scenic Thousand Islands between Kingston and

Prescott. By 1826 when preparations for the building of the Rideau Canal were taken in hand, there were no fewer than nine steamers operating on Lake Ontario and the upper St. Lawrence. By 1833, the second season for the Rideau Canal, there was a 500-ton steamer, the *Cobourg,* on Lake Ontario. In 1840 the Rochester-Toronto route, diagonally across Lake Ontario, was served by three steamers, the *Burlington, Brittania* and *Gore,* the latter of which bears the distinction of being the first steamboat to ply the waters of Lake Huron and Georgian Bay in 1845. The shallow though tempestuous waters of Lake Erie were introduced to steam navigation by the quaintly named *Walk-in-the-Water* in 1818. Built in Black Rock, this vessel, capable of doing 7.5 miles per hour, operated the length of the lake between Buffalo and Detroit.[5] Immigration and the grain trade combined to augment the upper lakes steamer service rapidly, finally surpassing that on the lower lakes. The propeller *Independence* was the first steamer to navigate the northerly waters of Lake Superior in the summer of 1845, with the *Julia Palmer* the first to serve the remote north shore ports the following year.[6]

With the passing of the 1830s and 1840s companies or lines of steamers, under stress of competition, tended to supersede individual operation. Routes became longer, serving more ports, and service became more frequent with intensified competition. Operators were hard put to survive. Rate wars developed; for example, cabin fare from Montreal to Quebec was slashed to one dollar, and deck passage could be had for as little as 12 1/2 cents. By 1845 there was a vessel, the *John Munn,* on the St. Lawrence over 400 feet in length. In 1852 no fewer than six steamers ran between Hamilton at the head of Lake Ontario and Montreal. The American Mail line operated the largest and most commodious vessels on the Niagara, Toronto, Rochester and Ogdensburg route, but nonetheless went bankrupt in 1858.[7] A portent for the future was completion of the Grand Trunk Railway from Montreal through to Toronto and beyond in 1856.

Early Commercial Navigation on the Rideau

The size of steamer which could navigate the Rideau Canal over its 123.5-mile course from Kingston to Bytown was limited by the dimensions of the 47 locks, measuring 134 feet in length by 33 in breadth, with five feet of water on the sills. Colonel By had strongly recommended 150-foot locks, since he envisaged the future canal trade as being steam powered; he was frustrated in this by home authority, but at least secured a considerable concession over the originally planned locks, 110 feet by 22 feet. The locks as



Early paddle-wheel steamer *Hunter* on Opinicon Lake, n.d. [1840] after Burrowes Sketch No. 47. (Ontario Archives.)

built meant that cargoes had to be trans-shipped at Kingston from the larger lake carriers, but steam power could operate throughout the chain of lakes and rivers, supplemented by locks and short stretches of canal. Unlike the small canals in the United States and the United Kingdom, since there were no towpaths, the commercial navigation of the Rideau Canal in the main was steam -powered.

Early lock records[8] cite the passage of divers small craft - Indian canoes, batteaux and Durham boats. The celebrated engineer, Thomas C. Keefer, described the Durham boat as "an American barge" with carrying capacity for 350 barrels of flour. Batteaux were more frequent entries in the lock records, and these, according to Keefer, were manually propelled, flat-bottomed, sharp-pointed skiffs, some 35 feet in length and 5.5 feet in the beam.[9]

From the outset, however, the principal commercial carriers on the Rideau Canal were small side paddle-wheel and multi-purpose steamers and the barge, at first towed, subsequently in many instances self-propelled. Until about 1890, indeed, the unpowered barge was the principal carrier, when it was displaced, although never eliminated, by the cargo steamer. At the outset the small low-powered

paddle-wheel steamers carried freight, passengers, and towed barges, which made for slow and irregular service. By the 1850s Rideau steamers were increasingly designed for a particular function, whether as tugs, freight or passenger boats. In the early days, however, a steamer was a Jack-of-all-trades.

Steamers and Barges: 1832-50

As is the case with many historical documents, the early shipping registers are much less detailed in their descriptions than those of a later date. So it is that information on the first steamers in Rideau service too often is of general rather than technical interest. A basic reason for this was the desultory registration or non-registration of vessels on inland waters, a provision not enforced until 1845.

An early steamer on which there is some detail was the *Beaver,* launched from the marine railway, Kingston, on 4 July 1840, especially designed for the canal trade. Her



Sketch of early paddle-wheel steamer *Pilot* at an undisclosed location on the Rideau, 3rd August 1844. (Public Archives Canada.)

hull was fiddle-shaped to accommodate the paddle boxes, and to allow the cabins to extend the full beam of the vessel.[10] The *Beaver* was 104 feet in length by nearly 17 in breadth; her engine-room measured 56 feet in length, and she registered 55 tons. She was built and operated by the well-known forwarders Macpherson & Crane, and she was put on a bi-weekly Kingston-Bytown service.[11] She changed hands several times, ending with Kingston distiller and brewer, James Merton (or Morton).

The single-decked, paddle-wheel *Bytown* (at least the second if not the third vessel of this name), built in Montreal in 1842, was somewhat smaller than the *Beaver,* admeasuring 42 tons, and only 92 feet in length. Unlike the *Beaver,* the *Bytown* was round rather than square-sterned.[12]

Toward the close of this first period, and indeed in the 1840s, the screw propeller began to displace the paddle-wheel in the Rideau service, despite patented improvements to the latter during this period. One such in 1840 was a device whereby each paddle or bucket was maintained in such an attitude by a governor so as to eliminate "splashing and resistance of the back water caused by the present paddle."[13] The following year another wheel was devised which it was hoped would give a continuous and even pressure to the action of the buckets when the steamer was under way.[14] It is not known whether these developments were incorporated into Rideau steamers. Despite some ingenuity expended upon improvement, or would-be improvement, to the paddle-wheel, the screw propeller quickly displaced the paddle-wheel on the Rideau Canal,[15] in contrast to what occured on many other inland waterways. This, and the preference for the high-pressure engine, were the key developments at the approach to mid-century. At this period the tonnage[16] of particular vessels registered at either Kingston or Bytown and known to have operated in the Rideau service, varied over a rough range of 70-120 tons.[17]

In conclusion, one may say that to mid-century Rideau steamers were wood-burning, all-purpose vessels driven by paddle-wheels or propellers and that their accommodation was not of the best by later standards. While passenger service was not known for punctuality, one could travel from one end of the canal to the other in a day and a half. Vessels of the period were single-decked, or at least described as such, in the registers. This is not to say, however, that these vessels had only one deck since the vessel registers recorded only watertight decks secured by bulkheads. Many steam boats in the Rideau service as elsewhere had decks not classed as watertight, a fact which explains the apparent inconsistency between visual evidence and the documentary sources. It should thus be borne in mind that where a steamer is described as single-decked in this paper it does not necessarily follow that the vessel had only one deck.

Without undertaking a systematic examination of the lock records (which the author has not done) it is not possible to identify all the barges which operated on the Rideau. While barges were registered there is little indication, other than dimensions of particular barges (the size of the locks being a limiting factor) and the names of the owners, whether a barge operated in the Rideau Canal or not. It is nonetheless possible to identify certain characteristics of barges of the period which were flat-bottomed and square- or round ended craft. Initially, barges were generally 60-tons or less; however, by 1840 these smaller barges gave way to the larger 90 ton.[18] The early 1840s was the first of two peak periods for barge traffic.[19] The early barges, and some to the end of the commercial period, were unpowered, but in the 1840s propeller-driven barges with covered deck were favoured. Many immigrants completed their arduous voyages to backwoods settlements aboard decked barges. The barge *Breeze*, built in Kemptville in 1845, was 91 feet in length by 12 in breadth and 7 feet in depth; she admeasured 42 tons gross, and was scrapped about 1870.[20] The square-sterned, *Thistle,* built in Kingston by Macpherson and Crane in 1847, a foot shorter but three feet more in the beam than the *Breeze,* admeasured 74 tons.[21] The *Alice*, built in 1854 in Portsmouth, was registered at over 105 tons. At slightly over 88 feet in length and 17 in breadth,the *Alice* was both shorter and wider than her predecessors.[22] The Kingston shipyards were the most prolific builders of barges, but a goodly number were built in Rideau shipyards.

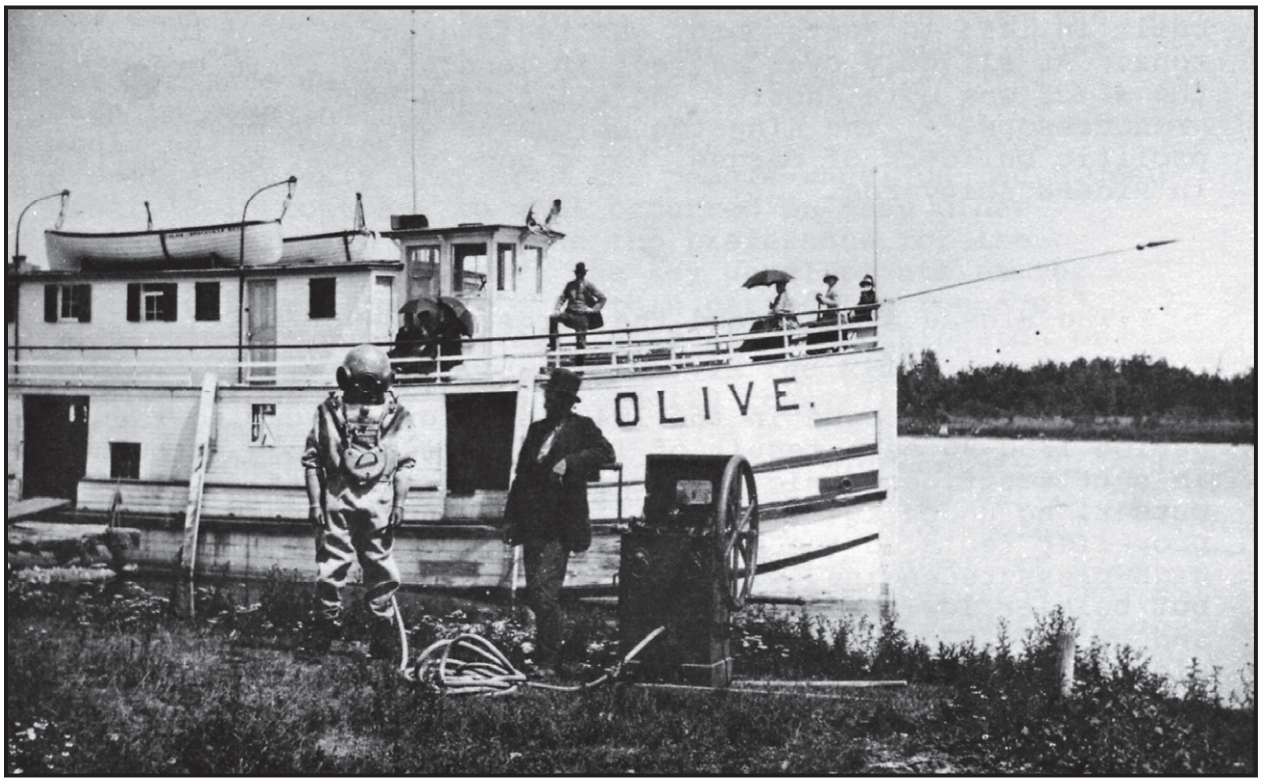
The Rideau Steamer and the Barge: 1850-90

The trends begun in the 1840s accelerated during the period 1850-90 as a result of improving technology, growth in settlement, economic development, and at least at the outset, no undue railway competition. Increasingly the propeller replaced the paddle-wheel, and the more compact high-pressure engine, with its noisy exhaust, the quieter but bulkier low-pressure type.[23] Engine power increased and by the 1870s coal displaced wood in the fire-boxes of Rideau steamers. The functions of vessels became specialized: steamers became either freight or passenger boats, the tug (aptly named) took over tows (which hitherto had so delayed the passenger service), powered barges gained preference to the engineless scow, only to give place, although never entirely, to the freight boat. Certainly from the point of view of the passenger the most striking trend was in the increasing size (within lock limits) of the passenger steamer, and even more in its vastly improved comfort verging on luxury by the 1890s. Within the

limitations imposed by the canal itself, to which was added the inexorable decline in the importance of the waterway, progress in the evolution of the Rideau steamboat was on a modest scale, but nevertheless reflected developments in steamship technology at large.

The Olive

The dual-purpose passenger-freight steamer *Olive,* built by William O'Mara in Smiths Falls 1875, merits attention as one of the later freight and passenger carriers as distinct from steamers specifically designed for one job or the other; she also was one of the three or four best known steamers on the placid reaches of the Rideau. Wooden-hulled (as were all Rideau steamers until very late in the day), the *Olive* was two-decked in contrast to most of her single-decked predecessors. Her registered tonnage was 124, and she was fitted with a high-pressure engine developing 40 horsepower, built by the Pound Manufacturing Company of Lockport.[24] The *Olive* was



Built in 1875, the 95-foot steamer *Olive*, carrying both passengers and freight, was a familiar sight along the Rideau for many years. Time and place of this photo are unknown, as are the particulars of the salvage operation which occasioned it. (Mt. Harold Foster, Jasper, Ont.)

95 feet in length by 18.5 breadth,[25] and in 1875 was licensed to carry 20 passengers.[26] The *Olive* underwent modifications in 1889; her overall length was shortened by five feet and beam increased by one. In the spring of 1892 her registry was transferred from Kingston to Ottawa. In 1901 a new engine, built by J. & B. Weir of Montreal, was installed.[27] In overall configuration the *Olive* resembles the small ark-like vessels on the Trent and Kawartha system. The *Olive*'s story, an integral part of the carrying trade spanning the turn of the century, will be told in a later chapter.

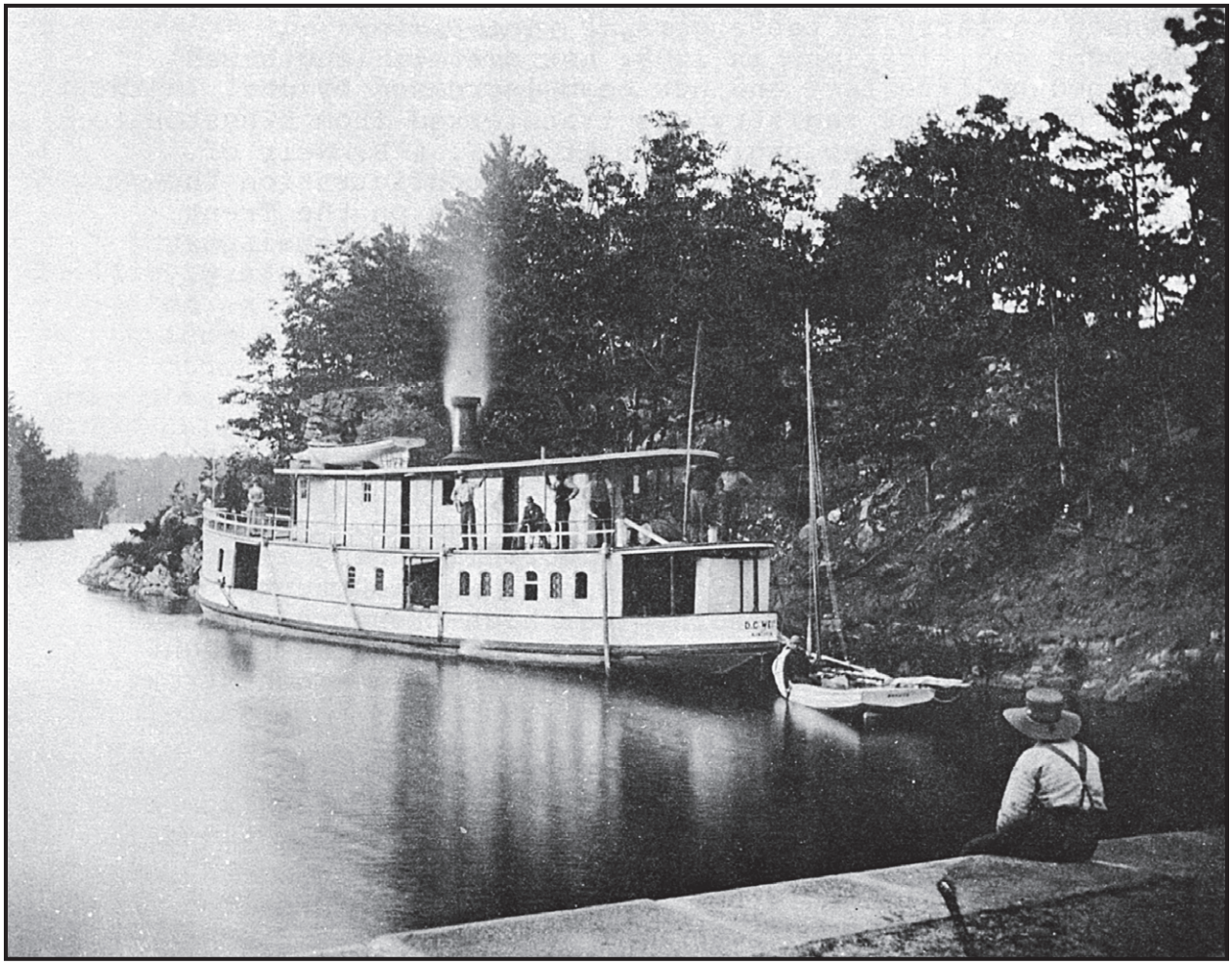
Freight Boats

Surveying a sampling of steamers built in the 1870s and 1880s specifically for the carriage of freight, one may well start with a locally built vessel, the *Quebec,* built in Bedford Mills 1867, by William A. Gorrell. Single-decked, with a square stern, the 60-ton *Quebec* was 110 feet in length and 23 in breadth. Her high-pressure engine, built by J. King's engine works in Oswego, had an upright cylinder 14 inches in diameter, employing a 14-inch stroke which developed 45 horse-power. Her registry was transferred from Kingston to Ottawa in 1919.[28]

The photograph of a steam barge, the *Quebec* of Kingston, approaching the Wellington Street bridge from the head of the flight of locks in 1914, poses the question as to whether this is one and the same vessel. Freight steamers were frequently converted to steam barges in their latter days. The one discrepancy in the photograph is what appears to be a rounded stern, whereas the *Quebec* described in the Kingston Shipping Register was square-sterned. This fact, however, does not preclude the possibility that the *Quebec* ended her days as a steam barge.

Another very well-known freight carrier on the Rideau, active in the carrying trade for over forty years, was the 65-foot, 26-ton *D C West,* built by Robert Davis Clayton in Clayton, New York, 1874. Single-decked and round-sterned, the *D C West* was powered by an engine from the same works as the *Quebec,* but somewhat smaller, and developing only 30 horse-power.[29] Very shortly after she was built her length was increased from 65 to 80.4 feet, with consequent increase of her registered tonnage to 32.32. Little is known of her final disposition, other than that she burned in 1916, her registry being closed the following year.[30]

Another freight boat, a product of a Rideau shipyard, was the *Khartoum,* built in the township of Ernestown, Lanark County, by Joseph Ward Pierce in 1885. The *Khartoum* had a registered tonnage of 34 and was 78 feet in length. Her 12-foot engine-room accommodated a 20-horsepower, upright high-pressure engine, employing a 9-inch



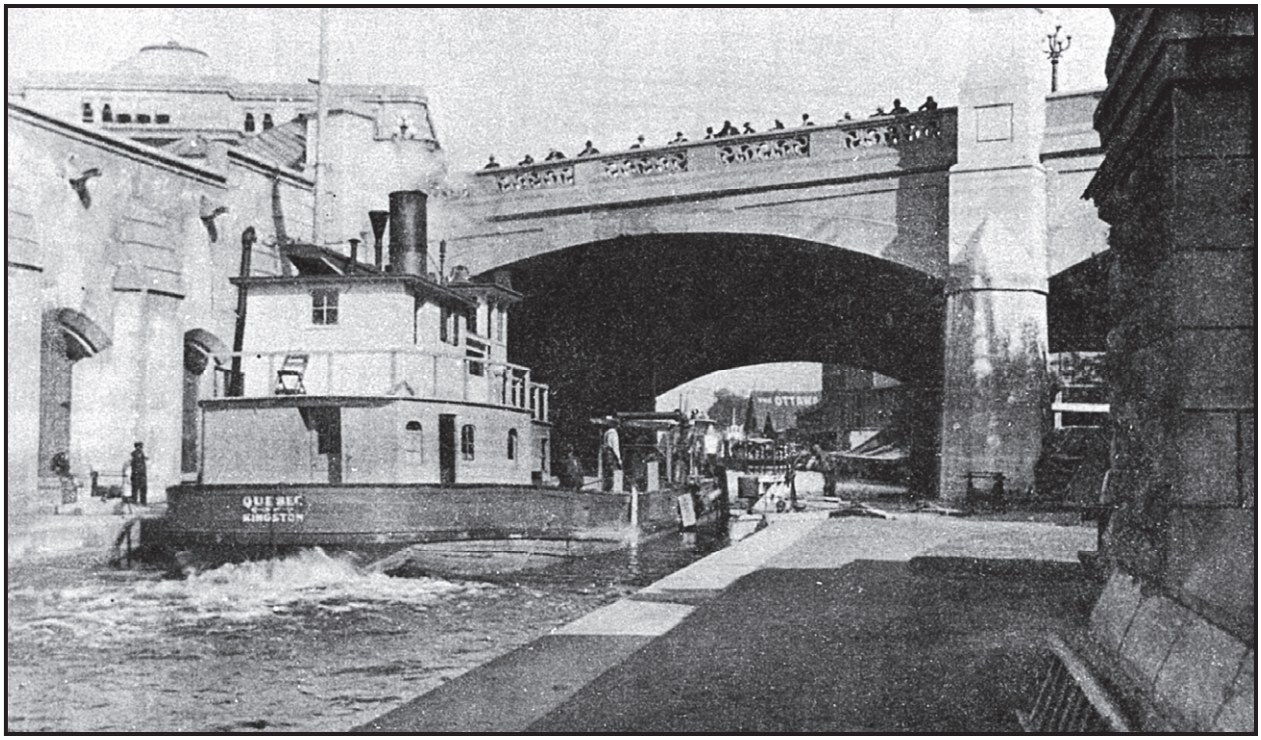
Steamer *D.C. West* at Jones Falls, ca. 1880. (Public Archives Canada.)

cylinder with a 12-inch stroke, built by D.M. McEwen & Son of Kingston.[31]

The *Khartoum* had a short career, being broken up in 1892 or 1893.[32]

Barges

Until the early 1890s the 60- to 90-ton wooden barge, increasingly decked and steam-powered after mid-century, was the principal freight carrier in the Rideau service. In the early period in particular a vessel was needed which could operate throughout the triangular Montreal-Bytown-Kingston system, a requirement fulfilled by the barge within this tonnage range. From 1891-92 the all-purpose steamer (and possibly powered barges) displaced the unpowered barge, whose overall tonnage on the Rideau plunged to a nadir in 1894, thereafter making a partial recovery, though far below



Steam barge *Quebec*, Ottawa, 1914. Powered barges, generally with bridge and living quarters in the stern, predominated over unpowered for the period of the 1880s. (Public Archives Canada.)

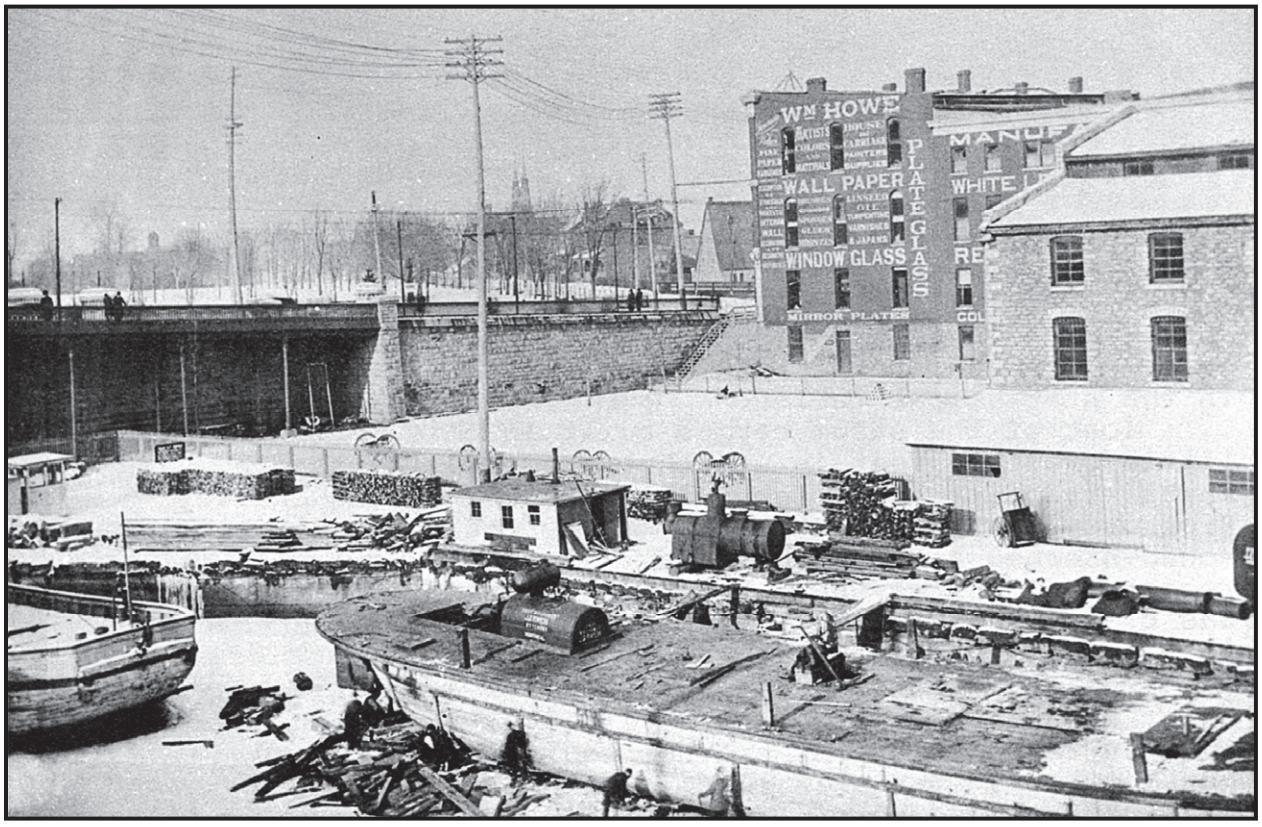
powered tonnage, until 1914, when separate tabulation ceased in the statistical tables.

Most of the steam barges built in this period were a little over 100 feet in length by some 20 in breadth. The *Westport,* built in Bedford Mills in 1862 by the Chaffey Brothers, measured 103 feet by 20.5 feet; she was round-sterned and had one deck. Her tonnage was 165 registered. She may have had a long career, for her registry was closed only in 1937, although all trace of her had been lost long before that.[33]

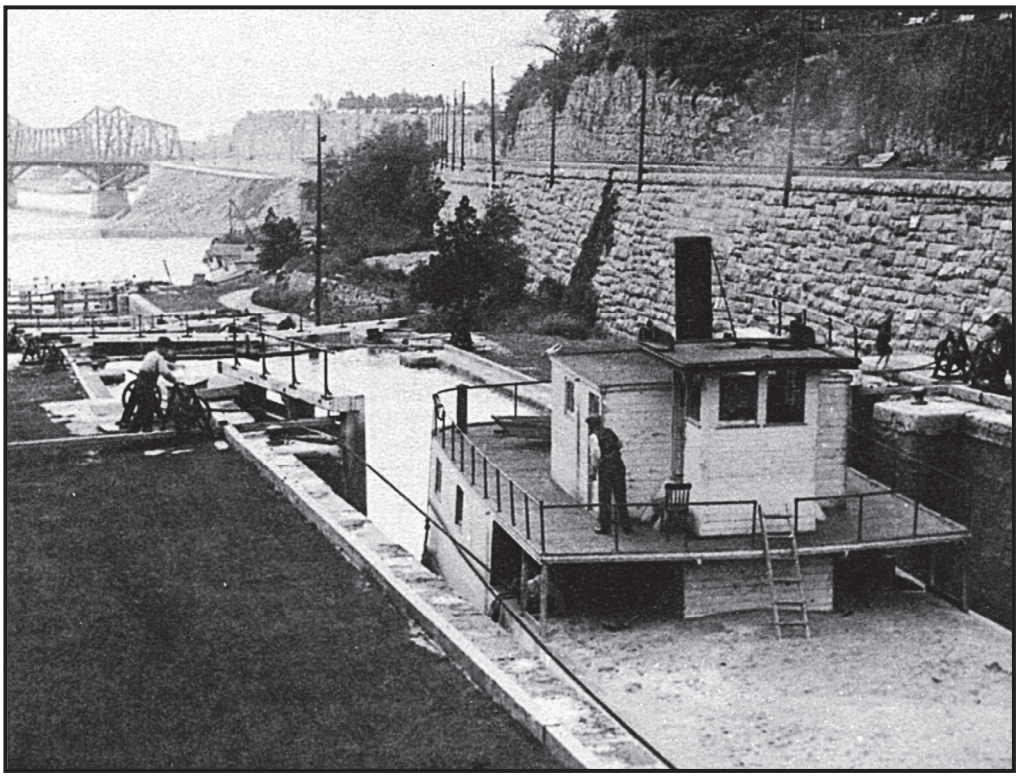
The steam barge *Nile,* 90 tons, was smaller; she was built at Battersea by R. Davis in 1870; she measured a shade over 90 feet in length, and her engine developed 20 horsepower.[34] The *Nile* is described as "plantation built," the meaning of which in this context is obscure. (The term “plantation built” was used in British registers to describe colonial-built vessels.) She was a versatile craft, in the manner of earlier Rideau vessels, having been designed for both freight and tug service. Much larger was the 148-ton *Carlyle,* 105 feet by 20.5, built at Newboro in 1870,[35] and the still larger *Gatineau* (Brewer's Mills, 1873), originally 103 feet in length, later increased to 108 feet, and registering 254 tons. The *Gatineau*

drifts into obscurity about 1911.[36] The longest barge on the Rideau, however, as of 1882, was an unspecified 111 foot craft.[37] Many of the steam barges were round-sterned, but an exception was the 110-foot *Willard Crane,* built in Ottawa by Joseph Bedard in 1887, designed with a square stern.[38] She was in service until about 1920. As late as 1888 an unpowered barge, the *Mary Bedford,* came from a Bedford Mills shipyard at the hands of Joseph Mercier. The *Mary Bedford* admeasured 61 tons register and was 101 feet in length.[39]

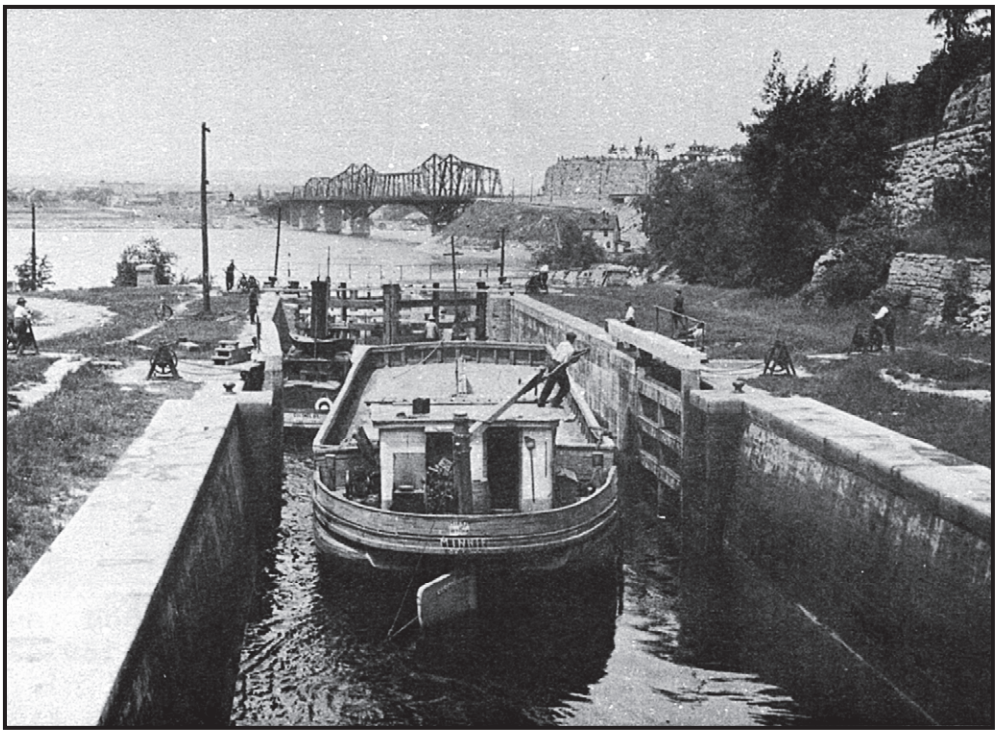
Steam barges usually had crew's quarters aft in a deckhouse, sometimes surmounted by a pilot-house. There were, however, instances of the pilot-house being located in the bow. Again some of these craft had the pilot-house located just forward of the after deckhouse. Powered barges had similar steering arrangements to steamers, whereas unpowered barges were steered simply by a tiller.



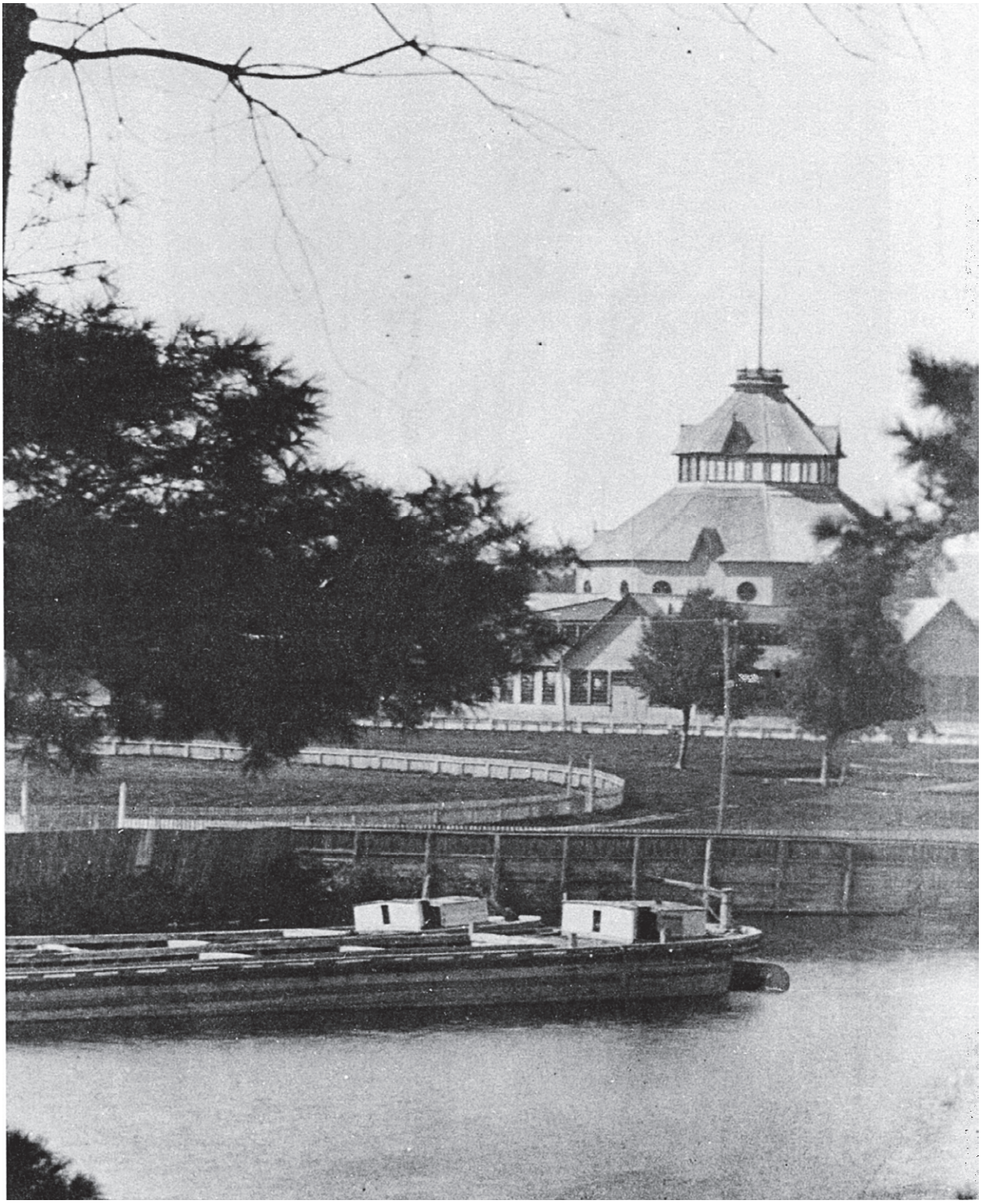
Steam barge in dry dock, Sapper's Bridge, Ottawa, January 1896. Note boiler. (Public Archives Canada.)



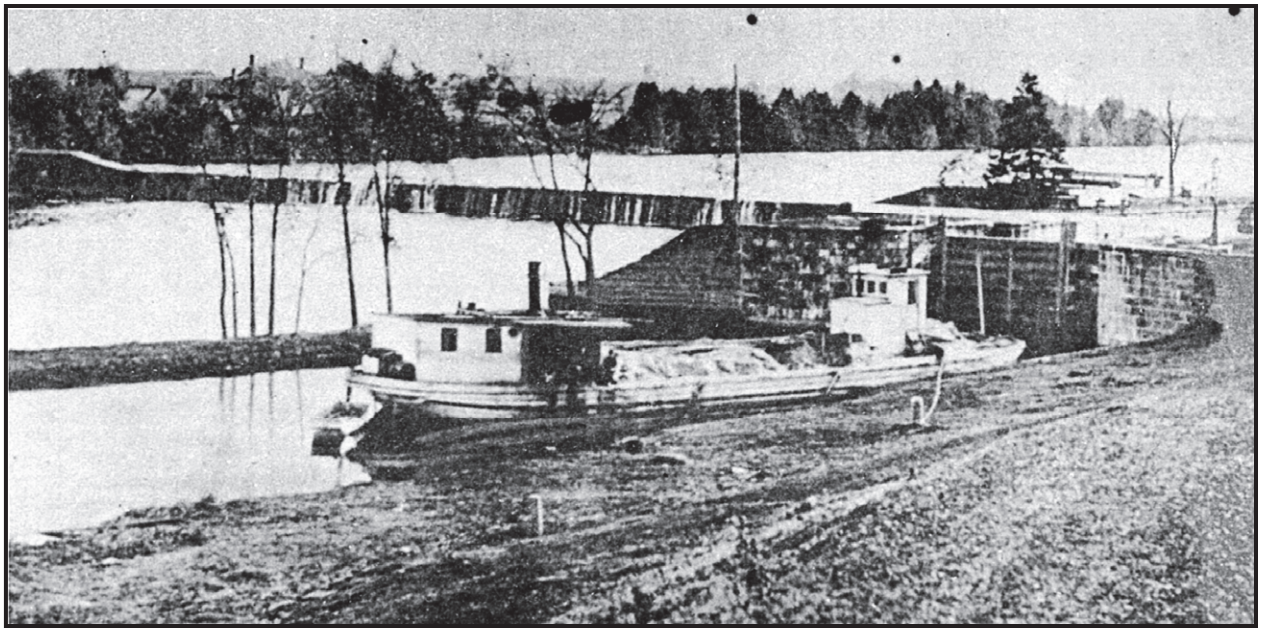
After-structure of a steam barge in the Ottawa locks, 1911. (Public Archives Canada.)



Barge *Minnie* in the Ottawa locks, 16 June 1920. (Public Archives Canada.)



Unpowered barge in canal, Landsdowne Park, Ottawa, 1891. (Mr. N.B. Ballantyne.)



Unidentified steam barge near Clowes, ca. 1900. This craft has the bridge in the bow, living quarters in the stern. Its configuration is similar to that of a Great Lakes grain boat, but on much smaller scale. (Mr. L. Hassall, Merrickville, Ont.)

The Tug

At the outset there were no tugs as such, the small multi-purpose paddle-wheel steamer sufficing for the general needs of steam power on the Rideau Canal. Nonetheless, as early as 1 November 1841 Lanson Hilliard broached the subject of steam tow boats to William Hamilton Merritt, then serving as president of the Welland Canal Co. The project was under serious consideration, and the views of the new Governor were apparently solicited.[40]

Early steamers, as we have seen, served as freight and passenger carriers, as well as tow boats for barges and timber rafts. The debut of specifically designed tow boats or tugs resulted in faster and more regular passenger service.

The earliest tug *per se* to transpire from this research is the 31 ton (registered) *Mary Ann,* built in 1856 at Sackett's Harbour. Owned by Henry Easton of Merrickville, she measured exactly 50 feet from stem to stern, and a little over 15 feet in the beam. She was still in service at the close of the 1877 season.[41]

In 1861 George Chaffey & Bros. built the 33-ton *Forest* at Bedford Mills. Although considerably narrower (9 feet) than the *Mary Ann*, the *Forest*'s registered tonnage was slightly larger. The *Forest* was round-sterned and single- decked. She was broken up

sometime in 1877.[42] The *Frances* built in the same shipyard by John Chaffey in 1864, was a little larger, admeasuring 36 tons and 55 feet in length.[43] She must have been a sea-worthy little vessel, for according to a reminiscence in the Brockville *Record and Times* of 4 February 1933, the *Frances* ventured forth on the choppy waters of Lake Ontario, towing lumber barges to White Hall and Oswego.[44]

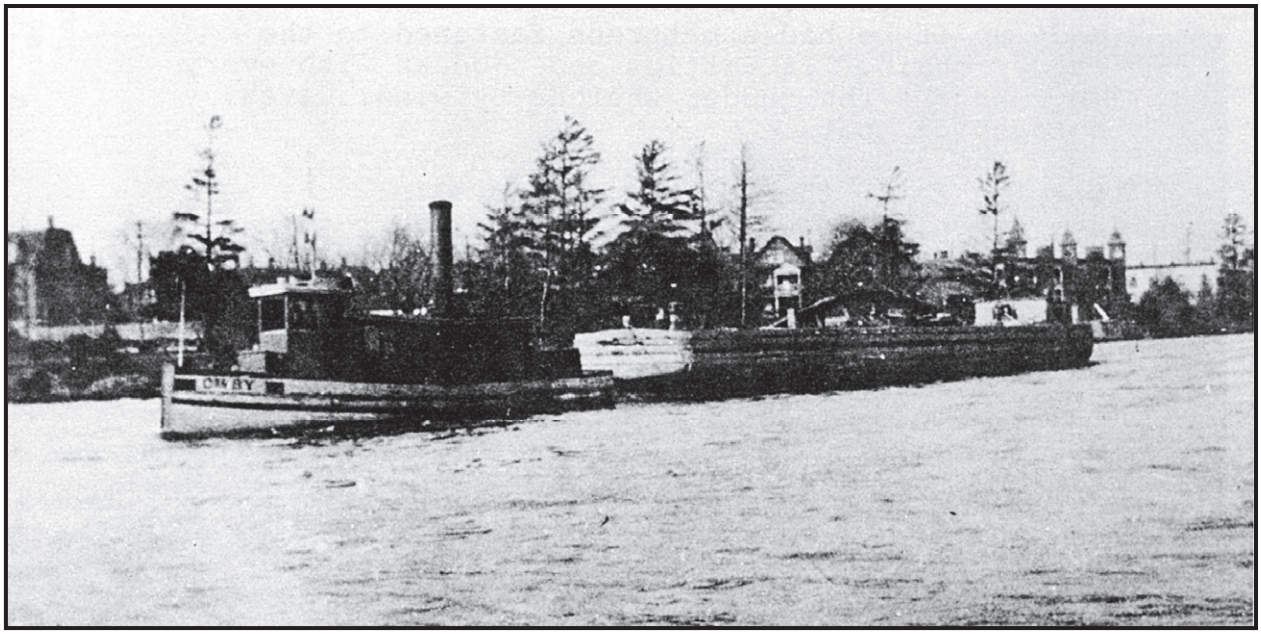
The Tug *Elswood,* yet another product of the Chaffey Brothers shipyard at Bedford Mills, was launched in 1865. Somewhat smaller than the other vessels, she registered a bare 17 tons. Her length was 49.1 feet overall, and breadth 11.8 feet.[45] In 1876 the *Elswood* towed the barge *Ontario* from Loughborough township to Montreal with a load of 163 tons of phosphate.[46] Unfortunately engine-room data for the previously mentioned tugs are not presently available except for the *Elswood.* In 1878-79 she underwent a refit, with installation of a new engine and boiler, the contractor's specifications for which are produced *verbatim* in an endnote.[47] The *Elswood* gave very good service until she met her end one-half mile off Pigeon Light, Simcoe Island, in Lake Ontario.[48]

A much larger tug, the *Kitty Friel,* came forth from a Kingston shipyard in 1869. At 46 tons (registered) she measured 91 feet in length, lengthened to 99 feet in 1873.[49] She was powered by a 5 16/100-horsepower engine.[50] The *Kitty Friel* lasted but ten years in the Rideau service, meeting a fiery end on 18 August 1879 from a funnel spark which set fire to her hold. The holocaust must have been one of the more spectacular sights along the pastoral reaches of the Rideau:

> An Ottawa paper says the crew of the *Kitty Friel,* the steamer which was burned on Monday last, arrived there on Wednesday evening by the *Olive.* They gave a shocking account of the burning of the *Kitty.* It appears that on Monday at 2:15 p m she caught fire in the hold, and being loaded with dry lumber she burned very fast. From the time the fire started she steamed four miles, the engineer not being able to get to the engine to stop the movement. She was then run aground so as to allow the crew to escape with their lives. The greater part of their clothing was lost. So great was the heat that the whistle was melted off, allowing the steam to escape from the boiler. This, along with the roar of the flames, could be heard at Merrickville, a distance of five miles. The steamer was completely burned, nothing being visible but the smoke stack.[51]

The *Kitty Friel* was a total loss ($2,500), in addition to her cargo of lumber, valued at $800.[52]

The tug *Edmond*, built in 1879, is a vessel on which there is much more information than for vessels of this type



Tug *Colonel By* towing barge, n.d. (Public Archives Canada.)

hitherto discussed. Built in Bedford Mills by David John Ainslie, the *Edmond* was registered in Kingston at 22.7 tons. She was a smaller vessel than the aforementioned, (56.4 feet in length, 12.1 feet in breadth). Her engine room measured 25 feet. The engine was a high-pressure, upright cylinder (12-inch diameter, 14-inch stroke) which turned out 40-horsepower.[53] According to the recollections of Mrs. Eleanor Tett Robertson, the *Edmond* once towed the passenger steamer *Rideau Belle* from Westport to Kingston.[54]

E.J. Tett, merchant and forwarder at Bedford Mills, left a firsthand account of the cramped accommodation aboard his tug, *Edmond,* in which he travelled from Bedford Mills to Montreal.

> The tug accommodation as they say is a bit crowded. The captain has a state room of his own, his cot very short -- one pillow, blanket and stool. He sits or stands to manipulate the wheel which in turn shifts the rudder and guides the boat -- either with the current or against -- . . . he watches for a quiet cove or old dock in the river bank; rings the ease away bell -- 3 short – pulls on the wire to the engineer, pulls in close, ties up and pronounces to the boys -- leave here at 5.30 A:M. That's fine because he could not sleep longer with his feet on the stool the rest of him rolled up in the blanket -- on what they call a mattress. The engineer sleeps in a top bunk -- one of two on

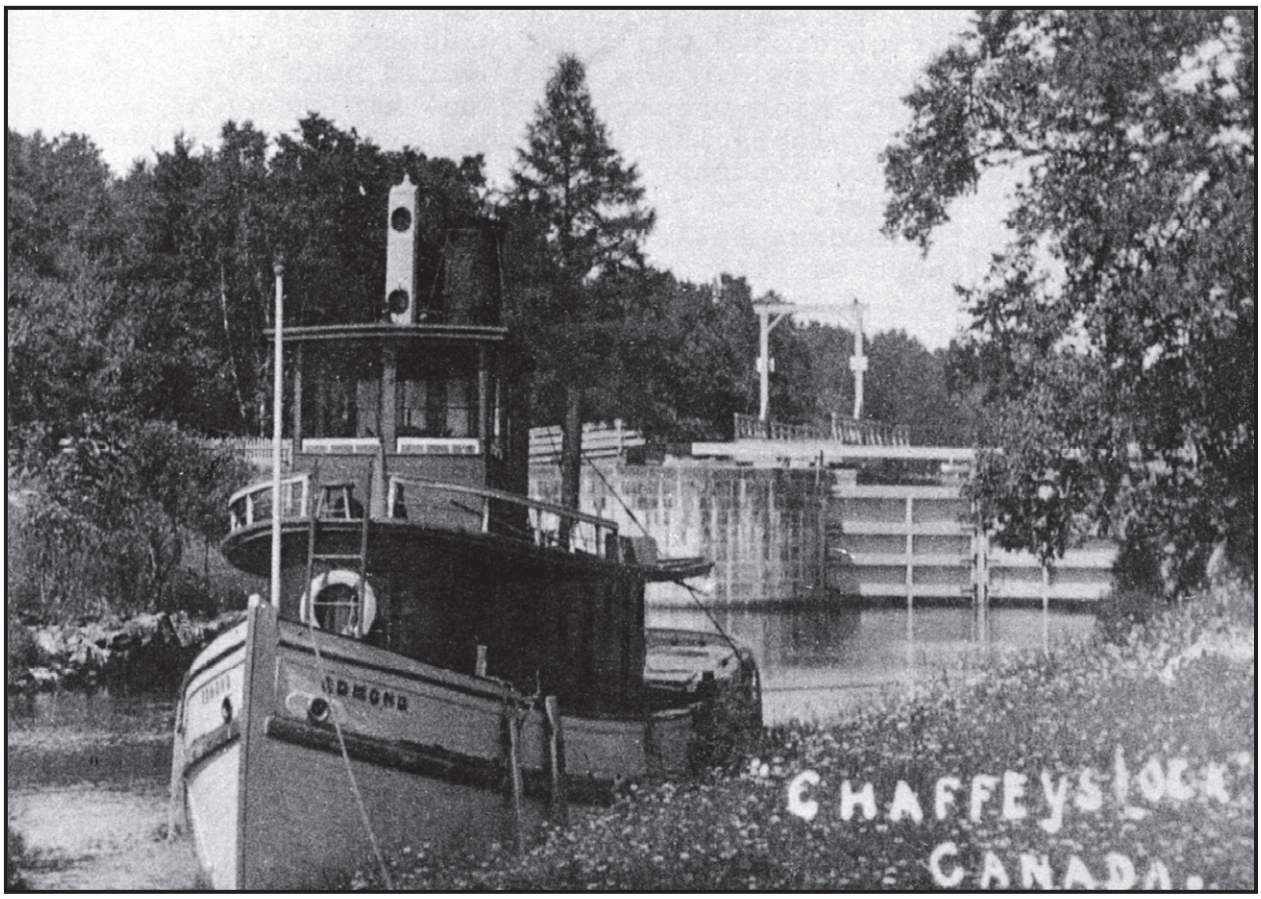
both sides of the cabin. A third bunk could be made up if he had a mattress fastened to the rudder chain. It rattles and squeaks with every movement of the rudder whether by wind, waves, or passing boats.

The cabin is under the stern deck. To get into it raise the hatch cover or slide it toward the stern, go down 4 steps, close the hatch cover up again. Small table one side next to the tug's engine, other 3 sides stools for 4 at a time. Can stand up if not too tall. Each side is a seating board. Top bunk if careful can get into it but don't raise your head or take the blow from the deck timbers. Next bunk opposite side same design. 2 small windows each side of room; lower bunk same on each side of room. The engineer occupies upper bunk smokes French twist tobacco most of the night in bed goes to sleep pipe in mouth. Matches easy to reach; big watch, key wind, easy to reach to get the time with match. The deck hand occupies one lower berth. The cook has private room up near the bow. A kitchen nearby, all the tools needed. Water rope on pail drop the pail & take all you need for any purpose. Cook sets the table, fries the pork and passes everything to the person at end of table. Potatoes pork, bread & butter, flap jacks, black-strap, tea & coffee, no milk as a rule but capt knows where can get milk along route and if at right time stops the tug and sends man to get some in spite of cross dog.[55]

The *Edmond* enjoyed a long and busy life, ending ingloriously by "sinking at our lock here" (presumably Bedford Mills) for undisclosed reasons in August 1911. In June 1913 the *Edmund* was dismantled, her stack sold to one purchaser, and the hull to W.J. Waffle of Westport; on 18 June the hull was raised and towed away.[56]

The tug *Hiram Easton*, built in 1880 at Merrickville by David J. Ainsley (or Ainslie) is typical of those in the Rideau service. With a length of 57.5 feet and 13.5 in the beam, the *Hiram Easton*, named after her Merrickville owner, was 23.2 registered tons. Her 25-horsepower upright high-pressure engine of American manufacture (Hamilton Bros., Buffalo) had 10.5-inch cylinders, with a 12-inch piston stroke. Her registry closed on 9 May 1900.[57]

Overall there appears to be little trend discernible in tug development; the tug was developed to meet the needs of the waterway, the towing of barges and timber rafts.



Tug *Edmond* at Chaffeys, 1906. Operated by Tett Bros. 1879-1911, the *Edmond* had a long and active career. At an undetermined date Benjamin Tett travelled from Bedford to Montreal return on this little craft, whose accommodation was Spartan and primitive. (Mr. Neil A. Patterson, Kingston.)

The Passenger Boat

Along with the specifically designed freight boat, steam barge and tug, the 1850-90 period witnessed the debut of the passenger vessel, although vessels never became exclusively confined to one or the other function. Passenger carriers on the Rideau developed more spacious, commodious, and finally luxurious accommodation, again within the limits set by the locks.

First of the luxury steamers to appear on the Rideau in the latter years of the century was the 69-foot, single watertight deck *Rideau Belle,* built at Kingston by Robert Davis in 1885. Fifteen feet in the beam with a registered tonnage of 31.87, the *Rideau Belle* was not much bigger than a good-sized cabin cruiser of the present

day. She was licensed to carry 40 passengers, and became very popular in the late Victorian period before railway and highway competition eroded and finally destroyed the steamship excursion trade. She was powered by a 20-horsepower upright, high-pressure engine, employing a 10.5-inch cylinder with a 12-inch stroke, built by Davidson Doran and Company of Kingston. Her original owner was Robert Davis,[58] her builder.

In 1886 the *Rideau Belle* was re-built at Kingston: her overall length was increased to 85 feet, a spar-deck (a light upper deck; a spar-decked vessel being defined as one intermediate in design between an awning-decked and a three-decked vessel) was added, and the registered tonnage increased to 131 tons. A new 40-horsepower compound engine was installed (one cylinder 9 inches in diameter and the other 16 inches) built by D. McEwen and Son of Kingston. This must have been one of the early such engines to make its appearance in Rideau service.[59] Following an 1892 overhaul, her passenger accommodation was increased to 50, and the following year to 100.[60]

The *Rideau Belle*'s accommodation was in sharp contrast with the spartan quarters aboard the early steamers. Cherrywood panelling adorned the dining room and staterooms, ceilings were painted sky blue, curtains of green velvet adorned the windows, and satin cushions the settees and sofas.[61] Catering to the increasing taste for luxury, which was general in late Victorian and Edwardian times aboard steamships and railways alike, was clearly reflected in the Rideau passenger service.

The *Rideau Belle* flourished for little over ten years, but she never reached the scrapper's yard. She met her end off the west side of Sand Lake, 11 November 1895, being destroyed by fire for a loss of $4,500.[62] It is a rather unfitting epitaph to the short-lived career of the well-known and popular excursion steamer that an enterprising former lock master at Chaffey's Lock salvaged some of the cherrywood panelling to build a privy.[63]

The *John Haggart* followed the *Rideau Belle* by two years, being launched at Perth in 1887, and originally had practically the same registered tonnage (59.10) as that of the *Rideau Belle.* Her original dimensions were 78.3 feet long 17.5 feet wide, and she accommodated an engine-room 25.3 feet in length. In contrast with the *Belle* the *John Haggart* had two water tight decks. Her engine (a Davidson Doran, high-pressure, 11-inch cylinder) developed 65 horsepower, very much more powerful than the first installation in the *Rideau Belle,* and considerably more so than the second. She was fitted with a 90-pound pressure steel boiler.[64] In 1891 the *John Haggart* was lengthened to 100 feet, and her registered tonnage thereby increased to 207. In 1892 she was licensed to carry 250 passengers, operating on the run between Kingston and Montreal via the Rideau Canal. Apparently the designers of both the *Rideau Belle* and *John Haggart*

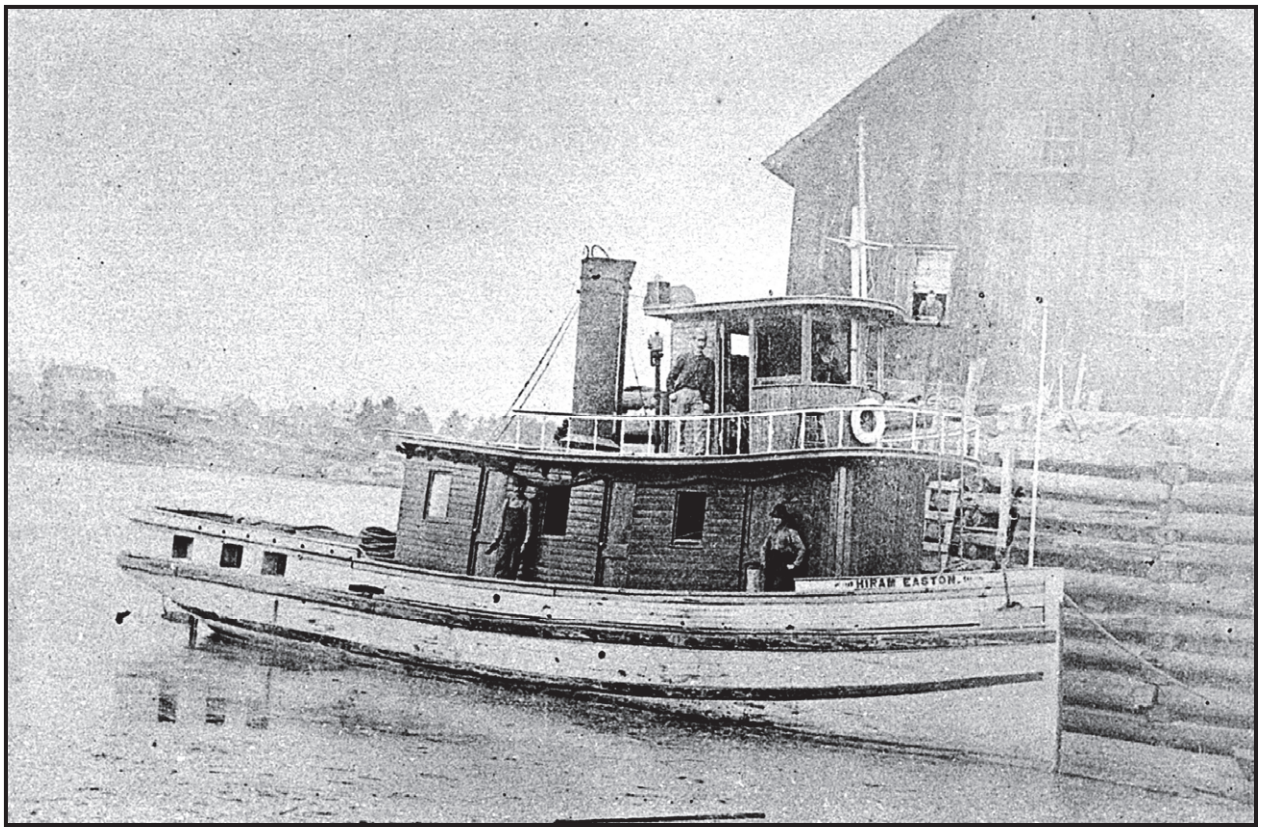
underestimated future traffic, for both were lengthened, the latter several times before the end of her long career on the Upper Lakes, where she was scrapped in 1928.[65]

The Last Years - 1890-1935

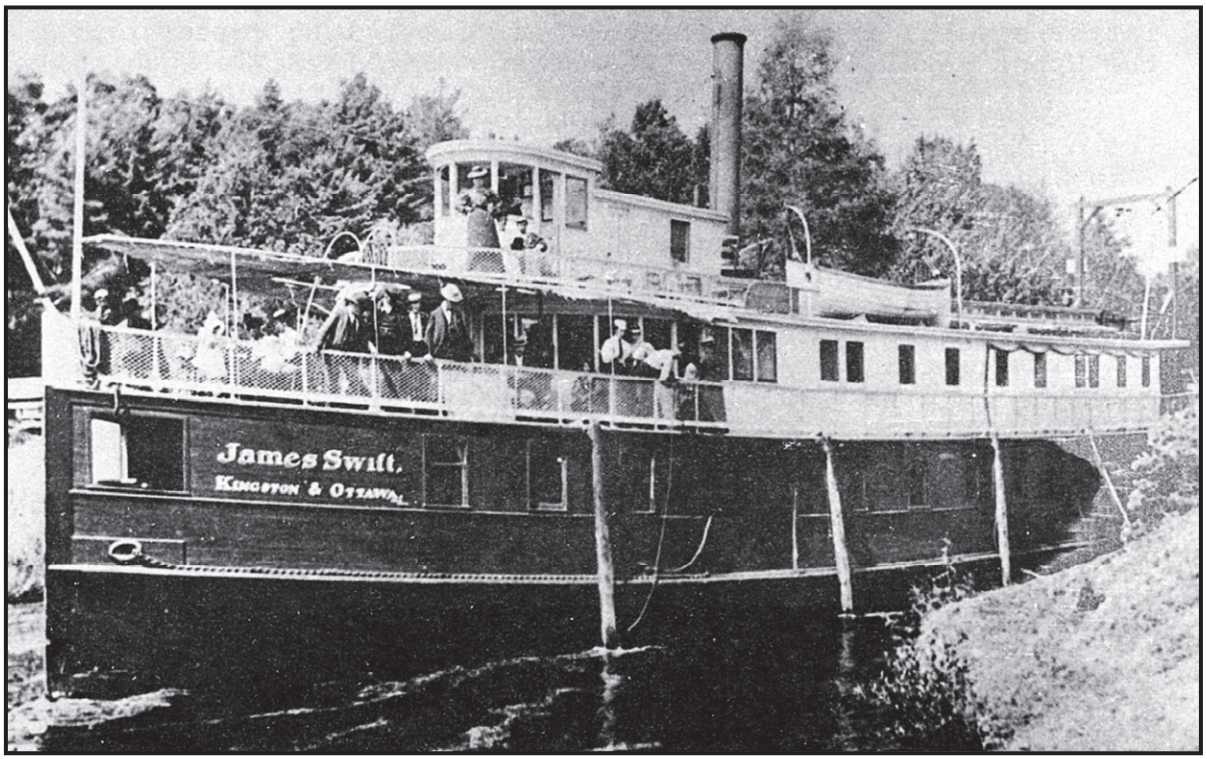
The Passenger Excursion Steamer

The well-appointed river or lake steamer, with its panelled lounges and dining saloons, sheltered decks, tempting cuisine and unhurried progress, is a thing of the past on our inland waters, banished by the ubiquitous automobile. Surely few journeys could have been more pleasurable than a cruise through the placid reaches and picturesque locks of the Rideau Canal, where one pastoral panorama succeeding another could be viewed from a deeply inclined deck chair or through the windows of the dining saloon or lounge.

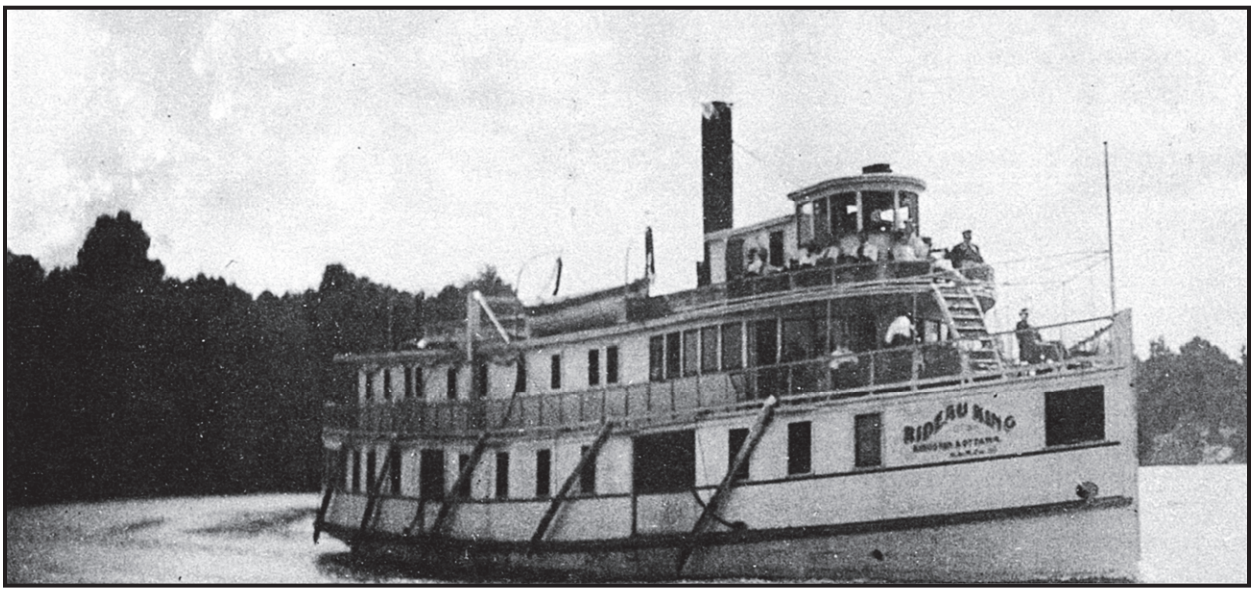
An early and very well known excursion steamer was the *James Swift,* built in 1893 at Kingston, and re-named the



Tug *Hiram Easton* at Merrickville, n.d. (Public Archives Canada.)



Steamer *James Swift*, n.d., subsequently rebuilt and renamed *Rideau King*. (Queen's University Archives.)



Steamer *Rideau King*, Isthmus, n.d. With the *Rideau Queen*, the best known luxury and excursion steamer in the early hears of this century. (Dr. H. Butman, Smiths Falls.)



Steamer *Rideau Queen*, luxury passenger steamer operated by Rideau Lakes Navigation Company, n.d. (Mr. F. Fleming, Newboro, Ont.)

Rideau King in 1901. The *James Swift,* 197.23 tons registered, overall length 107 feet by slightly over 23 feet in the beam, was one of the first steamers with both electric light and steam heat. She was fitted with a fore-and-aft or horizontal compound engine built by D. McEwen & Sons of Kingston, developing 12 [*sic*] horsepower[66] (a seemingly incredibly low figure). The *James Swift* and the *Rideau Belle* were among the earliest, if not the first, steamers in Rideau service equipped with a compound engine. The *James Swift* was licensed to carry 100 passengers in 1893, raised to 150 in 1895,[67] and finally 350 in 1902,[68] as the *Rideau King*. The *Rideau King,* operated by the Rideau Lakes Navigation Company (whose operations will be dealt with later) made the run from Kingston to Ottawa in 23 hours. Her licensed passenger load was 350. (Since 1853 each

vessel had been licensed as to maximum passenger capacity, which bore no relation to the number of berths available). The vessel's career was not without incident: while still the *James Swift* she was partially destroyed by fire at her wharf in Ottawa in 1901 in which one fireman lost his life; she was considered a partial loss.[69] It may be reasonably inferred that her name was changed with her restoration to service. Again in 1909, en route from Kingston to Ottawa, she ran aground on White Hall Island, sustaining about $1,000 damages.[70] By 1916 the *Rideau King,* in service nearly 25 years, was far spent; her boiler engine were in need of overhaul or replacement, and structurally she was no longer sound.[71] Her final entry in the Transaction Book for the Port of Kingston reads: "registry closed 8 June 1938 -- vessel under water Garden Island for a number of years."[72] The hull may be dimly discerned in shallow water on a calm day.

Her sister ship, the *Rideau Queen,* product of the same shipyard, was built in Kingston 1900, and as the illustrations confirm, she was of similar size and configuration to the *Rideau King.* The *Queen* was in fact slightly larger than the *King:* 108 feet in length, 24 in breadth, although her registered tonnage (195.5) was slightly less. The shipping register entry describes her as having one watertight deck; photographs dating from 1906 and



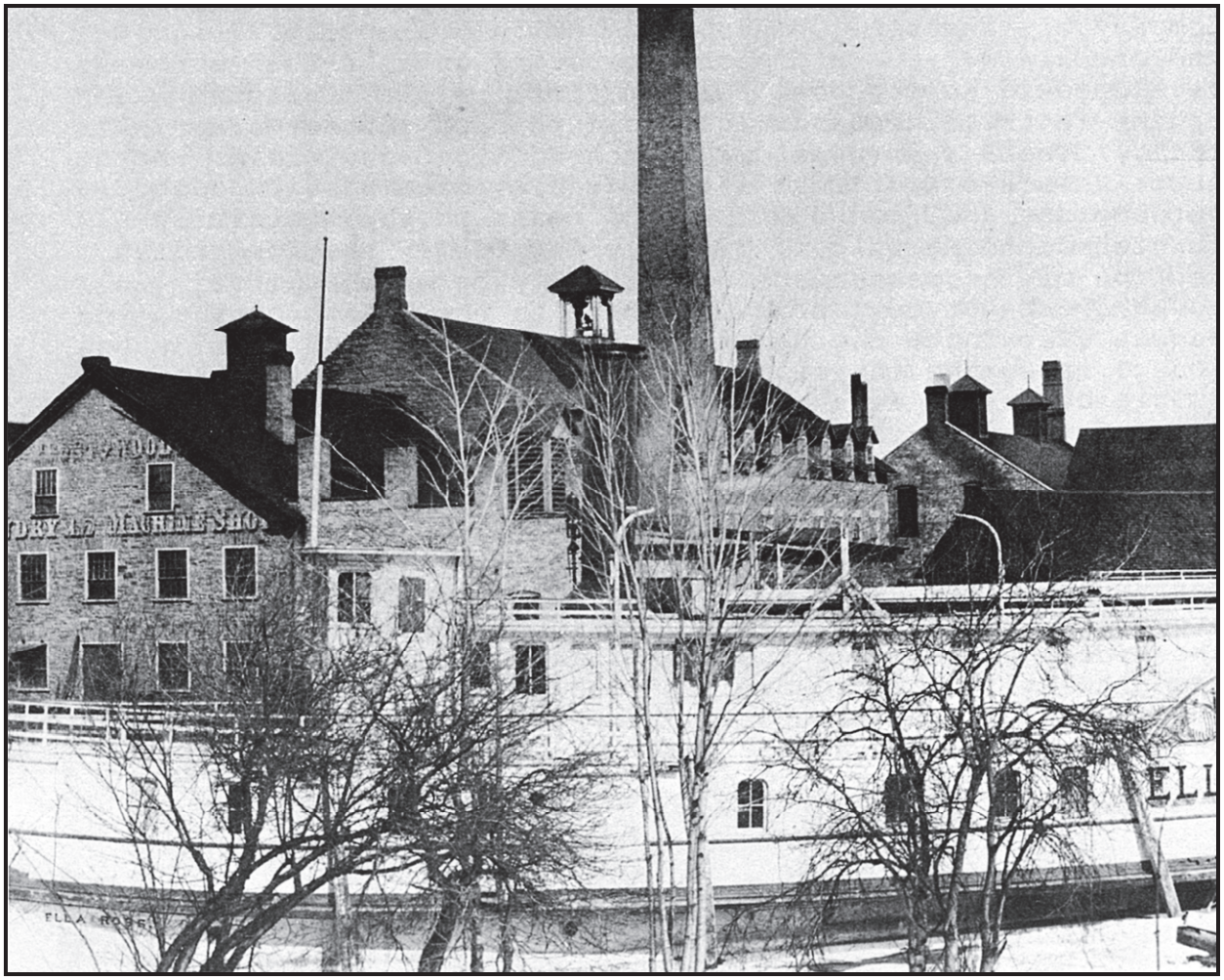
Rideau Queen at Chaffeys, 1906. (Neil A. Patterson, Kingston.)

1908 show that she had a saloon deck and boat deck as well. Her triple-expansion engine, supplied by the Davis Drydock Company of Kingston (one 8.5-inch cylinder, one 12.75-inch, and one 21-inch, with pistons operating on a 14-inch stroke) developed 25 horsepower and was the first engine of this type installed on the Rideau.[73] The *Rideau Queen* had electric light and steam heat; when she went into service cabin accommodation cost between one and five dollars, and meals in the tastefully furnished dining saloon, probably located in the forward section of the passenger deck directly below the pilot house, were served for 50 cents.[74] In the photos of the *Rideau Queen* note the panelling and facilities of the lounge, also the interior of one of the cabins, with its double bunks and wash basin. Heavy Victorian drapes and hangings are evident, in contrast with an unpanelled deckhead. Although hardly spacious accommodation, it would be comfortable with a window (rather than porthole) opening on to the saloon deck. The *Rideau Queen* was licensed to carry 300 passengers her first season[75] and in 1905 to carry 300 on the canal and 150 on the river,[76] presumably the Ottawa. According to the *Perth Courier,* the *Rideau Queen* plied the whole length of the canal from 1900-14, operated by the Rideau Lakes Navigation Company, whose solicitor requested that the new Maria Street bridge (now Laurier Avenue West) be built at sufficient height to accommodate the new steamer.[77]

In 1910 the *Rideau King* and *Rideau Queen* advertised a "Three Days Water Trip" (round trip excursion between Ottawa and the Rideau Lakes), and in this pre-automobile age, or rather at a time when motor cars were costly luxuries only the well-to-do could afford, no doubt did a brisk business.[78]

Sometime between 1910 and 1918 the *Rideau Queen* was removed from the Rideau, for in the 1918-19 season she was on freight service in the Bay of Quinte.[79] In 1924 she was sold to the Valleyfield Transportation Company. Her registry was closed on 19 August 1937,[80] by which time she may well already have been scrapped a number of years previously.

Another popular and well appointed excursion steamer of the time, offering weekly trips from Montreal to Ottawa, Kingston and return (the old triangular route), was the 190 ton, 99-foot *Ella Ross,* formerly the *Gipsey,* built in Montreal 1873, and re-built at Kingston about 1887. The *Ella Ross* had two water tight decks, was round sterned, measured nearly 28 feet in the beam, and was powered by a low-pressure horizontal engine built by Davidson Doran & Company of Kingston. Her first owner was James Swift of Kingston, who sold her to John Daniel Murphy and Samuel Edgar Pettigrew of Toronto in 1884, who in turn disposed of her to the Rathbone Company of Deseronto in 1886, her registry being transferred from Kingston to Deseronto the following spring.[81]

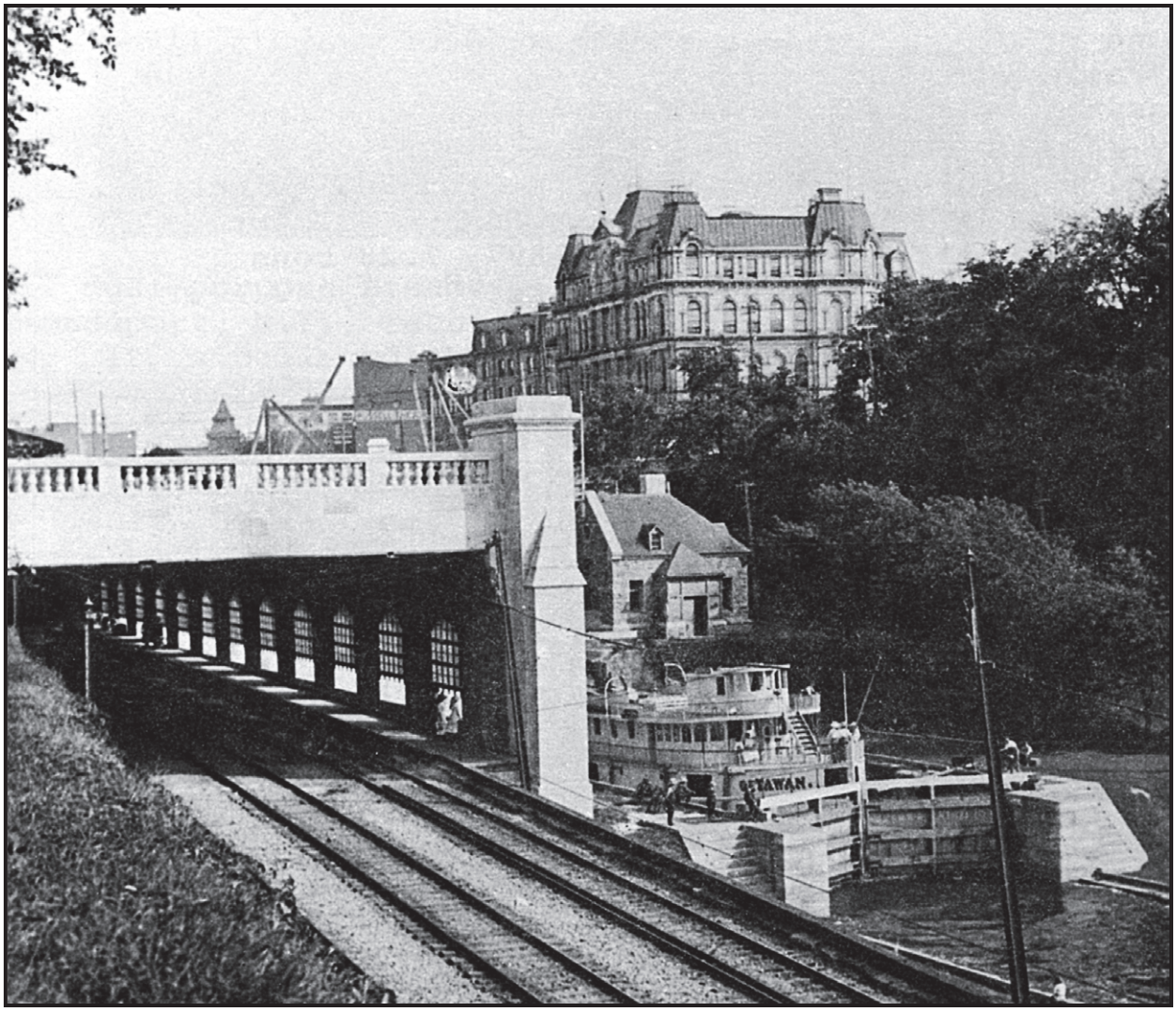


Steamer *Ella Ross* at Smiths Falls, ca. 1900. (Mr. Harold Nichol, Smiths Falls, Ont.)

The *Ella Ross* featured a lounge 75 feet in length, plush carpeting throughout, and her dining saloon seated 50. Seven cabins were accommodated on the main deck, and 19 staterooms opened on the main lounge on the upper deck. Beds were fitted with patent spring mattresses.[82] The round trip, Montreal return, including meals and berth, was $18.00.

The last passenger vessel to operate a first-class scheduled passenger service on the Rideau Canal was the 157-ton *Ottawan,* built in 1904 by J.& R. Weir of Montreal in one of its Ottawa shipyards. Similar in size and appearance to the *Rideau King* and *Rideau Queen,* (108 feet in length, 24 feet in breadth, two decks) the *Ottawan* marked one significant innovation in her steel frame, although in the main she was of wood construction like her predecessors. Her engine was a fore-and-aft

compound, also built by J. & R. Weir, with a rating of 17 net horsepower, her cylinders being 11-inch and 20-inch respectively. She was equipped with a 130-pound steel Fitzgibbon boiler. She was operated first by the Ottawa Forwarding Company and from 1913 by the Ottawa Transportation Company.[83] In 1906 she had an unusual assignment, shipping a consignment of blasting powder to some point on the Rideau,[84] possibily in connection with the construction of the Canadian Northern Toronto-Montreal line in the vicinity of Lake Opinicon. The *Ottawan* lasted well into the automobile era, continuing service until November 1935;[85] her registry was closed 3 September 1940.[86]



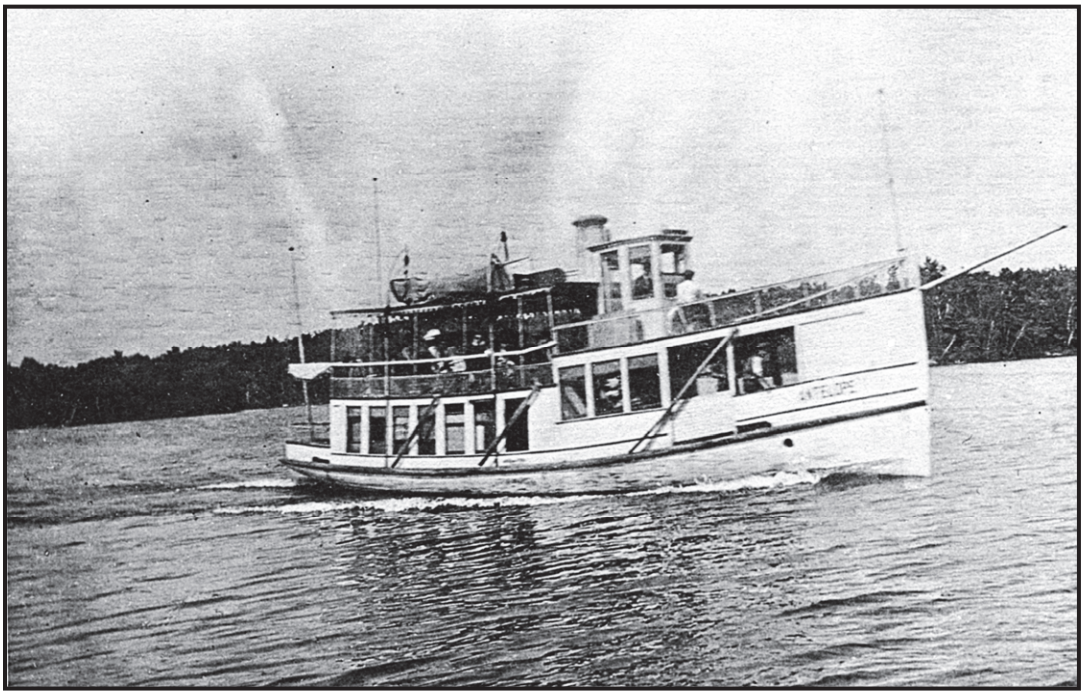
Steamer *Ottawan* in the Ottawa locks. She was the last steamer in regular Rideau passenger service, which terminated in November 1935. (Public Archives Canada.)

The Small Dual-Purpose Steamer

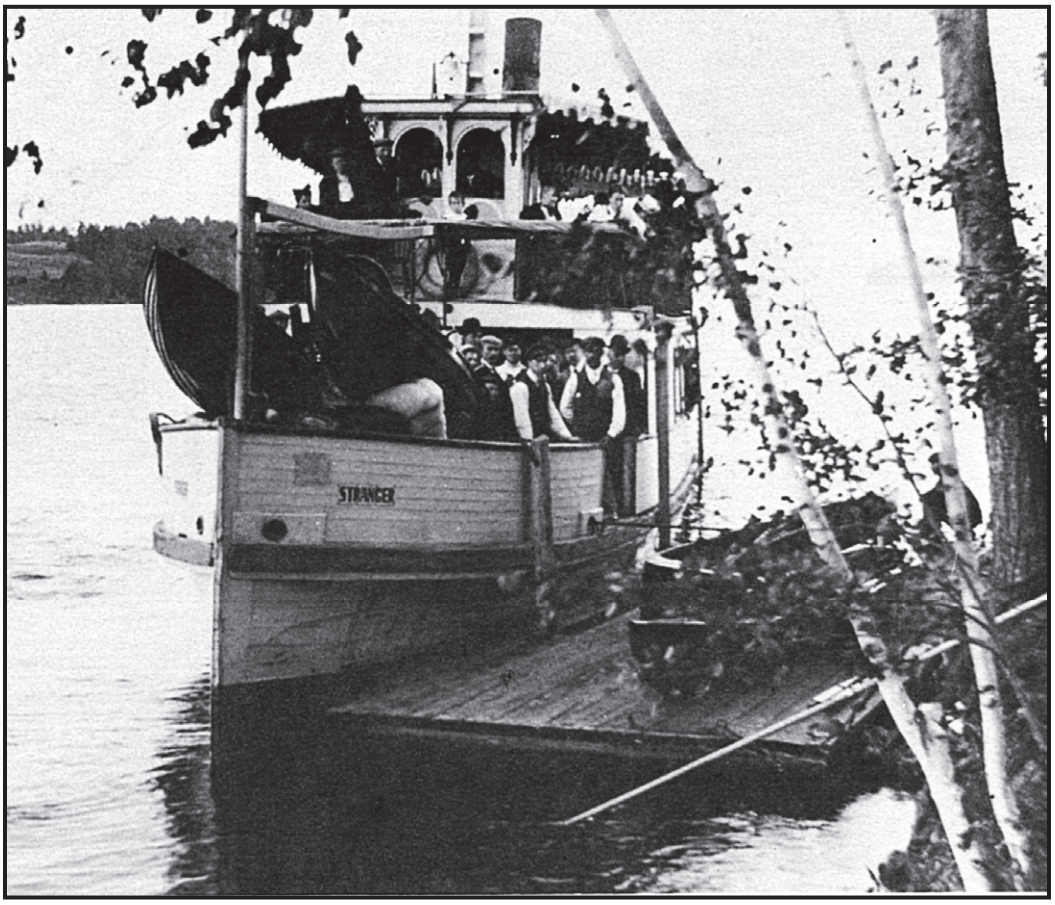
These vessels were often operated by individual forwarders, who frequently acted as captains of their own vessels. The wheel had gone full circle, for it was in this manner that the early steamers operated, until superseded at an early date by companies or lines of forwarders, operating a fleet of vessels.

The 11-ton, single deck (watertight), *Antelope,* built by Robert Davis in Kingston in 1889, was 60.5 feet in length and 11.5 in breadth. She was powered by a 15-horsepower upright compound engine, product of Davidson Doran & Company, employing a short stroke (8-inch), with cylinders of 11 and 8 inches diameter respectively.[87] Her service in the freight and passenger trade out of Newboro will be described in a later context. It is sufficient now to note that the *Antelope* was one of the early boats to be fitted with a compound engine.

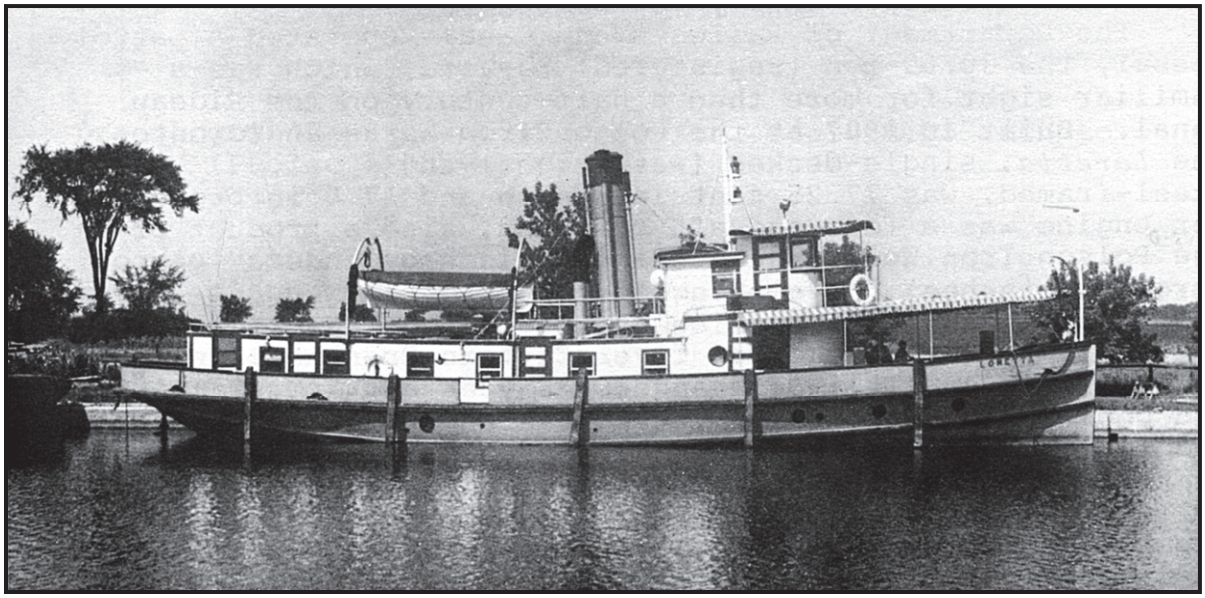
One of George Davis's steamers (George Davis lived in Smith Falls) was the *Victoria,* built in Kingston 1900. She was a little larger than the *Antelope,* measuring nearly 73 feet overall, and registered at 40 tons burthen.[88] She was licensed as late as 1928 to carry 175 passengers.[89] Davis also operated the diminutive steamer *Lee* built at Kingston in 1897, 7.28 tons register, licensed for 40 passengers.[90]



Built in Kingston in 1889, the *Antelope* was operated by G.A. Davis, a Smiths Falls forwarder, from 1906. She was fitted with one of the earlier compound engines on the Rideau. (Mr. G.A. Davis, Smiths Falls.)



Small dual-purpose steamer *Stranger,* built 1872 at Hammondsport, N.Y., rebuilt Cornwall 1901, 56.54 register tons. It is believed that she operated on the Rideau, since she was owned at one point by Albert Dupont of Smiths Falls, and this photo comes from the G.A. Davis collection, Smiths Falls. (Mr. G.A. Davis, Smiths Falls, Ont.)



Government patrol boat *Loretta,* built in 1907, and operated on the Rideau until 1958. (Mr. Edgar Whalen, Newboro.)

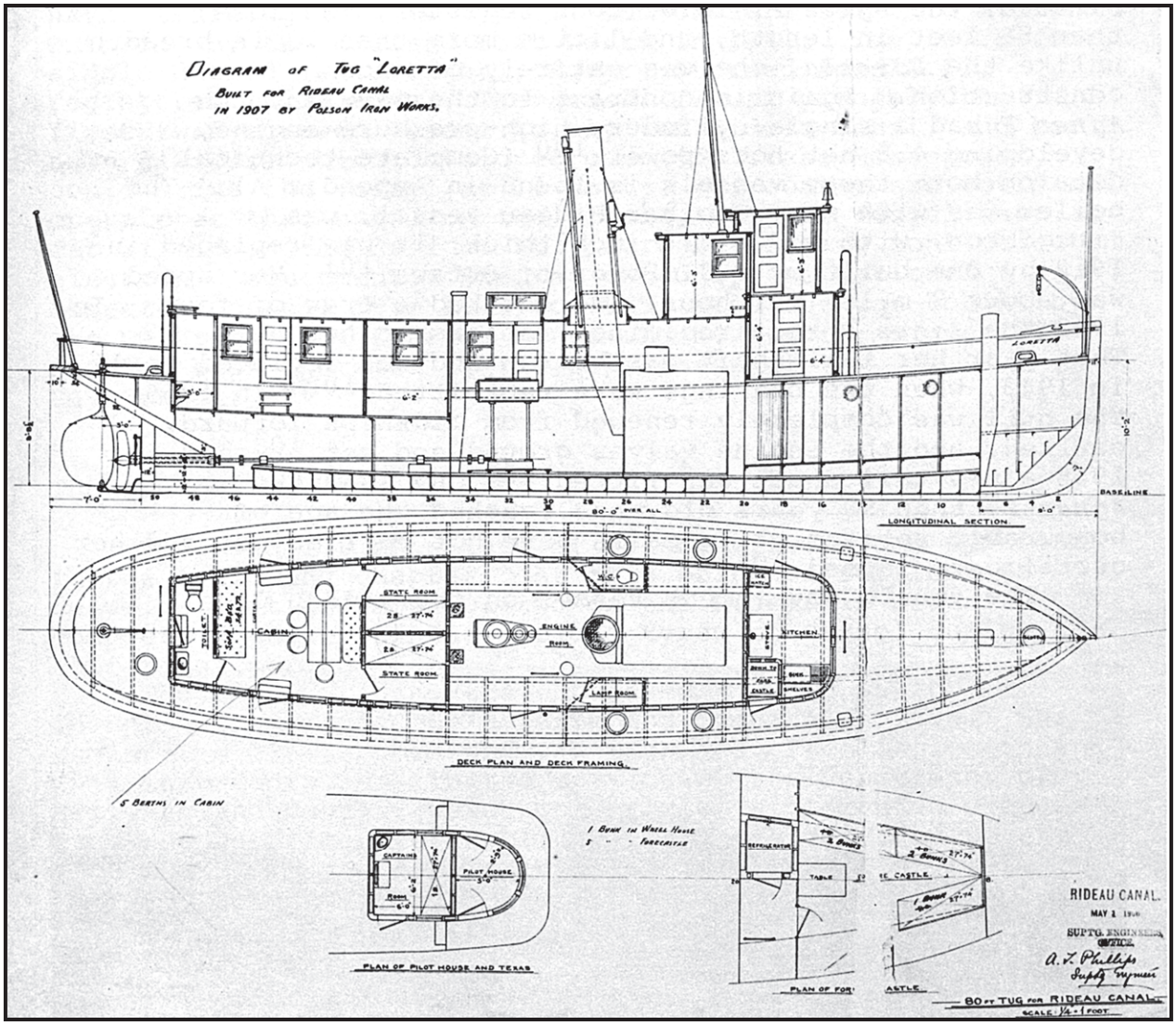


Crew of the *Loretta,* n.d. (Mr. F. Fleming, Newboro.)

Government Patrol Vessels

The first of these was the fishery patrol boat *Ella C,* 5 tons register, built in Dresden, Ontario in 1906. She was 37 feet in length and only 9 in breadth, and her engine developed barely one horsepower.[91]

The Department of Railways and Canals operated a patrol vessel, the 30.69 ton (registered) *Loretta,* which was a familiar sight for more than a half-century on the Rideau Canal. Built in 1907 at the Polson Iron Works in Toronto, the *Loretta,* single-decked (watertight) and steel-framed, was 77.25 feet in length and 17.0 in breadth. Her engine was a fore-and-aft compound, also a product of the Polson Iron Works (9-inch and 18-inch cylinders, piston stroke 14 inches), developing 13.5 net horsepower.[92] The *Loretta* went into service on the Rideau Canal in August 1907, with a crew of five: Captain Frank Nevins, engineer Victor Riel, deckhands S. Hayden and J.M. Taggart, and cook Joseph Cowan. The vessel was used on patrol duty and for tug service as required. She had a well-appointed stateroom for the use of the canal superintendent. Until 1911 her cook doubled as steward,[93] when presumably a separate functionary was appointed. So intent was the department on preserving her immaculate appearance, with her brass gleaming as brightly as that of HMS *Pinafore,* that hard anthracite only filled her bunkers.[94]



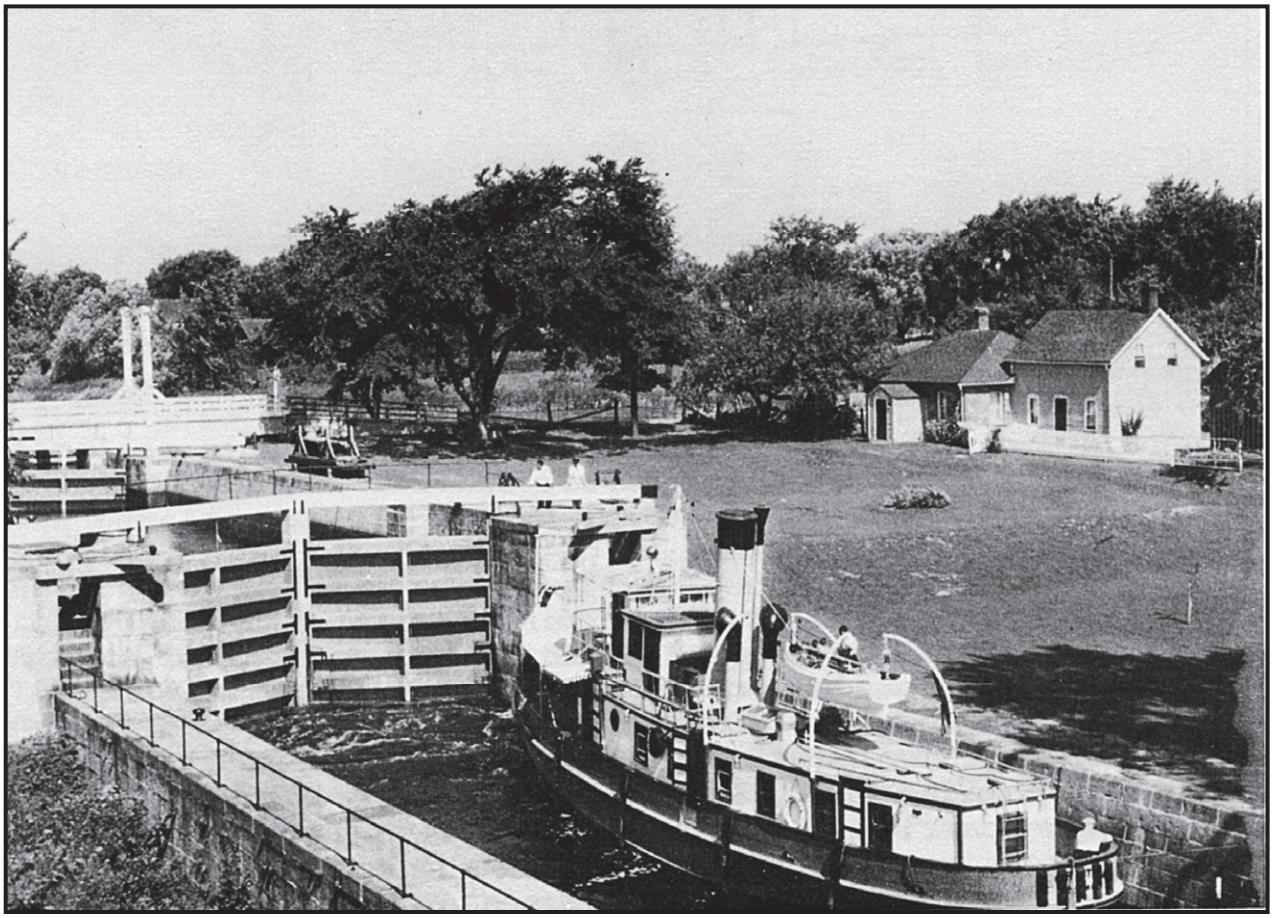
Draughtman's plans of the *Loretta,* scale 0.25 inch to 1 foot. (Public Archives Canada.)

A 1941 inspection found the *Loretta* basically sound, although it was deemed expedient to reduce the boiler pressure to 120 pounds per square inch. Hull and rudder were found in good condition.[95] In the winter of 1944-45 the original 3-bladed propeller was replaced by a cast-iron 4-bladed one, 58 inches in diameter.[96] Hull repairs were carried out in 1953[97] and five years later emergency repairs were authorized for the boiler,[98] which was replaced before the 1959 season. Her registry was closed on 16 September 1968.[99]

The other, long-familiar, Department of Railways and Canals vessel, with function similar to the *Loretta,* was the celebrated *Agnes P,* built in Buckingham, Quebec,

1913, by the W.H. Kelly Lumber Company. Smaller than the *Loretta,* the *Agnes P*, 18.02 tons register, was less than 56 feet in length, and little more than 13 in breadth; unlike the *Loretta,* she was entirely of wood construction. Again in contrast to the *Loretta,* the *Agnes P* had a single-cylinder high-pressure engine, developing 4.8 net horsepower.[100] (Complete technical data on both these vessels is found in Appendix A). The boiler, as with many another Rideau vessel, was a Fitzgibbon, with sides 3/8-inch thick; it was replaced in 1912 by one built by P.J. Power of Ottawa.[101] Her speed was about 9 miles per hour, and she had a crew of four. In 1942 the *Agnes P* required minor repairs to her hull. That year her tail shaft was broken, and was replaced early in 1943, when the bearings were rebabitted.[102] In 1955 the hull was completely renewed from midships forward, caulked, and the engine valves ground and set,[103] and in 1958 a new tail shaft was fitted.[104] By 1963 the *Agnes P,* then fifty years old, had reached the age of honourable retirement; repairs were not carried out and her certificate lapsed.[105]

The fourth government vessel on the Rideau Canal, the



Loretta at Old Slys, ca. 1940. (Rideau Canal Office, Smiths Falls.)

MV (motor vessel) *Radell II* was a converted Fairmile naval training ship (a type of sub-chaser) built in Midland, Ontario, by the Midland Boat Works in 1941. The 107.6 foot, single-decked (watertight), square-sterned *Radell II,* registered 78.34 tons. The *Radell II* was probably the first twin-screwed vessel to ply the Rideau Canal, and her twin diesels, which developed over 450 brake horsepower, could drive the vessel at 14 knots. Of course she could not operate at that speed on the Rideau, but the vessel went as far afield as the Gulf of St. Lawrence testing sophisticated electronic equipment. She was owned by the National Research Council from 1949 to 1969, when she was bought by the Department of Energy, Mines and Resources; since 1971 she has been operated by the Department of the Environment.[106]

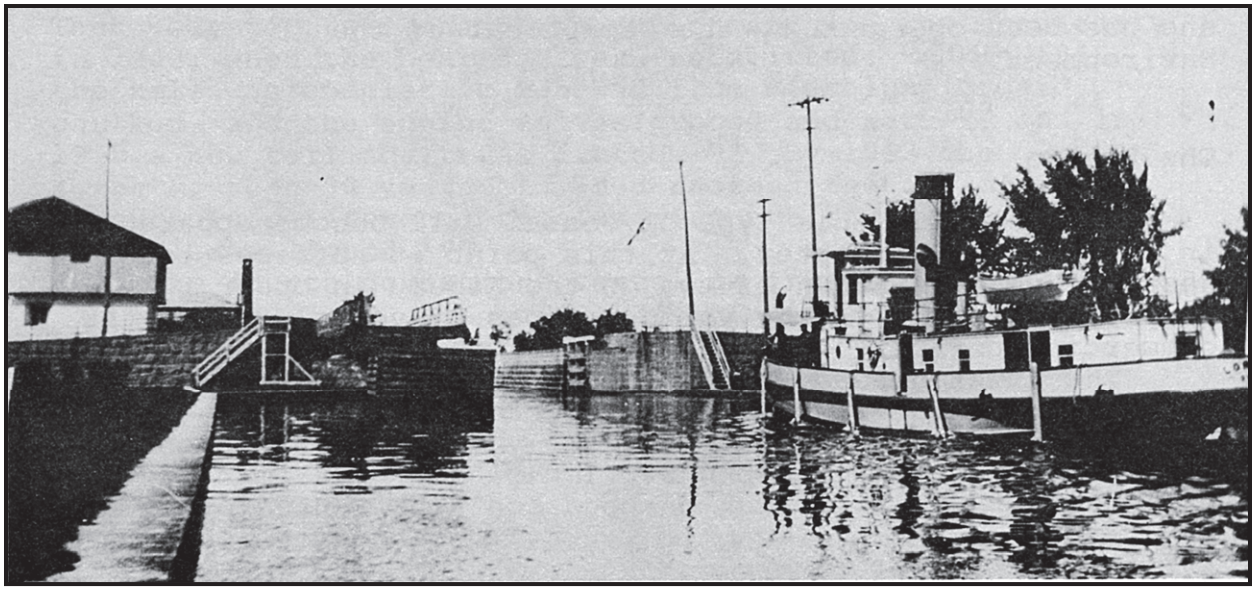
The Dredge

The need for this type of vessel will become apparent in the following chapter. At this point it suffices to describe what is known of two on the Rideau in order to complete a survey of the various types of vessel which figured during the commercial period.

The first dredge, the unpowered *Rideau,* was built in Welland, Ontario, by Beattie and Company in 1889. She registered 136.63 tons and was nearly 71 feet in length and 25.4 in breadth.[107] In the service of the Department of Railways and Canals (which on occasion also rented dredges from the Department of Public Works), her services were first cited in the department's *Annual Report* for 1891. She had a crew of five, made up of an engineer-cum-captain (a combination prohibited for other vessels by sundry Steamboat Inspection Acts and the Canada Shipping Act), a cranesman, two deckhands and a cook.[108] In 1899 tenders were invited for rebuilding the *Rideau,* that of John Burns of Ottawa being accepted for $4,475.[109] It is inferred that the *Rideau* had an engine installed about this time, for in 1901 the department let a contract for a "new" boiler to Selbey and Youlden of Kingston.[110] The *Rideau* continued in industrious if unspectacular service for a number of years, but in the spring of 1918 the chief engineer, Department Railways and Canals, gave orders to lay up the *Rideau,* and transfer her crew to the dredge *Tay.*[111]

A steam dredge, also known as the *Rideau* (and apparently originally as the *Tay)* was built in Buckingham, Quebec, by an unknown builder in 1913. She was of approximately the same size and dimensions as the first *Rideau,* 72 feet long by 24.7 wide, and registered 136.95 tons. Her frame was of wood, she had a single deck (watertight) and a round stern. She had five bedrooms. The largest of her bedrooms, or cabins, measured 10.1 feet by 7.7 feet, and all five had 7.7 foot deckheads. She had a

dining room, measuring 18 feet by 12.5, with a 7.8 foot deckhead. The crews quarters, consisting of kitchen, dining room, oil and lamp room, wash room and lavatory, plus the five bedrooms, are described as deckhouses.[112] The *Rideau* had a long career dredging out the ever accumulating mill refuse and silt in the Rideau. In June 1966 she was sold by Crown Assets to Charles William Biscope of Manotick. Such were two of the ungainly looking vessels whose unremitting labour kept the channel navigable throughout its 123.5-mile course.

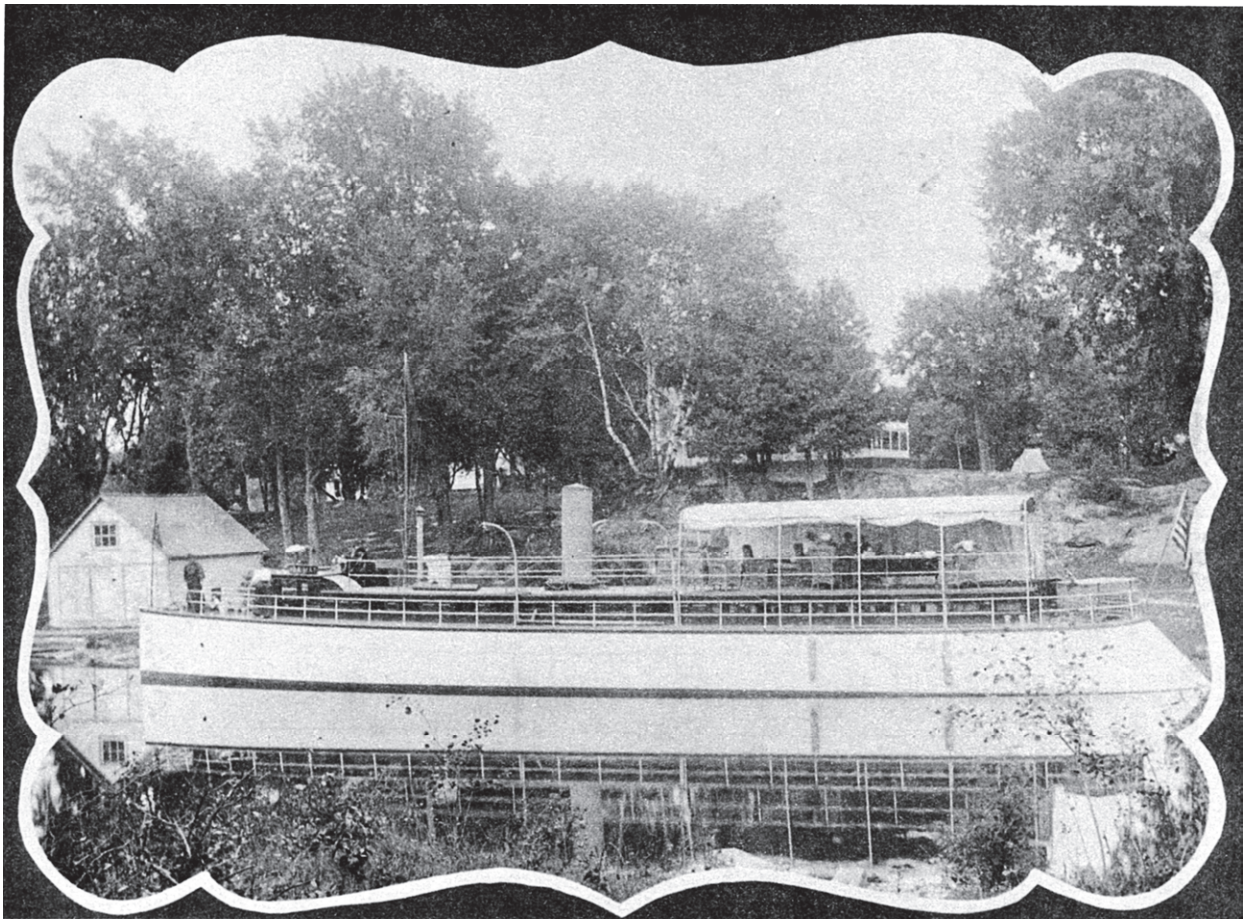


Loretta at Merrickville, n.d. (public Archives Canada.)

Pleasure Craft

It is fitting that a resumé of steamers and commercial vessels should conclude with a few words on the craft which fell heir to the Rideau Canal - the privately owned pleasure craft. The early steam yachts were the precursors of this numerous progeny which now constitute almost the sole traffic on the Rideau Canal.

The first steam yacht which in all likelihood operated on the Rideau Canal, for at least a part of the time, was the *Marquis of Lorne,* buit in 1874 in Kingston. She was owned by a Portsmouth brewer, is described as single-decked in the register, had two masts (which would have to be shipped in passing beneath the Rideau bridges), was 54.6 feet in length by 10.1 in breadth and was registered at 10.59 tons. Her vertical high-pressure engine was rated at 15 horsepower. After the death of her original



Steam yacht *Ida May,* Chaffeys, 1907. (Mr. B.A. Campbell, Elgin, Ont.)

owner in 1876, she changed hands several times, ending as the property of an Ottawa merchant, John Carruthers, in 1896.[113]

The *Bella,* 5.64 tons register, was built in Brockville 1881. She was 46 feet in length and was propelled by a 10-horsepower upright, high-pressure engine, with a 7-inch cylinder. Her first owner was a Merrickville resident, and so presumably she plied the waters of the Rideau system. In 1888 she was purchased by Arthur Starkey of Parry Sound, and her name changed from *Bella* to *Ida;* she was later broken up and the registry was closed in December 1910.[114]

Another early steam yacht was the 44-foot *Willard,* built at Rideau Ferry in 1912. Registering 18 tons, the *Willard* was driven by a one-horsepower engine. She was owned by a Mrs. Mabel A. Code of Smiths Falls.[115]

The house-boat has attained great popularity on such sheltered and scenic waters as the Rideau. One of the earliest was the 63-foot *Annandale,* built in 1903 at



Unidentified steam yacht near Smiths Falls, n.d. (Mr. Harold Nichol, Smiths Falls, Ont.)

Rockport, 75.57 register tons. The *Annandale* was unpowered. She was bought by the Rideau Houseboat Association in 1908. She was presumed to be out of existence by August 1921.[116]

By 1912 the internal combustion engine was crowding close on steam for use in small craft. The *Little Queen,* built at Cape Vincent, New York, in 1911, just short of 45 feet in length, was powered by a one-horsepower gasoline engine. She was owned by Grant Pike of Wolfe Island; it is not known whether she operated on the Rideau, but it is likely that she did.[117] She caught fire in October 1912, and was a partial loss; the cause of the mishap was a leaking petrol tank.[118] As early as the summer of 1909 there were estimated to be some 200 to 250 motor boats in the Ottawa vicinity and late in 1909 or early 1910 the Ottawa Motorboat Association was formed with 70 to 80 initial members.[119] This development was very indicative of things to come, for the canal built by Colonel By as a defence measure, and envisaged by him as a future important commercial waterway, was fated to become a summer

playground for the tourist and holiday-maker. Probably this trend was discernible in the Edwardian period and foreseen by some as early as the 1890s.

Steamboat Fuel

The earliest locomotives and steamboats burned wood in their fire-boxes, although there is the assertion in the *Encyclopedia Britannica* that the *North River of Clermont,* along with most early American steamboats, burned both wood and coal. Frank Evan's *River Boats of America* notes that on the Hudson River anthracite had replaced wood by 1840.[120] Closer to home, the *British Whig* (Kingston) in August 1834 predicted that Lake Ontario steamboats would be using coal the following season.[121] The first evidence found of the use of wood for steamer fuel on the Rideau (although it is presumed that wood had been the principal steamer fuel on the Rideau since 1832) is a November 1839 reference in the Tett Papers in which the Tett sawmills undertook to supply the forwarders, Macpherson and Crane, with 400 cords of "good steamboat wood" - maple, birch, beech and hemlock - to be stacked at convenient loading points along the line of the canal.[122] A journal dating from 1852 records a season's supply for a half-dozen of the Macpherson and Crane fleet:

Meteor	3 cord	tamarack	@	£0-6-0	£0-18-0
Charlotte	9	hemlock		0-5-6	2-9-6
Juno	21	"			5-13-6
Perth	3	hard		0-7-6	1-2-6
	63	soft		0-5-6	17-6-6
Otter	9	"			
Beaver	15	tamarack		0-6-0	4-10-0
	27	soft		0-5-6	7-8-6[123]

A similar order placed by Macpherson and Crane dates from the following year, in which both hard and soft wood is ordered for four steamers in more or less similar proportions.[124]

Wood remained the preferred fuel for as long as it was readily available. Farmers and settlers made extra money by cutting and stacking wood for steamers. However, once the region was partially cleared, and wood had to be hauled a greater distance, then its wasteful properties and increased cost made it much less attractive. In the mid-1860s much of the forest cover, including magnificent virgin stands of pine, originally so dense as to be nearly impenetrable, had been harvested and wood had to be hauled from farther afield.[125] It was at that point that steamers began converting to coal, although it is impossible to precisely date the transition. Wood could only retain its place

while it was readily available, because its use demanded much more frequent fueling stops; and since it took up much more space in a steamer than coal, a vessel's cargo or passenger-carrying capacity, and hence the return to the owner or forwarder, was correspondingly reduced. According to D.D. Calvin the old wood burners consumed from 25 per cent to as high as 56 per cent of a steamer's revenue in running costs, compared with about 15 per cent for a modern steamer. The ashes pulled from the grates of the wood burners were left as a perquisite to the firemen, who sold the ashes to potash manufacturers,[126] although it is not known whether this occurred on the Rideau. The conversion to coal on the railways took place in the 1870s, and it may be assumed that the same held true for steamers. By the spring of 1882 coal forwarders petitioned the Department of Railways and Canals for the repair of a wharf on the west side of the canal basin; a notation in the file, under the signature of F.A. Wise, superintending engineer, observes that "it appears the Coal Trade has left the Rail and is coming by Water again."[127] With the completion of the Canadian Pacific's Montreal-Toronto line via Smiths Falls in 1885, the coal trade on the Rideau Canal had assumed considerable proportions. There can be no doubt that by that time, and probably for a considerable period before, Rideau steamers were carrying coal in their bunkers. Once wood no longer had the advantage of economy there was no further reason for its use, and it was quickly superseded. Moreover, with the decline of the timber trade, shipowners would be less likely to have interests in lumbering, removing a lingering incentive to stay with wood-fired boilers.

Registration and Inspection

Before leaving the Rideau steamer, the closely related topics of registration and safety regulation must be considered. Little of what follows pertains specifically or exclusively to the Rideau, but to inland waters in general, and minor inland waters in particular.[128] The information is derived from successive legislative acts and amendments, a digest of which will be attempted as part of the history of commercial navigation on the Rideau.

Registration of Vessels

In the early days of the last century a number of vessels were not registered at all, and of those that were, some on Canadian inland waters were registered under the Imperial Merchant Shipping Act and others under the terms of legislation promulgated by the Province of Lower Canada.

Unfortunately many port registers have been lost or destroyed by fire. For all vessels registered under imperial authority registers were kept in London, and duplicates issued for all ports on tidewater or the lower St. Lawrence, but duplicate records were not kept for ports located above Montreal and on the Great Lakes. Many shipping registers for the region encompassing the Rideau have been lost; hence for the period prior to 1844 documentation is scanty.[129] In that year, 1844, the Province of Canada passed the first legislation (8 Vic., cap. 5) establishing a uniform procedure for the registration of vessels operating on inland waters which were not registered under the act of the Imperial Parliament. This act, which became effective 1 July 1845, covered all vessels over 15 tons, which had to be registered by the owners with a collector of customs, who in turn recorded the information in registry books and granted certificates to the owners. The ownership of vessels was divided into 64 shares or parts, but not more than 32 persons could be part-owners of any vessel at any time. Changes of master, ownership and/or name, and all mortgage transactions were to be duly recorded for each vessel in the shipping register. A penalty of £100 sterling was imposed for false declarations.[130] The legislation also provided for the measurement of all vessels by qualified inspectors, according to formulae approved by the imperial government. This legislation introduced a standard of uniformity unknown hitherto in provincial waters.

Further legislation (40 Vic., cap. 19) passed by the federal Parliament in 1877 decreed that every ship registered in Canada before 27 March 1874, and admeasured by rules other than those prescribed by the Merchant Shipping Act of 1854 (imperial) must be remeasured and tonnage recorded *de novo*.[131] From that point registration was standardized, making for safer steamboat operation.

Steamboat Inspection

At the outset there were no regulations regarding boiler pressures, fire hazards or provision of life-saving gear. Every entrepreneur or steamboat captain was his own master regarding the fitting out and operation of his vessel.

The boiler explosion was the early terror of the waterways: the Hudson safety barge, mentioned in an earlier context, is a case in point. This dramatic sort of disaster, often entailing considerable loss of life and appalling injury, was all too frequent in American waters, with their proliferating steamboats and intense competition, but accidents were not unknown in the Canadas. A boiler explosion aboard the steamer *Dart* took place in the Rideau Canal at Miles Lock, between Burritt's Rapids and Merrickville, in May 1844. A lad 15 years of age was

scalded to death, and two crewmen injured. The coroner exonerated the captain and engineer of blame, but observed that the boat had been raced the day previous, and that the cause of the explosion was a cracked flue.[132]

With the high incidence of boiler explosions in American waters it is perhaps not surprising that the first safety legislation on the continent was introduced in the United States, with Louisiana's enactment of boiler safety regulations in 1834. Inspections were made compulsory every three months, for which certificates were issued by the state engineer, port of New Orleans, specifying maximum boiler pressure for each vessel inspected. Penalties for infractions were severe; a steamboat captain could be fined $500 to $3,000, and be imprisoned for terms ranging from three months to three years, on conviction of having exceeded steam pressures laid down for his particular vessel, or of overloading or racing.[133] In 1838 the first federal law went on the statute books, but was ineffective. Only in 1852 were more stringent and effective regulations enforced for passenger vessels.[134]

The first legislation passed in Upper Canada was in 1837 (7 Will. IV, cap. 22), which laid down a number of navigational rules and procedures in the interests of safer steamboat operation. From one hour after sunset to one before sunrise all craft navigating the inland waters of the province were to carry one or more lights in the bow. The right-hand rule was established, with all vessels taking the starboard side of any channel. Vessels riding at anchor at night were to show a light.[135] In 1838 guards and rails about machinery for the protection of passengers and crew were made mandatory.[136] By the year 1851 a fairly comprehensive piece of legislation was on the statute books of Upper Canada, which laid down a number of safety regulations, enforced by fines for their infringement. Inspectors of hulls and machinery were appointed, armed with broad authority in the performance of their duties; it goes without saying that all this regulation was unpopular, if not repugnant, to many shipowners. All vessels had to be fitted with a steam gauge. Hulls had to undergo inspection annually, boilers and engines every six months; without the inspector's certificate a vessel could not leave the wharf. Evasion of inspections incurred a £100 fine. Penalties of £50 were imposed for exceeding the lawful steam pressure. Each steamer had to carry two lifeboats with a capacity of 20 persons each, and vessels of over 200 tons had to have three. Each steamer had to be equipped with a fire-engine and hose, under penalty of £50. Finally owners of vessels were liable for wilful default of their captains or masters.[137] Legislation enacted the same year further provided for lifebelts or floats readily available for all passengers, and that both passenger and freight boats must carry at least one lifeboat to carry 50 persons, with lifelines attached to the gunwales and equipped with oars. Each steamer had to be equipped with at least 25

fire-buckets and fire axes. Finally the passenger carrying capacity of each steamer was stipulated, based on either tonnage or dimensions.[138] On paper these regulations seem to have covered most contingencies on inland waters that would readily occur to the average boat.

Reports from steamboat inspectors, however, 1856-57, indicate clearly that the legislation (14-15 Vic., cap. 126) was only partially effective. Captains sometimes refused to co-operate, some shipowners denied the inspectors access to their craft, and others defaulted on their fines.[139] Further legislation (20 Vic., cap. 34) in 1857 provided penalties for obstruction on the part of captain and crew (£10 for false information) and the inspectors were empowered to question the crew. Inspection fees were made payable in advance to the customs collector, subject to forfeiture of the vessel for non-payment. Fire regulations were tightened with prohibition of the stowage of combustible materials within 18 inches of boilers or steam pipes unless adequately shielded.[140] Legislation, passed in 1859, established the Board of Steamboat Inspection, composed of the steamboat inspectors, to convene annually in Toronto and Quebec. This body framed regulations governing hulls, boilers and engines. Henceforth certificates of inspection were to be posted prominently in each steamer for the perusal of passengers and crew. Fire regulations were revised. Rideau Canal steamers alone were excused from the provision making life-boats mandatory at this time, although later they were required to meet this regulation. Engineers were to be licensed by the Board of Inspectors, and no unlicensed persons were to serve in the engine-room.[141] Further navigational safeguards concerning lights and sounding of whistles when under way were laid out. The Steamboat Inspection Act of 1873 extended and revised the provisions of preceding legislation, a process which continued throughout the period of this study. Rates for steamboat inspection were set at $5.00 plus 10 cents per ton for vessels under 100 tons registered, and $8.00 plus 10 cents per ton for those over 100 tons.[142]

The Steamboat Inspection Act of 1882 (45 Vic., cap. 35) consolidated the provisions of previous statutes and was the most precisely defined and comprehensive legislation to date. Maximum boiler pressures were defined for both iron and steel boilers. Regulations as to safety valves were set out, and the steam gauge had to be prominently displayed; also, each boiler had to be fitted with a water-gauge. Steamers of less than 50 tons register were required to carry one lifeboat, those between 50 and 100 tons two, and each lifeboat had to be equipped with four oars, be built with a keel of 17 feet minimum length, and carry 12 passengers plus the crew. Canal steamers were exempted from the lifeboat provisions, with the noteable exception of the Rideau Canal, since the route across Rideau Lake was more than one mile wide. Fire regulations were further

elaborated.[143] The same legislation carried manifold regulations for the licensing of engineers, subject to the Board of Inspection. Further amendments and consolidation of steamboat acts followed, but for purposes of this study they are not dealt with in detail. Licensing of masters, mates and engineers became more stringent, a trend common to the operation of all mechanical conveyances. The regulations were more lenient in definition for sheltered waters like the Rideau than for rivers like the Ottawa and St. Lawrence, or for the Great Lakes. In this connection it is interesting to note that a Steamboat Inspection Act amendment (51 Vic., cap. 26) passed in 1888 defined "minor inland waters" as all those including the St. Lawrence "as far seaward as a line drawn from Father Point to Point Orient, but excluding lakes Erie, Ontario, Huron, Georgian Bay and Winnipeg."[144] Captains, mates and engineers licensed for minor inland waters were required to sit for another examination and qualify for another certificate to serve on the Great Lakes or lower St. Lawrence. Times had changed a great deal in the 50 years since the opening of the Rideau Canal, when a captain or engineer of a steamer on these waters needed only the confidence of the vessel's owner to secure the job. A circular issued by the Department of Marine and Fisheries as late as 1898 indicates the difficulty of full enforcement of the licensing regulations and mentioned that violations were to incur the full rigour of the law.[145]

Pleasure craft on inland waters also came under cognizance of the inspection regulations, but never to the degree of commercial vessels. In fact, an amendment to the Steamboat Inspection Act of 1893 exempted steam yachts used exclusively for pleasure from the provisions of the Act, as it did fishing boats, freight boats under 150 tons gross, and steam dredges. Likewise gas-powered or motor boats at this date lay outside the provisions of the Act.[146] At a later date pleasure craft were subject to limited regulations in the interests of safety.

The Canada Shipping Act of 1906 was the definitive legislation governing all ships in Canadian waters as well as those under Canadian registration on the high seas. There have been divers amendments and revisions since that time, but basically this act, revised for changing times and circumstances, remains the authority in all matters relating to steam navigation in this country.[147]

In 1910 freight boats under 50 tons gross could dispense with a lifeboat providing they carried sufficient life rafts for the crew. The same applied to tugs engaged solely in harbour or canal work.[148] Moreover wireless installation or radio was not required on boats on minor inland waters, such as the Rideau Canal.[149]

The initial date of boiler insurance is not known. The Canadian Steam-Users Insurance Association, with head office in Toronto, and capitalization of $500,000, was incorporated in 1875. Insurance was provided against loss or damage due

to boiler explosion in all types of steam installations, including steamboats.[150]

Steamer Crews on Inland Waters

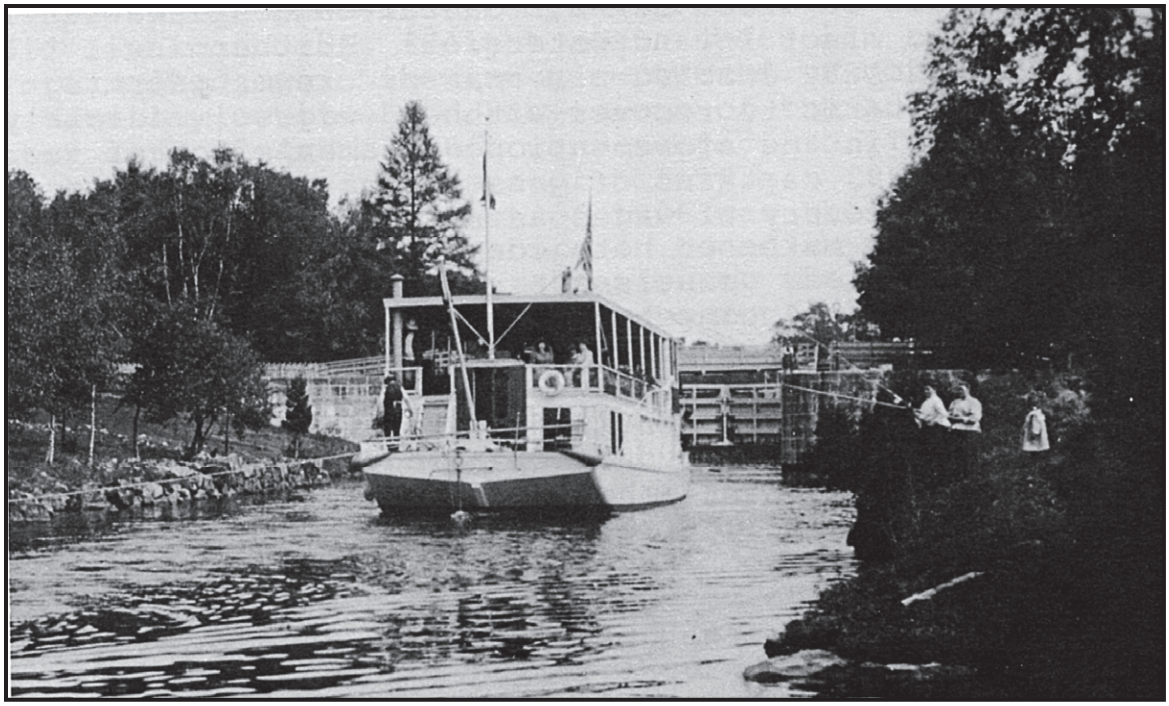
A word must be said concerning conditions under which the men who manned these boats as well as other boats on the inland waterways of this country served. The first legislation found bearing on the subject was an extension of the Seamen's Act of 1873 to inland waters in 1875 (38 Vic., cap. 29). By this legislation a formal agreement (known as "articles") was to be signed between the master or captain of a vessel (all steamships of over 20 tons registered operating above Quebec; excluding, however, barges and scows) and each member of his crew, specifying the nature and duration of the run, time to be on board and begin work, the capacity in which the individual was to serve, the wages to be paid, regulations pertaining to conduct and the prescribed penalties for infractions. A seaman or crew member discharged without due cause before departure was entitled to compensation not exceeding a month's wages. A man forfeited his wages during time that he refused to work, or was disabled through his own fault or neglect. For wilful disobedience a man lost two days pay, and for assaulting a master or mate he was liable to six to 12 weeks imprisonment with hard labour; a similar penalty pertained to deliberate damage to the vessel or cargo, in addition to loss of wages covering the damage. The other provisions of the Act pertain to Great Lakes, coastal or deep sea service, rather than to minor inland waters.[151] Further legislation in 1882 enabled a seaman or crewman serving anywhere in Ontario to recover withheld wages immediately, under a clause in the afore-mentioned Seamen's Act of 1873.[152] In 1893 captains of vessels secured the same remedies for recovery of wages as seamen.[153]

Masters and mates on both coastal and inland waters serving aboard steam vessels after 1 January 1884 had to hold certificates of competency issued by the Minister of Marine. The department could suspend or cancel an officer's certificate for due cause.[154] Legislation licensing engineers and clarifying their function followed. All such matters, including steamboat inspection, navigation, and everything to do with steamboat operation, was comprised within the comprehensive provisions of the Canada Shipping Act of 1906.

Shipyards and Engine Works

Based on the partial listing (Appendix A) of vessels known to have been in the Rideau service at one time or other, the distribution of the shipyards and engine works which served the region can be considered.

The Kingston area's shipyards, including those in Portsmouth, Battersea, Wolf and Garden islands, supplied a total of 52 vessels for the Rideau service, 39 of which were built in Kingston itself. This is not surprising, considering that Kingston, at the southern entrance to the Rideau, was one of the principal shipbuilding centres on the Lower Lakes. The heaviest concentration of Rideau shipping, both steamers and barges, was a product of this region. A number of shipyards and builders may be mentioned. At mid-century, for example, Macpherson and Crane built a number of vessels in Kingston, as well as at Prescott and Montreal, used on the Rideau, Ottawa and St. Lawrence. Robert Davis of Kingston in the 1880s received orders from a number of Rideau forwarders, and from his yard came the little 11-ton *Antelope* (1889), one of the last passenger and supply steamers in Rideau service. Matthew R. Davis of Kingston built the well-known *James Swift* (re-named *Rideau King*) in 1893, and in 1900 the *Rideau Queen,* which figured so largely in the luxury passenger and excursion service. The Davis Dry Dock Company, a shipyard active in the latter 19th and early 20th centuries in Kingston, supplied a number of Rideau vessels. Other Kingston shipbuilders could be cited - W.B. & S. Anglin,



Houseboat at Chaffeys Lock, 1907. (Mr. B.A. Campbell, Elgin, Ont.)

lumber merchants, Martin Clayton, Cornelius A. Jones, R. Davis and Sons (*Victoria* 1900), et al., and last but not least, Robert Drummond, one of By's principal contractors, and builder of the *Pumper,* active in the construction period and first vessel to pass through the canal from Kingston to Bytown on Colonel By's inaugural passage. Robert Davis operated a shipyard on Wolf Island and at Battersea, as well as in Kingston. From the Portsmouth yard of P.R. & B. Baupre came the crack steamer *Cataraqui* in 1847, deemed without a peer in her prime.

Montreal shipyards, particularly Macpherson and Crane, produced a considerable number of vessels destined for Rideau service, particularly in the early period. Macpherson and Crane's Montreal yard launched the *Bytown* in 1842, the *Otter* in 1840, the *Western* in 1849 and the *Meteor* in 1841. The well-advertised and popular *Prince Albert* was the product of an unspecified Montreal shipyard in 1843. William Webster built the luxury passenger boat *Ella Ross* in 1873. Among other Montreal shipwrights whose vessels found their way into Rideau service may be mentioned W. & G.H. Tate (*Frolic* 1890), P.G. Waters and Augustin Cantin. Montreal shipyards produced, in all, 17 vessels among those identified by the writer as Rideau steamers or barges.

Ottawa and Hull, as might be expected, launched a fair number of vessels for Rideau service, although apparently fewer than Kingston and environs. In all, Ottawa-Hull shipyards are credited with 15 vessels from among those identified with the Rideau service. From the ways of J. and R. Weir (who may have been associated with a Montreal engine works, J. & O. Weir) came the *Ottawan* in 1904, the last steamer to operate a scheduled passenger service on the Rideau. The *Welshman,* mentioned earlier in the text, came from the Ottawa shipyard of Napoleon Tessier in 1900. P.G. Waters, the Montreal shipbuilder, also had shipyards in both Ottawa and Hull. Finally may be mentioned Alexander Miller in Hull, and L.T. Easton and W.A. Baldwin in Ottawa.

In Brockville four shipbuilders (Chaffey Brothers, John Harris, Harris Williams and George Hutton) built four steamers identified with the Rideau between the years 1864 and 1890; in addition, three other vessels were the product of undetermined Brockville shipyards.

Turning now to what may be termed the Rideau corridor the region along the waterway between Kingston and Ottawa, a number of vessels were built in local shipyards, most prolific of which were located at Bedford Mills.[155] Here John and George Chaffey turned out a number of barges for use in their lumber business, and tugs with which to haul them, one of which was the *Elswood* built in 1865. Besides the Chaffeys at Bedford Mills, John Harris, David John Ainslie (who built the equally well-known tug

Edmond in 1879), Joseph Mercier and William A. Gorrell operated shipyards in the same place, from which 14 of the identified vessels on the Rideau originated.

William O'Mara was active in Smiths Falls; from his yard came the *Olive* in 1875. Adam Foster, mentioned later in the text, built his supply and freight steamer *Kenirving* in Smiths Falls (1900). Five of the identified Rideau vessels originated here.

Shipyards on Opinicon Lake were also operating, including one owned by Alexander Miller, presumably the Hull shipbuilder. Chester Stewart and Fraser & George also built vessels on Opinicon Lake.

The scenically situated town of Westport on Rideau Lake was also the scene of shipbuilding, as well as of sawmills. Chaffey Brothers had a yard here, as well as in Bedford Mills, a product of which was the steamer *Westport* in 1903. The only other shipyard known to be located in Westport was that of William Robinson, who built the steamer *Aberdeen,* completed in 1894.

In addition to these centres, there were scattered shipbuilding enterprises elsewhere in the Rideau region. For example, at Brewer's Mills a yard was operated by J. William Ainslie, perhaps related to David John Ainslie of Bedford Mills. On Dog Lake in Storrington Township Samuel Knapp built two scows in regional service, in 1865 and 1869 respectively, and George Dickson the steamer *Adventure* in 1873. Joseph Ward Pierce built the steamer *Khartoum* in 1885 at a location in Ernestown township. In Kemptville Thomas Adams and S.S. Phillips produced the steamer *May Flower* in 1877 and the *Witch of the Waves* in 1875. A barge was built by John Doran in Newboro in 1870. Hugh Harold built the *Wenonah* in 1899 at Oliver's Ferry. Robert Robinson of Kingston built the steamer *John Haggart* in 1887 in Perth, and in Portland Wesley Brooker launched at least one barge that we know of (the *Mary Louise,* 1902) that saw service on the Rideau. Finally a boat builder by the name of James Jarrett apparently was in business both at Seeley's Bay and at Washburn, between Brewer's Mills and Joyceville in the early 1890s.

Including the foregoing products of Rideau shipyards derived from Appendix A, V.A. George cites a total of 12 steamers and 74 barges built in the 50-year period 1840-90 at nine locations along the line of the canal - *viz.*, Brewer's Mills, Cranberry Lake, Dog Lake, Battersea, Storrington, Seeley's Bay, Sand Lake, Opinicon Lake and Bedford Mills. Of George's 12 steamers built on the Rideau, eight came from Bedford Mills: Bedford Mills and Dog Lake between them produced 46 of the 74 barges.[156] Rideau shipyards specialized in barges and scows to serve the lumbering trade, with only the Bedford Mills yards of the Tetts and Chaffeys producing an appreciable number of steamboats.

A few Rideau boats originated from farther afield. The celebrated patrol boat *Loretta* came from the yards of the Polson Iron Works in Toronto, and the equally well-known *Agnes P* was built in Buckingham, P.Q. Both Thorold and Welland in the Niagara peninsula produced a dredge for the Rideau, as did a yard in Buckingham. A few Rideau steamers were the products of American shipyards at scattered locations: Alexandria Bay, N.Y., Boston (*Navarch* 1912, a government craft), Buffalo, Clayton, N.Y. (where Robert Clayton Davis in 1874 completed the freighter *D C West*), Detroit (one vessel), Pamrapo, N.J. (two vessels), and the Lake Ontario port of Sackett's Harbour. The Department of Public Works steamer, the *Ella C,* was the product of a Dresden, Ontario shipyard in 1906, and the *Ida* hailed from a Deseronto yard on Lake Ontario in 1884. The most unusual craft of all to ply the Rideau, the *Radell II,* operated from 1949 by the National Research Council, came from the ways of the Midland Boat Works in 1941.

Engines installed in Rideau vessels tended to originate farther afield, although there were engine works operating in both Kingston and Ottawa used by vessels in the Rideau trade. In Kingston there were the firms of Davis Dry Dock Company, Davidson Doran, D. McEwen & Sons, and the Canadian Locomotive and Engine Company. In Ottawa the firms of Alexander Martin, John Dewey and the Vulcan Iron Works supplied engines in the 1880s and 1890s for Rideau steamers.

The Montreal engine works of J. & O. Weir installed engines in several of the Rideau steamers 1889-1904, including the *Ottawan*. E.E. Gilbert of Montreal installed an engine in at least one Rideau steamer.

Black Brothers, with works in both Belleville and Brockville, built a number of engines for the Rideau trade in the 1880s. In Toronto H.W. Petrie, Dority and the Polson Iron Works (the latter engined as well as built the *Loretta*) were called on by builders of Rideau steamers. The Hamilton firms of Kelley and Beckett and Frank A. Gardner supplied a few engines for installation in boats destined for the Rideau service.

American-built engines were not infrequently used, engine works ranging from Buffalo to Ogdensburg and Lockport, N.Y. The Buffalo firms of Hamilton Brothers, Night Sissman and Sutton Brothers may be cited; in Schenectady Clute Brothers, in Rochester the Shipman Coal Oil Engine Company, in Oswego the firm of John King and Company, in Ogdensburg John Glass, and in Lockport the Pound Manufacturing Company. Occasionally engines were imported from the United Kingdom, as was the case with the steam yacht *Marquis of Lorne* built in 1874, whose 15-horsepower single-expansion engine had been built by Charles McBride of Port Glasgow, Scotland.

On the basis of the scanty information gleaned from shipping registers for steamers known to have been in the Rideau service, generalizations on the products of these various engine works are not possible, and will not be

attempted. The earliest instance of the installation of a compound (or two cylinder) engine in a Rideau steamer was the work of Carrier and Taine, a Levis firm in 1887 for the *Meteor.* Two years later Davidson Doran of Kingston built a compound engine for the steamer *Antelope,* and in 1890 Alexander Martin of Ottawa followed suit for the *Allie.* D. McEwen and Son of Kingston built a compound engine for the popular and well known passenger and excursion steamer *James Swift* (later the *Rideau King*) in 1893, and J. & O. Weir of Montreal got the contract for the installation of a compound engine in the *Ottawan* in 1904, the largest and last passenger boat on the Rideau route.

Few triple-expansion, or 3-cylinder, engines found service on the Rideau, but the first to our knowledge was the product of the Canadian Locomotive and Engine Company of Kingston, rated at 34 horsepower and built in 1888 for the *Kathleen.* The Davis Dry Dock Company, Kingston, produced a triple-expansion engine for the *Wapiti* in 1899, for the sumptuous and palatial *Rideau Queen* in 1900, and finally for the *Aletha* in 1901.

The Rideau Steamer

The Rideau steamer, with a few exceptions late in the period, was wooden-hulled, roughly 60 to 105 or so feet in length, 15 to a little over 20 feet in the beam and single-stacked. No evidence of the use of hog chains has been found. Almost all of these vessels were powered exclusively by steam, that is to say they did not carry auxiliary sail. Only seven exceptions have been noted; of these four were sloop-rigged, two were schooner-rigged and one was barge-rigged. The vast majority had one watertight deck, ten had two, one had three and three were classed as "open ship". Round sterns appear to have predominated although a significant number had square sterns. Two vessels had sharp sterns, two had spoon, one had oval and one had a fan-shaped stern. All were carvel built and of those vessels for which the framing material is known, 67 had wood frames, three had steel, one had iron and one was composite. Little is known about the design of vessel heads; six are described in the shipping registers as having sharp heads, three as plain, two as blunt and one each as eagle and square.

In the early years low-powered, single cylinder, low-pressure engines drove side paddle-wheels; stern-wheelers were apparently not used at all. By the 1850s paddle-wheels were being displaced by the screw propeller, probably because the wash from a propeller was less damaging to canal banks and possibly to increase cargo capacity.

Compound engines began to make their appearance in the 1880s. The barge, at first unpowered, then self-propelled, was the principal freight carrier to the 1880s, when it was largely displaced by the freight boat. The early dual-purpose steamer gave place to steamers specifically designed either for freight or passenger service, although small dual-purpose steamers persisted to the end of the period of commercial navigation. The passenger-carrying capacity of steamers tended to increase, although the size of the vessels was limited by that of the locks; passenger accommodation made great strides in comfort, and finally luxury, by the 1880s. Compared with the pace set on more competitive and busier routes, steamboat development on the quiet backwater of the Rideau is modest enough, but it is nonetheless discernible that over the century the waterway served, at least in part, the function that had been envisaged by its builders.

THE RIDEAU CANAL: COMMERCIAL WATERWAY

Before describing the forwarding trade which flourished for about 90 years, then languished for another 20 seasons before virtually disappearing, the Rideau waterway merits consideration in order to appreciate the nature of the carrying trade in its setting. The waterway will be treated under three general heads - navigation and operation of the canal, the regulations governing its use, and the facilities provided the users.

In a sense, of course, the name Rideau Canal is a misnomer; over the course of the 126-mile waterway from Kingston to Ottawa, there are only 16.5 miles of actual canal or artificial waterway, and 446.25 feet of lockage [lift]. The 47 limestone and sandstone locks, 24 dams and divers waste weirs,[1] beautifully designed and soundly wrought engineering works which have become a part of the nation's historical heritage, remained an imperial concern under the Ordnance Department until 1856. The Canadian Board of Works assumed responsibility for the canal in that year, continuing through Confederation as the reconstituted federal Department of Public Works until 1879, when a newly formed department, Railways and Canals, took charge of transportation in all its aspects throughout the country. The Department of Railways and Canals remained the responsible authority throughout the period of commercial navigation on the Rideau. By the time Railways and Canals merged into the new Department of Transport in 1936 the Rideau Canal had all but ceased to be a commercial waterway, but was nonetheless maintained in use for water control and recreational purposes. The upkeep and operation of the canal throughout the last century laboured under two well-nigh perennial problems - low water and obstruction, generally in the form of mill refuse. An account of the various measures taken from time to time to cope with these conditions, frequently in response to the complaints of forwarders, follows.

A Navigable Waterway

On Colonel By's recall to England, Captain Daniel Bolton, Royal Engineers, assumed the superintendency of the recently opened canal. Many of the lockmasters were

discharged veterans of the Royal Sappers and Miners, who for a number of years in their new capacity continued to wear uniform. During the first season Donald Bethune, a Great Lakes forwarder, reported to the Select Committee on Inland Water Communications that the only obstructions on the Rideau were floating islands in Cranberry Marsh, which he declared, would soon be cleared. Bethune reckoned that a steamer should make the passage of the Rideau, Bytown to Kingston, in about 22 hours, and take about 36 hours for the run Kingston to Lachine via Bytown. On the grounds of economy Bethune recommended retention of the Rideau as the main channel of communication rather than the improvement of the St. Lawrence, since the imperial government only required payment of the interest on the capital invested in canals in the province.[2] This advice was not taken, and fifteen years later the St. Lawrence canals were to supplant the Rideau in large measure.

The account of an early observer, Edward John Barker, whose detailed description of the Rideau waterway was published by the *Kingston Whig* in 1834, lends credence to the report that for a time Kingston Mills served as a transshipment point owing to a large rock obstructing the channel about a mile south of that point.

> . . . About a mile below the locks, the channel is excavated for about 100 yards through soft mud, and piled on both sides to prevent filling in. This was done last winter on account of a large rock lying in the centre of the proper bed of the channel, upon which is seldom more than three feet of water. It was this obstacle which last summer retarded the progress of the larger steamboats, and compelled them to stop at Kingston Mills until the present channel was dug. . .[3]

Barker also described the western end of Mud Lake (now Newboro Lake) and Upper Rideau Lake as a difficult passage by reason of the numerous stumps left sticking two to three feet above the surface. The channel across Sand Lake was marked by large barrels painted white and mounted on poles.[4] The first mishap dates from October 1835, when the *Thomas McKay,* on her last run of the season, hit a snag on leaving the Merrickville locks; she quickly sank in five feet of water, but not before her cargo had been unloaded.[5] The same paper which reported the foundering of the *Thomas McKay* pronounced the waterway in good condition for the 1835 season. Deadheads, or submerged and rotted trees, were the principal hazards and accounted for the sinking of the *Thomas McKay* (she was raised shortly thereafter and returned to service).[6]

The by-wash at Long Island gave way 14-15 June 1836, closing the canal to Burritt's Rapids,[7] but within two months service had been restored.[8] The first criticism of the canal management, appearing in the pages of the

British Whig of Kingston, concerned the alleged leaking of the turning basin at Smiths Falls and the condition of a dam at Merrickville. The editor recommended that the management of the canal be removed from the hands of the military. Further, the editor asserted that the Long Island contractor had warned By of the danger of spring freshets, advice which had been ignored, to the considerable cost of the privy purse.[9]

Although the canal works were to suffer the periodic effects of spring runoff, it was not high but low water which was to prove the continuous problem. Basically the cause of this was the clearing to greater or lesser degree, according to the suitability of the land for agriculture or the value of the timber for the market, of the region of its natural forest cover. Although the reaches of the canal, roughly between Brewer's Mills and Smiths Falls, are largely forested at present, the broad flats from there to Bytown were cleared at an early date and put under cultivation. The denuding of the forest cover along the Rideau, as elsewhere, produced rapid runoff and low water in the dry months of mid-summer. This factor combined with pollution of the channel by mill refuse kept the authorities' hands full regardless of who was responsible for the canal. As early as 1846 Benjamin Tett, general merchant and forwarder of Newboro, wrote to a Montreal merchant, complaining of very low water; indeed many timber cutters had had to leave their logs in the bush for want of sufficient water to float them out in the small streams.[10]

Refuse from sawmills, such as slabs, bark and sawdust, dumped into the canal aggravated the recurrent problem of low water. The first legislation banning the practice, except for sawdust, seems to have been passed in 1844, and amended in 1847. The legislation was not confined to the Rideau but applicable throughout the province.[11] This act was inneffective, and repeated legislation was passed at intervals to cope with the trouble. In 1855 a miller, Angus Cameron, was ordered to remove the sawdust he had dumped in the channel which was interfering with navigation and held liable for damages. That spring the lockmaster at Kingston Mills reported accumulations of sawdust to the degree that "when there is 7'5" on the lower sill it is all sawdust."[12] Although legislation passed in 1857 for the protection of provincial canals prescribed fines ranging from £0-10-0 to £50-0-0 for this offence, the lockmaster at Old Slys in 1865 complained that the local mill was dumping so much refuse into the canal that navigation was likely to be impeded.[13] Three years later there was no apparent improvement, with the lower lock at Ottawa two feet deep in sawdust. Each passage of a steamer stirred up this refuse and took half a dozen men labouring several hours to clear it. The mile stretch between Old Slys and Smiths Falls was barely navigable, with boats proceeding dead slow so as not to stir up the mess on the bottom, whereupon the department wrote to seven mill owners demanding an explanation pending

legal proceedings against them.[14] In 1873 fines of not less than $20 were prescribed for the first offense, and not less than $50 for subsequent infractions. No sawdust whatsoever was to be thrown into navigable streams anywhere in the province,[15] despite which the following year sawdust had so clogged the lower entrance to the Ottawa locks that an expenditure of $600 for dredging was authorized.[16] In 1880 the situation at the same point was no better, an expenditure of $2,000 being earmarked for dredging.[17] Dredging was called for at Westport, at the head of Upper Rideau Lake, shortly to become the terminus of the Brockville and Westport Railway. Again the culprit was the local sawmill.[18] Presumably the situation improved with the decline of the lumber trade late in the century.

Although sawdust and mill refuse was the principal nuisance, not to say impediment, there were many other obstructions and pollutants from foundered scows to dead horses. A good many boat owners were content to leave sunken vessels blocking the channel for the department to clear. The Superintendent of the Rideau Canal in 1872 found it necessary to post a public notice warning the owners of scows sunk in the Ottawa canal basin that failure to remove them would result in the vessels being sold at public auction, or otherwise removed at the expense of the owners, who would also be liable to a fine under the canal regulations.[19] The Protection of Navigable Waters Act (49 Vic., cap. 36) of 1886 made it mandatory for the owner of a vessel blocking a waterway to give notice of same to the department, and post an obstruction light, under pain of a $40 fine. The Minister of Marine was empowered to remove such a vessel, selling both vessel and cargo to cover the expenses of removal, and recover damages from the owner if the sale did not cover costs. The Act repeated injunctions against dumping of sawdust and refuse in any waterway.[20] An amendment of 1897 (60-61 Vic., cap. 23) empowered the Minister of Marine to use any and every means, including explosives, to remove a hulk blocking a channel.[21] A further amendment in 1899 to the Protection of Navigable Waters Act (62-63 Vic., cap. 31) prohibited the throwing of anything likely to sink to the bottom of any non-tidal waterway under eight fathoms in depth, subject to a fine of between $20 and $300, the offending vessel to be detained by the port warden or customs collector until the fine had been paid.[22] Yet another amendment in 1918 (8-9 Geo. V, cap. 33) banned any works or installations in the vicinity of a commercial waterway without prior approval by Order-in-Council, with the exception of small wharves, boat-houses or retaining walls costing less than one thousand dollars, subject to the approval of the Minister of Public Works.[23] By 1865, with the reach above Long Island reported nearly two feet below normal, and that above Kingston Mills 15 inches,[24] the chronic problem of low water became the subject of a report of a select committee

to the provincial government. The report recommended retention of spring flood waters in lakes tributary to the system by means of dams and floodgates, the waters to be released in the dry season. In the words of the outstanding hydraulics engineer, Thomas C. Keefer:

> We have only, by artificial means, to do what the swamps & woods effected before they were cleared up -- that is, to collect and hold back the surplus of the flood-waters, and feed them out as required.[25]

The Committee recommended that Public Works carry out a survey of lakes, suitable to serve as reservoirs, the following spring.[26] As a result, dams were built at the outlet to both Eagle and Crow lakes, headwaters of the Tay River, in 1866.[27] These works were followed by others, among which was a storage dam at the outlet of Bob's Lake in 1870.[28] In all the Privy Council authorized the expenditure of $12,000 in 1870 for the formation of reservoirs in lakes near the height of land.[29] Lockmasters were instructed to conserve water levels at their various stations, and if necessary, deny water to the mills in order to do so. In 1879 the maximum draught permissable on the Rideau Canal was only 4 feet 6 inches.[30]

The department had not only to contend against the climatic factors and unco-operative mill owners, but an element of lawlessness, if a letter from J.P. Tett to Sir Charles Tupper in 1880 is to be credited. Tett stated that the Mud Lake dam had been illegally removed "about seven years ago" by armed men, and that the government of the day had taken no action. Forwarders, Tett continued, were now losing money because the low water level prevented them loading their craft fully.[31] The water levels continued in this condition throughout the 1880s. An 1885 government proposal to spend $420,000 on measures to improve the water supply was derided by the Opposition as a misuse of public moneys.[32] In the decade of the 1890s dredging was increasingly resorted to, particularly above Merrickville, Poonamalie and Newboro, with the channel in some places deepened as much as two feet.[33] The cut at Newboro was a particularly troublesome spot; in the late summer of 1895 steamers and barges were continually grounding at this point, attributable to the denuding of the forest by fire and lumbering.[34]

By 1889 petitions were widespread from a number of forwarders that the canal basin in Ottawa be deepened to six feet, and the following year this was done to produce an overall depth in the turning basin of 6 feet 6 inches.[35] Petitions for the enlargement of the locks and channels, however, fell on deaf ears. Nonetheless the department must be considered to have been responsive to some of the addresses submitted to them from time to time for the improvement of the waterway. As early as 1877 the Prime Minister and Minister of Public Works, Alexander Mackenzie,

had virtually written the Rideau off as an obsolete waterway on which further moneys should not be wasted, a viewpoint repeated a couple of generations later during the Great Depression. In the words of the reform premier:

> Its usefulness was now nearly at an end, the railways having taken away all its traffic. It cost the country a considerable amount more than its revenue, and it was neither useful nor ornamental.[36]

Actually Mackenzie's strictures were very premature, although by this date the Rideau Canal was subsidiary to the St. Lawrence and increasingly confined to a regional trade.

Forwarders continued to press for improvements into the new century, indicative that the route was not yet a dead issue. In 1910 the Kingston Board of Trade supported their petition for measures ensuring the water levels on the waterway with statistics - *viz*. 22,640 passengers and 91,774 tons of freight for the season 1909. On 7 December 1910 the minister received a deputation from the Kingston Board of Trade in the Russell House, warmly concurring with their recommendations, and stating that "the possibility of the Rideau Canal ever being closed was extremely remote."[37]

That the Rideau Canal continued to be taken seriously by merchants and forwarders in the early years of this century is confirmed by the scotching of an attempt by the Canadian Pacific Railway to block off the north end of the canal in Ottawa to give access to their right-of-way into a new station, and by a proposal by the city to lower bridge clearances over the canal as an economy measure. Again the Kingston Board of Trade took a leading part in tackling the government on the first issue, protesting to the Railway Commission that the Canadian Pacific Railway scheme would remove the terminus of the canal from the business heart of the city and would deprive forwarders of their docking facilities from the Sapper's Bridge at the head of the locks to Gladstone Avenue, and would obviously cut off the canal from the Ottawa River. The virtual blockade of the canal for the sake of the railway's proposed right-of-way utilizing the canal bed north of Gladstone Avenue was unwarranted.[38] Although D.W. McNicoll, Canadian Pacific Railway vice-president at the time, contended that canal traffic did not warrant maintenance of the canal, and that the railway would make better use of the right-of-way, the Railway Commission found in favour of the canal. The city proposal to lower bridges over the canal from a clearance of 29 feet 6 inches to 12 feet was also thwarted in the interests of canal traffic.

Before leaving the subject of the Rideau Canal in its prime role, until the 1920s, as a commercial waterway, notice must be taken of the subsidiary Tay Canal. Originally built in 1831 and opened in 1834, the five locks of the Tay Canal (each measuring 100 feet by 20 feet), supplemented the course of the Tay River from Perth to the

Rideau River halfway between Perth and Smiths Falls. At some subsequent date the Tay Canal fell into disuse. By 1882 its revival as a connection with the Rideau system was raised; in 1883 the work was taken in hand by contractors, but following a new route,[39] from Beveridge's Bay on the Rideau to a point on the Tay above the old locks.[40] In 1890 the completed Tay Canal was declared a part of the Rideau system, with tolls set accordingly, [41] and subject to the same regulations.

Certainly the various authorities who successively had charge of the Rideau Canal succeeded in maintaining it as a viable commercial route for as long as there was traffic to use it, and beyond to the present recreational and water control uses. The problems met with thereon were not peculiar to the Rideau. The commerce of the region never stimulated further development of the original works, which were so solidly built that the canal retains its basic 19th century character.

Canal Regulations

Tolls were charged on the Rideau Canal for a 71-year period, from its opening to navigation in 1832, until 1903, other than a temporary suspension from 1860-63. The first toll schedule, based on Colonel By's proposals, was published on 26 April 1832, but replaced in June of that year by somewhat modified rates. Cabin passage from Kingston to Bytown was reduced from £0-5-0 to £0-4-0, certain livestock such as sheep and calves could be shipped the length of the canal for £0-0-6 rather than £0-1-3, and dry goods and wines were charged £0-7-6 instead of £0-10-0 besides sundry other deductions. (The complete toll schedule for various periods appears in Tulloch 1981). The 1842 schedule was similar, but introduced a toll for vessels as well as cargo carried therein; a steamboat paid a toll of £0-10-0 Kingston to Bytown, and a barge half that amount, the tolls in the reverse direction being double. Four years later steamer and barge tolls were determined by the number of lockages, at the rate of £0-0-6 per lock for steamers, and £0-0-4 for barges; the 1846 schedule also limited the dimensions of timber rafts to 100 feet by 26 feet, and the poling of unpowered craft was henceforth prohibited. Rideau Canal tolls were reduced in 1851, and again to a substantial degree in 1873, by which time the canal had long since passed from imperial to provincial jurisdiction.[42] The 1895 canal regulations set the tolls for all canals based on tonnage and the number of passengers carried. The Rideau rates were 1.5 cents per ton and 8 cents per passenger. On the St. Lawrence canals the tonnage rate was half that, but the passenger toll higher, at 10 cents.[43] Tolls on all

canals were suspended on 13 April 1903, and abolished on 19 June 1905.[44] In 1975 tolls were re-introduced on the Rideau for sail and mechanically powered vessels.

The Rideau Act, passed by the provincial legislature 17 February 1827, prohibited steamers entering locks under too much way, and prescribed penalties for damage to the locks, up to £20 for damaging lock gates, and £20 for entering locks under the action of paddle-wheels.[45] By 1863, with the development of the passenger vessel succeeding the earlier dual-purpose steamer, the former was given priority throughout the system in locking, and steamers in general took precedence over sailing craft. Rafts were denied access to locks after dark.[46] Enforcement of these regulations proved difficult, and complaints arose of barges holding up passenger boats. In 1881 the superintending engineer saw fit to issue more stringent and detailed regulations governing priorities and rights of way of vessels in the canal. Two classes of vessel were designated operating in the Rideau Canal: 1st Class steamers were defined as those rated by the steamboat inspector as fitted with machinery suitable for the carriage of passengers, and 2nd Class as all other vessels "of what kind soever they may be." Furthermore, mail steamers were to take precedence over those carrying passengers only. All vessels had to approach the locks in single tier within 300 feet of their entrance, and faster vessels were debarred from overhauling slower ones within that distance of the lock gates. Second Class vessels could proceed into a lock ahead of 1st Class only when the latter were delayed. Barges loading at a wharf had to give place to passenger vessels, particularly those on a schedule or timetable.[47] In 1888 the use of whistles, bells, horns, etc. was regulated for canals in general. Such signals were to be used with discretion, sufficient to give the lock-master or bridge tender sufficient warning of an approaching vessel. On any canal within city or town limits the use of steam whistles was prohibited altogether between the hours of 10:00 P.M. and 6:00 A.M. under penalty of a fine of up to $10. During the night hours horns only could be used to signal a vessel's approach.[48] The following year, 1889, 50 cent clearance fees were imposed on all vessels, other than coasters, entering or leaving all ports above Montreal.[49]

The previously referred to summary or digest of canal regulations published in 1895 comprehensively governed all aspects of canal navigation within the Dominion. A clearance had to be obtained from the customs collector before a vessel could enter any canal. Clearly painted draught lines in feet and inches, at the bow, amidships and stern of the vessel were required. Signal of entry to a canal or lock had to be sounded by steam whistle, horn or bell, at least 1/2 - 3/4 mile off or 15 minutes before arrival. Steamers had to carry conspicuous bow and stern lights, in addition to their port and starboard navigation lights. The priority of passenger boats was reaffirmed.

Limits were imposed for the loading and unloading of cargo, and permission had to be obtained for piling wood on wharves (a regulation long flouted). Deck loads of lumber or whatever could not project beyond the vessel's gunwale. Timber rafts on the Rideau could not exceed 25 feet in width by 100 in length.[50]

Revised canal regulations, which took effect 1 July 1897, laid down detailed regulations for navigation applicable to all Canadian waters. Elaborate provisions for the showing of lights when under way, when at anchor and when towing were published (the details of which may be found in the notes), to render navigation by night safer. Vessels under 40 tons burthen, of which there were many on the Rideau Canal, came under modified but no less detailed provisions. Even rowboats had to show a white light. Vessels under way in fog had to sound a whistle or siren at regular intervals. Minimum space was specified for the conveyance of live stock.[51]

The early years of the 20th century witnessed increasing regulation pertaining to cargoes, particularly the carriage of explosives. The origins of regulations of this nature apparently was an Act of 1874 (36 Vic., cap. 8), an "Act with respect of Dangerous Goods in Ships", which became effective 4 April of that year.[52] These regulations were comprised in omnibus legislation (9-10 Edw. VII, cap. 61), effective 1 September 1910. For wittingly shipping inflammables without disclosing their nature in a bill of lading a fine of $1,000 was prescribed. In addition, the master of a vessel had the right to destroy such undisclosed goods, the shipper thereof being held liable for damages. False bills of lading incurred penalties up to $1,000. Other provisions included limitations of the ship owner, master or charterer for loss or damage to cargo; specifically a limited liability of $100 per package was set unless a higher declaration was entered in the bill of lading. The owner or master, on the other hand, was responsible at law for proper stowage of cargo, as for the seaworthiness and proper manning of the vessel.[53] Much of this obviously concerns vessels operating anywhere in Canadian waters rather than specifically to minor inland waters and canals. In general, as one would anticipate, safety regulations were less stringent for vessels operating in sheltered waters, such as the Rideau than for those on the Great Lakes or coasters; nonetheless Rideau steamers were subject to the manifold clauses of the successive Steamboat Inspection acts, and, in some instances as with the carriage of explosives, as much so as a vessel on the high seas. Reference has been made to the Canada Shipping Act 1906 in an earlier context, comprehensive legislation which pertained to vessels under Canadian registry operating anywhere in the world. A further Water Carriage of Goods Act (24-25 Geo. V, cap. 44) redefined and elaborated previous regulations, but by this

date (1934) there was little traffic left, whether freight or passenger, to regulate on the Rideau Canal.

Sunday Observance

Although regulations as to the use of the canal on Sundays is germane to the foregoing section, the subject merits individual attention. Sabbatarianism was part and parcel of the not-so-distant past, an issue very much to the fore in Victorian times, motivated by an all-pervasive Protestant ethic. Nowhere perhaps was the issue more sharply joined and argued out than in transportation. Within living memory local branch lines did not operate on Sunday, and the author's grandfather disapproved strongly of the decision sometime early in the present century to permit the Toronto Street Railway to operate a Sunday service. The Rideau Canal, to be sure, was very much involved in this protracted struggle between the growing secular and commercial spirit of our own times and the simpler Bible Christianity of our grandparents' generation.

Whether in response to profanations of the Sabbath specifically on the Rideau or as a general declaration of principle, in 1863 the Kingston Sabbath Reformation Society petitioned the Minister of Public Works strongly condemning any leniency in observing the day of rest.

> That your petitioners are fully convinced that the Lord's Day is of Divine appointment and perpetual and universal obligation -- that the blessing of God rests on those nations, companies, and individuals who observe it -- His displeasure on those who violate it.[54]

The petition was one of several submitted about this time, including submissions from the Montreal Sabbath Association, the Township of Williams, Canada West, and from the United Counties of Stormont, Dundas and Glengarry. Divine law was buttressed by the obvious efficacy of one day's complete rest in seven for the restoration of energy and efficiency. One infers from the petition that only the Welland Canal had been completely shut down on Sunday and hence that some of the other canals in the upper Province had been open.

A petition from the residents of Merrickville a few years later (1869) bears specifically on the Rideau. The petitioners demanded that the department close the canals on Sundays,[55] clearly indicative that such had not been the practice. This becomes patently obvious two years later, when the Merrickville lockmaster ruefully reported to his superiors that he and two labourers had been arrested and fined one dollar each for passing the steamers

Carlyle and *Alice* on Sunday. Although carrying passengers, the *Alice* had been detained fully ten hours.[56] Nor was the Merrickville station the only offender, for in May of the same year one John Doyle, justice of the peace for the township of Kingston, addressed a remonstrance to the lock-master at Kingston Mills in these terms:

> Sir there have been several persons making complaints to me about the Sunday labour at Kingston Mills locks. i [sic] am informed by a clergyman a few days ago that when on his way to attend divine service in the township of pittsburgh, he was delayed at your bridge, and whilst waiting there was disgusted with the language of the men employed on the scows, who appeared to be intoxicated. now under these circumstances, i would advise you to discontinue such work on the sabbath day, and allow your men to go to hear the word of God, as a christian should do. and if you will not comply with the law i shall be put to the necessity of prosecuting you, and your men, as the law directs in such cases.[57]

The law on the subject in the province at the time, although clearly worded, allowed discretionary interpretation in the case of conveyance of the mails:

> . . . it is unlawful for any workman labourer or other person whatsoever on the Lord's Day to do or exercise any worldly labour, business or work of his ordinary calling (conveying Travellers or Her Majesty's mail by land or by water . . . and other works of necessity, and works of charity, only excepted.)[58]

In 1871 the canal was specifically ordered closed on Sundays except for conveyance of Her Majesty's mail and "works of charity."[59] The same conditions applied to the Cornwall and the Welland canals as to the Rideau, but on the other hand, the Beauharnois, Ste. Anne, St. Ours and Williamsburg canals did operate on Sundays, and the Lachine Canal opened Sundays only from 1 November to the close of navigation.[60] Matters concerning the vexed question of Sunday operation seem to have rested in this wise for the next twenty years, until in 1890 all canals were opened on Sundays during the final three or four weeks of each season, a practice repeated on a pro tem basis from year to year[61] well into the present century. A break in the pattern came in 1909, with the opening of the Rideau Canal Sundays at night (9:00 P.M. to 6:00 A.M.); and indeed the passenger carrying *Rideau Queen,* was given permission to proceed through the locks at any hour Sunday "if she is late."[62] Unrestricted Sunday hours began in 1913, with a temporary reversion to closure during the daylight hours on Sundays in 1917, but allowing for full 24-hour operation

at three locations - Beveridges lock, Poonamalie and Oliver's Ferry.[63] In any case canal operation on Sunday was pretty much a dead issue by 1913. The definition of essential services, to be operated 7 days a week, has ineluctably broadened through the years, and so the imbroglio of nearly a century ago has a quaint ring to modern ears.

Wintering

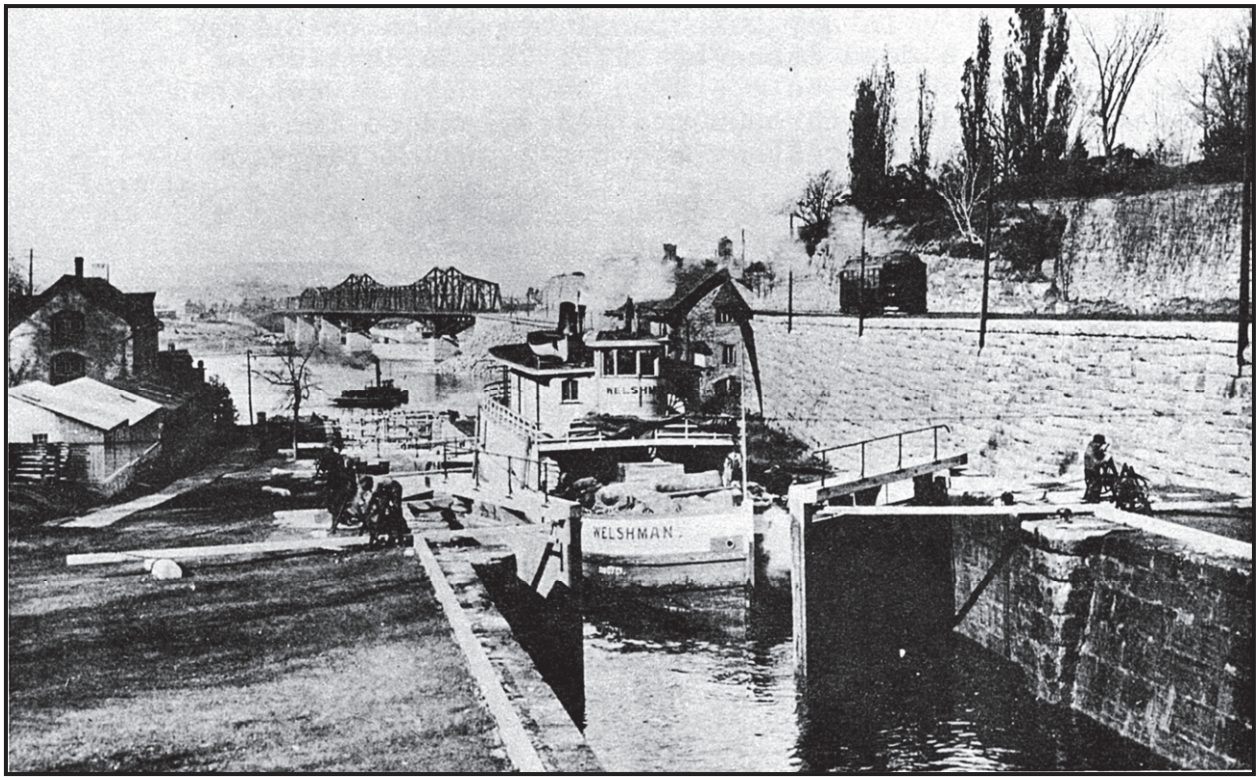
The practice known as 'wintering' consisted in the putting up of vessels, with the department's permission, in canal locks for the winter for a fee. The department regarded the practice askance, but tolerated it under strict control. The objection was based on the fire hazard and the debris too often left in the locks from overhaul and repair work. Nonetheless the department was prepared to oblige ship owners for a consideration.

Wintering had originated with the ordnance administration of the canal, who had charged for the privilege. The charges in ordnance days have not been ascertained, but the table of fees in 1887 was the following:

steamers in the canal basin (Ottawa)	$8.00
barges in the canal basin (Ottawa)	4.00
steamers in Ottawa locks	$50.00
steamers in locks elsewhere	15.00

In addition the posting of a $4,000 bond was mandatory in each instance in case of fire.[64] In 1888 the wintering of steamers under or near Ottawa bridges was prohibited,[65] obviously a fire safety measure.

To these regulations were added in November 1905 the proviso that wintering privileges must be accorded by special permit, and was to be at the sole risk of the owner of the vessel concerned. In no wise would the government be held responsible for loss or damage, however caused.[66] In 1907 the fee for wintering in Ottawa locks remained $50.00, but that for locks other than in Ottawa was raised from $15.00 to $25.00.[67] (The fees for wintering in locks were the same as late as 1916.) Further regulations were promulgated in 1908 covering many aspects of canal use as well as wintering. A vessel could be laid up in any of the canal basins, other than those at Smiths Falls and Perth, for $10.00 per season. Wintering in any cut or reach along the line of the canal was at the same rate. Ship owners by special permission were allowed to carry out minor repairs in a lock for an additional $10.00 a season, the owner to be held responsible for any damage to the lock. For $25.00 extra charge the owner could build a vessel over the winter within a lock, all refuse to be removed before



Steamer *Welshman* in the Ottawa locks, 1907. (Public Archives Canada.)

the opening of navigation in the spring. Further regulations were posted regarding locking of skiffs and canoes, by this date a numerous company.[68] In 1916 heavy repairs such as would normally be carried out in a shipyard were prohibited in any of the canal locks, but permission might be granted, in certain circumstances, for such work in the Kingston Mills basin. Only such minor repairs as caulking, painting and propeller work were henceforth permissible while wintering in any of the canal locks.[69]

Dry Dock

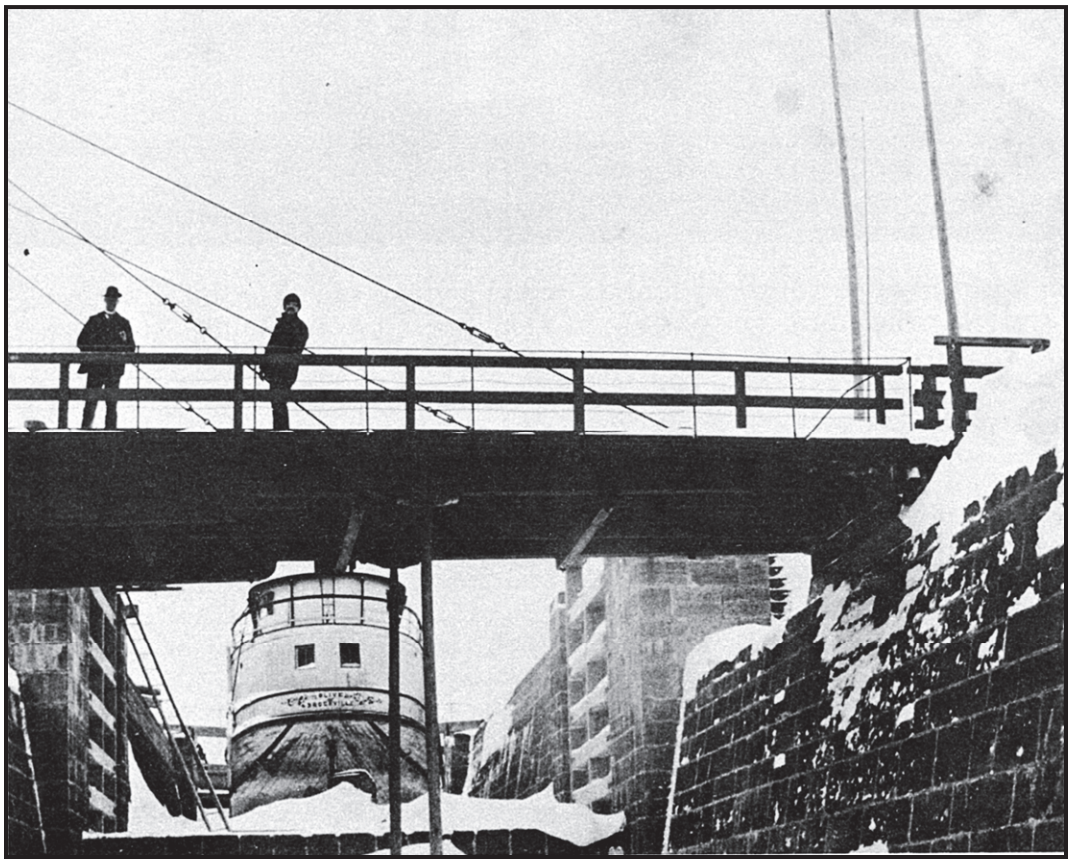
In 1893 the government opened a dry dock, for which there was a considerable demand. This may not have been the first on the canal, since the document refers to "a new one",[70] but this is the first for which current research has evidence. An undated map of the Ottawa canal basin indicates that the dry dock (marked simply 'dock') may have been built in the Bye Wash or waste weir, which extended from the north end of the canal basin a half block or so to the west of Mosgrove Street. Vessels entering the dry dock paid an entry fee of $8.00 for steamers, and $5.00 for barges and

steam yachts, and a daily rate of $2.50 until the opening of navigation when the rate was increased to $8.00 per day thereafter. Vessel owners supplied their own tools and gear.[71]

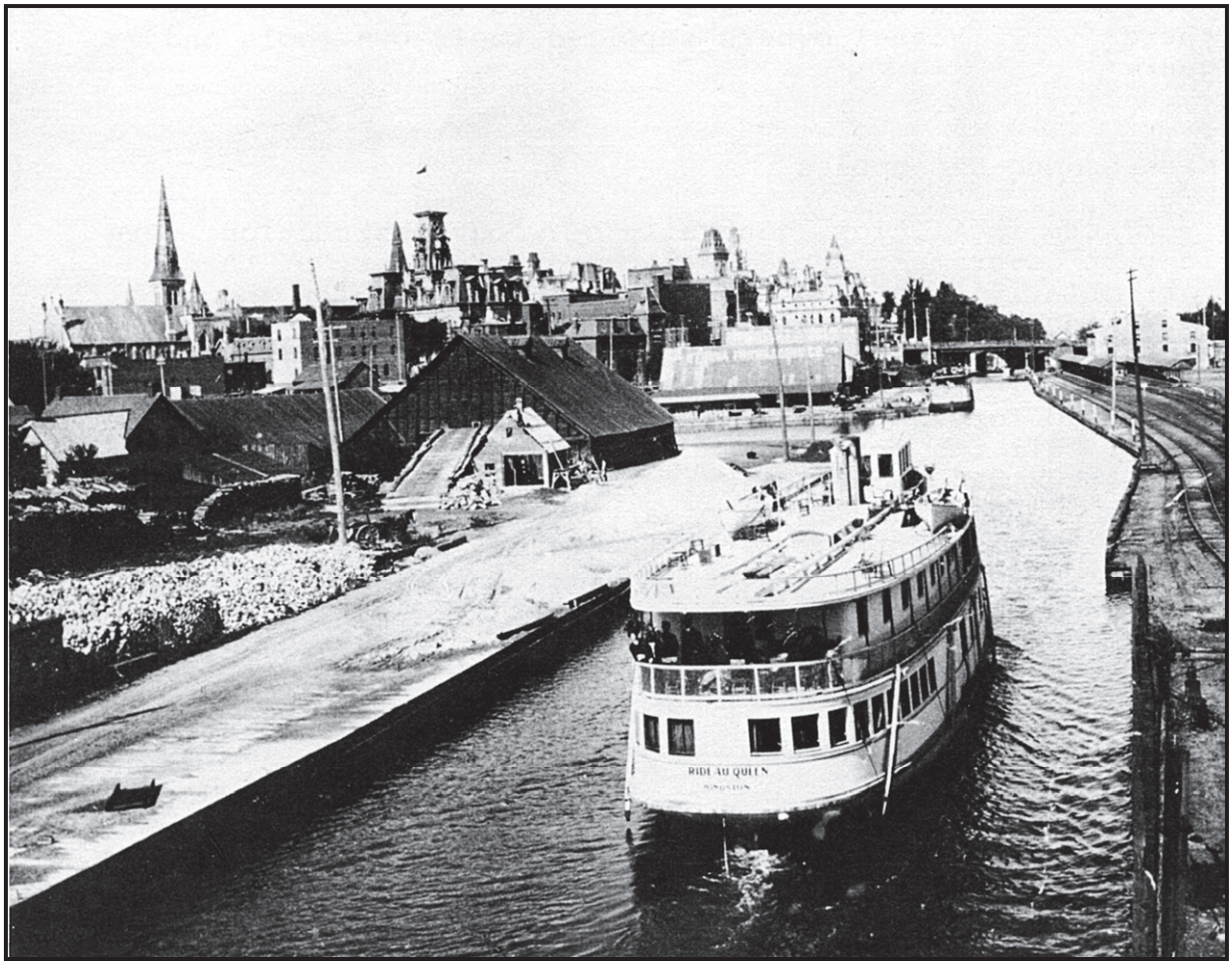
Wharves and Warehouses

These facilities, generally of wood construction, were in part government docks, but the greater part of them, particularly outside Ottawa, were probably built and maintained by the forwarding companies operating along the Rideau. The greatest aggregation of wharves was in the very considerable port of Kingston, only a small portion of which were used for the Rideau service, and in Ottawa's canal basin. All the principal points of call between Kingston and Ottawa had dock facilities, not to mention landing stages, consisting simply of a raft moored to the shore, put up by farmers on their river frontage.

No information has been obtained on wharfage for the first thirty years or so in the life of the canal. However some information can be derived from early prints or water

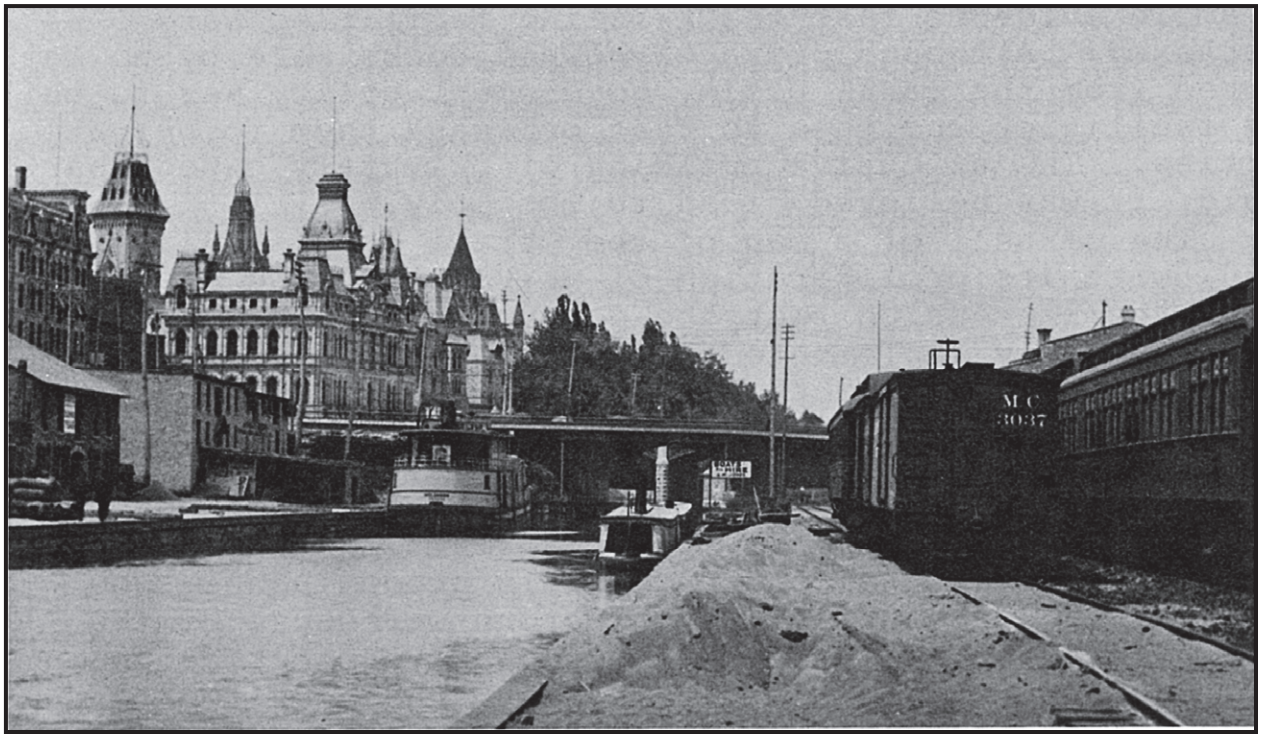


The *Olive* wintering in a lock at Smiths Falls, 1900. (Mr. Harold Nichol, Smiths Falls.)



Rideau Queen approaching canal basin, ca 1890; wharf on left and warehouses on canal basin left background. (Mr. G.R.L. Potter, Ottawa.)

colours. We may be certain that with an abundance of timber in the earlier years construction would be of wood. The earliest reference to construction of a government wharf in the Ottawa canal basin, dated May 1864, describes construction as 3-inch plank on cedar sleepers.[72] A somewhat fuller description for the construction of government wharves in 1870 around the canal basin, extending about 550 linear feet on the west side and 600 on the east, called for a foundation of cedar cribs 10 feet wide and 7 feet in height, to be filled with earth. The face timbers were to be fastened with half-inch square spikes 18 inches in length, the whole to be built of cedar.[73] Even with this construction, by 1887 forwarders were pressing the government for more wharves "between McCullaugh's coal shed and the Maria Street bridge" (now the Laurier Bridge), where it was estimated about 200 feet of wharf could be constructed for approximately $3,500.[74] The need for



Canal looking north towards Sapper's Bridge, ca. 1895. (Public Archives Canada.)



Northern or Ottawa River entrance to the Rideau Canal, ca 1880. (Public Archives Canada.)

more wharfage was expressed by various forwarders, and there is ample evidence that the existing facilities were overtaxed. Although privately owned docks were by no means barred from the canal basin, government policy was to build the facilities and then to rent or lease them to private parties. The extensive building of privately owned wharves would, it was believed, lead to monopoly.[75]

The perusal of a map of the Ottawa canal basin, dated 1890, with its proliferation of privately owned premises, gives the impression that the government's policy was not wholeheartedly implemented. Maps from this period show wharves lining the south side of the canal basin and the east wall of the canal from the basin to the Sapper's Bridge. Drawn to a scale of one inch to 50 feet, the approximate dimensions of the sheds and warehouses can be deduced, and are cited in the notes to this chapter. In general it may be observed that the construction is predominently wood, with the exception of a 60-foot stone warehouse of the Montreal and Ottawa Forwarding Company, another belonging to C.T. Bate, measuring 120 feet by 100, and a 90-foot structure designated simply military stores. The rest of the sheds and warehouses, with one exception, were of smaller dimensions.[76] All these structures along with the canal basin have since disappeared.

By the 1860s wharves and storage space in and around the canal basin were at a premium. The enforcement of such regulations as existed bearing on the loading and off-loading of cargo were obviously ineffective, coal and wood dealers being the most flagrant offenders. A departmental file of 1869 noted that the eastern side of the



Another view of the Ottawa canal basin (1907). Unpowered barge in background, and tug (presumably *Shanly*) in foreground. Barge berthed opposite warehouse. (Public Archives Canada.)

basin from "the Bridge to basin" (probably Maria Street bridge) was piled with coal the whole season, most of it the property of the "Gas Co." As the regulations then stood, no cordwood was to be unloaded on the east side of the basin between the Sapper's Bridge and Little Sussex Street (currently Sussex Drive south of Rideau Street and east of Union Station), but wood might be landed on the east side of the canal basin between Little Sussex Street and the long defunct By-wash, subject to removal within 24 hours. But despite a $40 fine for unloading without permission from the customs collector or lockmaster, and a daily penalty of 3 cents per cord for wood left after 24 hours,[77] the sight that met the eye confirmed the ineffectiveness of the regulations and their enforcement. The need of a wharfinger vested with some authority was obvious, a measure recommended in 1869 by the canal superintendent, James D. Slater. In short, forwarders were illegally encroaching on more and more wharf space and storage ground, often to the intentional detriment of competitors.[78] In 1871 complaints were frequent that coal so encumbered wharves that cargo could not be unloaded.[79] With the completion of new wharves in 1873 stricter regulation was more than ever necessary, and the wharfinger given the authority to enforce the same.[80]

The wharfinger was given broad powers to control and regulate all traffic between the first lock and the Maria Street bridge by order-in-council dated 14 May 1875. Unloading limits varying from one day to three or more were set according to tonnage, the wharfinger assigned berths, and was empowered to lease or rent land for the piling of



View of a portion of Ottawa canal (Aug. 1883) basin, showing wharf, unidentified craft in foreground, and the armouries in background. (Public Archives Canada.)

cordwood according to his own discretion.[81] In 1877 the decision was made to leave all government wharves on all canals under the jurisdiction of Public Works which had built them, whereas elsewhere they were taken over by Marine and Fisheries.[82] There seem to have been no further complaints about congested wharfage. In 1891 the wharfage dues for steamboats of one dollar per day were abolished, and a table of fees instituted varying from 20 cents per day for vessels under 50 tons, to 60 cents for those over 200. Mail steamers had priority in berthing. In 1909 fishing vessels were granted exemption at government docks from wharfage fees.[83]

It is of interest to note that as late as 1926 the Ottawa Transportation Company, in company with a number of merchants, petitioned the department for the replacement of the wharves and sheds from Sparks Street to Laurier Avenue due for demolition for park purposes. The following year the request was acceded to with the construction of new warehouses and wharves on the east side of the canal from Isabella Street to the "Deep Cut."[84]

Before leaving the subject of docks and warehouses, note may be taken of the growing corpus of regulation concerning the receiving and storing of goods throughout Canadian waters.

Legislation enacted 25 April 1849 (12 Vic., cap. 12) prescribed sentences of one to three years hard labour for conviction of having issued bogus receipts, or "fraudulently disposing of goods after having received advances on them."[85] A more comprehensive act followed in 1853 (16 Vic., cap. 124), regulating the formation of warehousing companies, and setting maximum rates for various goods. A quorum of at least five persons and the concurrence of the local municipality were required to form a company, with incorporation to follow once sufficient stock had been subscribed in issues of £5-0-0 each, the municipality having the option of buying out the company after 21 years. Wharfage dues appear in the notes.[86] In 1873, for example, the Dominion Dock & Warehousing Company was incorporated (capital $100,000), with head office in Ottawa. The directors were Joseph Merrill Currier, Benjamin Batson, Henry Newell Bate, and Charles Thornton Bate, all of Ottawa. Their charter entitled them to "erect, build, hire and lease sheds, stores, warehouses, wharves, lumber yards, coves, slips, piers, cranes and tramways" and they were free to expand their business anywhere.[87] Legislation passed in 1871 allowed banks to hold warehouse receipts as collateral security for loans, to take a lien on the goods, and in default of payment sell the same by auction to recover their money, returning any surplus to the owners of the goods or shipper (34 Vic., cap. 5).[88] At a later date warehousemen were legally empowered to dispose of goods for which storage was owing after 90 days and earlier for perishables, in order to recoup themselves.[89] In common with regulation of any phase of activity, the procedures

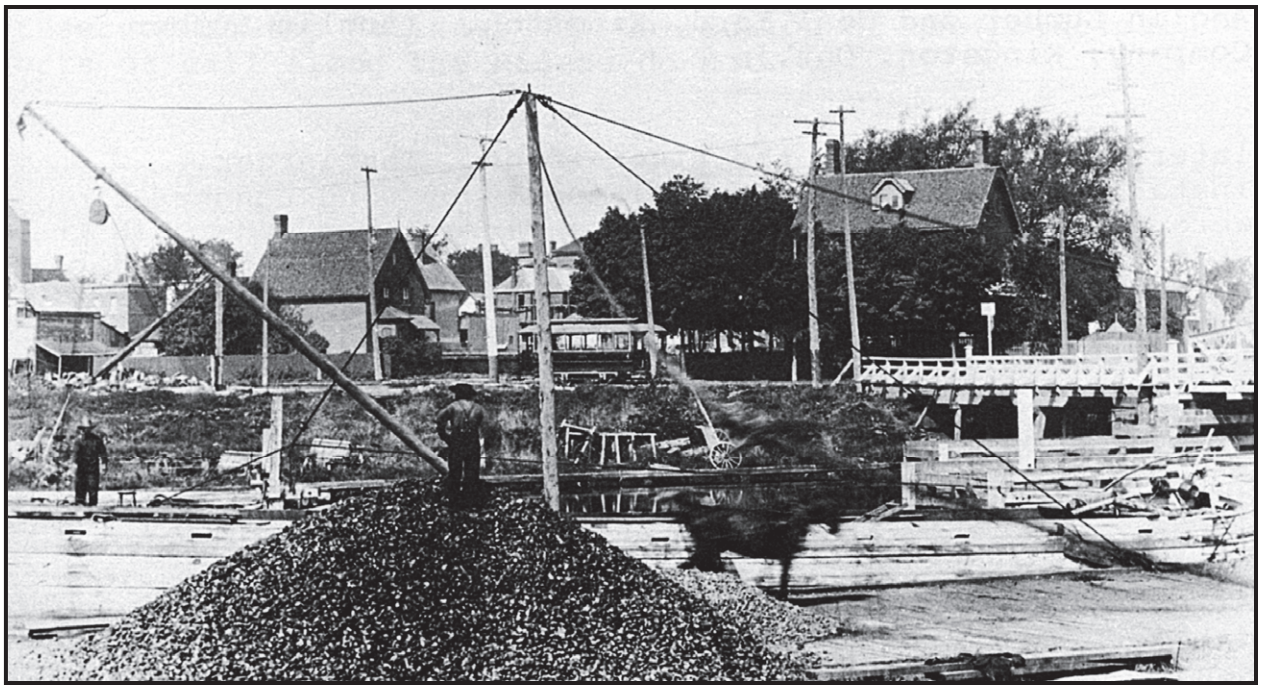
governing warehousing gained in complexity with the passage of time.

Lighting

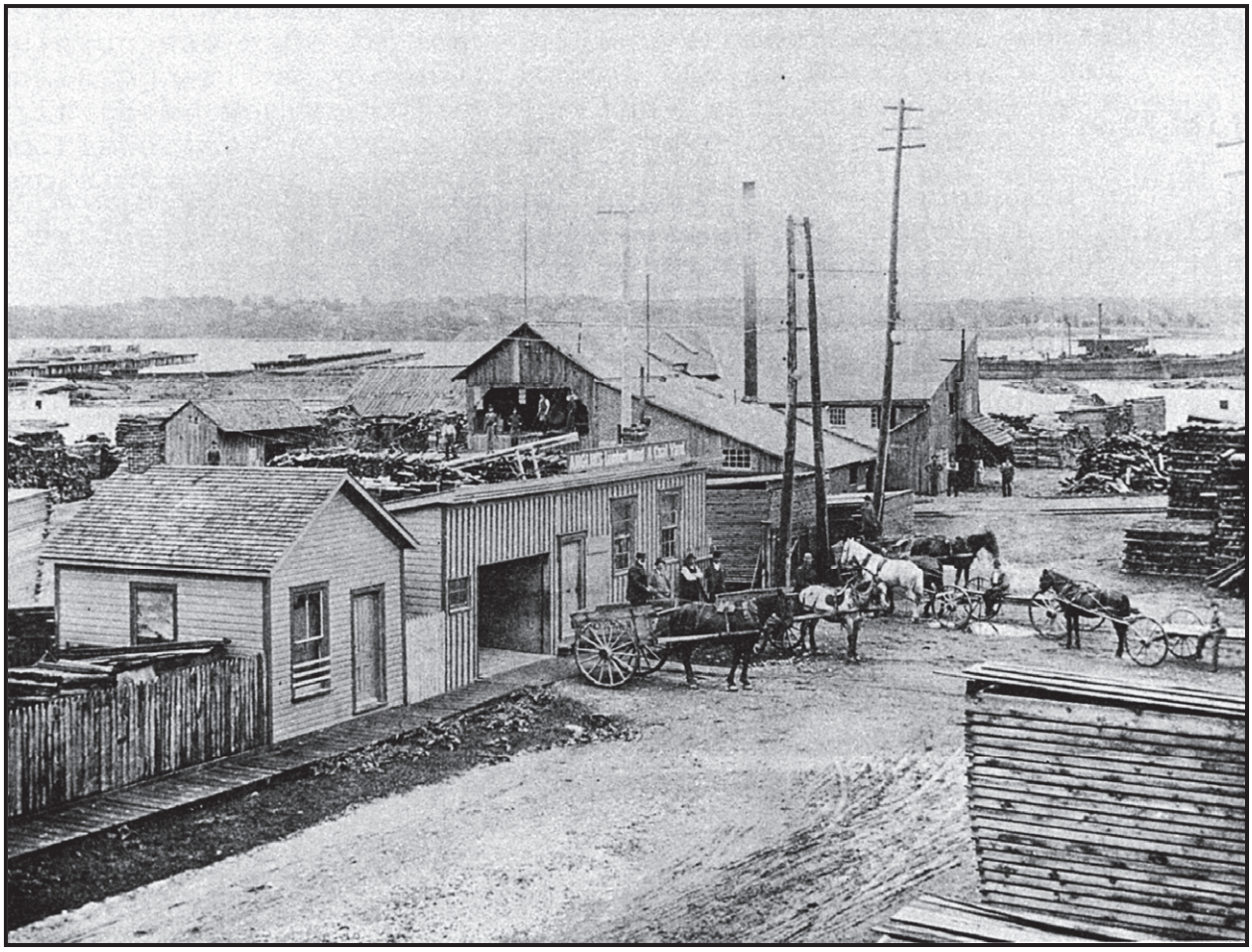
In ordnance times illumination was provided by sperm oil lamps at locks and wharves; this was of so ineffective a nature that more than one pilot and steamer captain expressed a preference for dispensing with lights at the locks. In the mid-1860s coal oil lamps were under consideration;[90] this recently developed illuminant had been introduced with encouraging results to lighthouses along the upper St. Lawrence. Whether coal oil replaced sperm oil or not is uncertain; likely it did, because coal oil was very much cheaper. In any case electricity was introduced in 1892 under contract to the Ottawa Electric Light Company, who installed five arc lamps to light the Ottawa locks and canal basin .[91] In 1904 further improvement was made by the replacement of some earlier incandescent lights with arc lamps.[92]

Dock Facilities Outside of Ottawa

Obviously there were scores of docks, wharves, warehouses, and simple landing stages erected by farmers and



Unloading coal from badge onto wharf, undisclosed location – probably Smiths Falls or Ottawa. The coal trade was particularly active in the mid-1880s at Smiths Falls. (Mr. N.B. Ballantyne, Ottawa.)



Anglin Lumber and Coal Yard, Kingston. (Anglin Lumber Company, Kingston, Ont.)

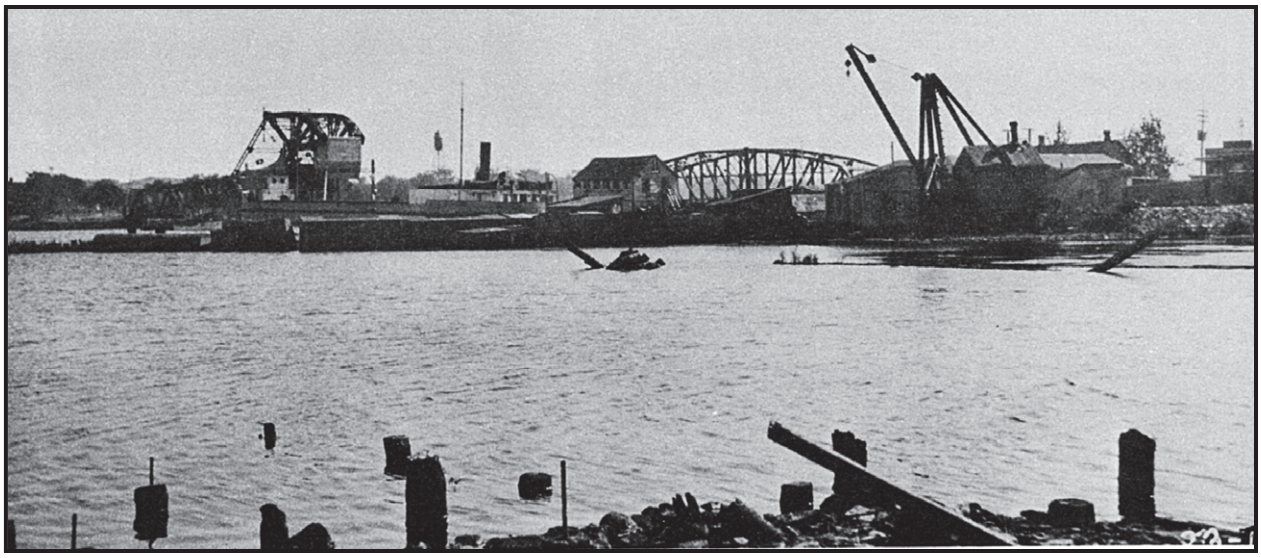
later by cottagers on the river front. The larger installations with warehouses, mostly of wood construction, were put up and maintained by the various forwarders in the Rideau trade. There were a few government wharves, perhaps built to accommodate the department's patrol boats when commercial shipping had become a thing of the past. At the time of writing, research has produced a dearth of information on this topic, other than a few maps and photographs.

Kingston, the busy lake and river port and onetime capital (1841-44) had 20 or so jetties and wharves located between Fort Frontenac and Mississauga Point as well as "spacious warehouses" of forwarders operating on both the Rideau and the St. Lawrence.[93] The earliest map found dated 1850, entitled "Plan of the City and Liberties of Kingston", shows three wharves (Rourk's, Anglin's and McCutcheon's) in the inner harbour north of the Cataraqui Bridge. The map shows a total of 14 wharves in the main harbour south of the bridge one of which, Hooker and Henderson's, definitely figured in the early Rideau forwarding trade.[94] The old Rideau wharf at the foot of

Clarence Street, by 1851 known as Hooker & Holton's wharf, presumably did too. The measurements of this wharf may be deduced from the map scale (6 chains to the inch), as 148-49 feet in length by approximately 99 in width. Macpherson & Crane, active in the Rideau forwarding trade, had a wharf at the foot of Princess Street with "the largest and most commodious warehouse"; the dock measured 148-49 feet by 125 feet. In 1851, according to the *Weekly British Whig,* this wharf was used by Macpherson & Crane's express boats on the Hamilton-Montreal service as well as freight boats, some of which probably operated on the Rideau Canal.[95]

An 1865 map of Kingston and harbour drawn to a scale of 4 chains to the inch indicates that some of the docks and warehouses had changed hands in the 15-year interim. It also shows a slight increase in the number of wharves, 20 in the outer harbour, but only two in the inner. The Anglin wharf measured about 166 feet in length by slightly under 100 in breadth.

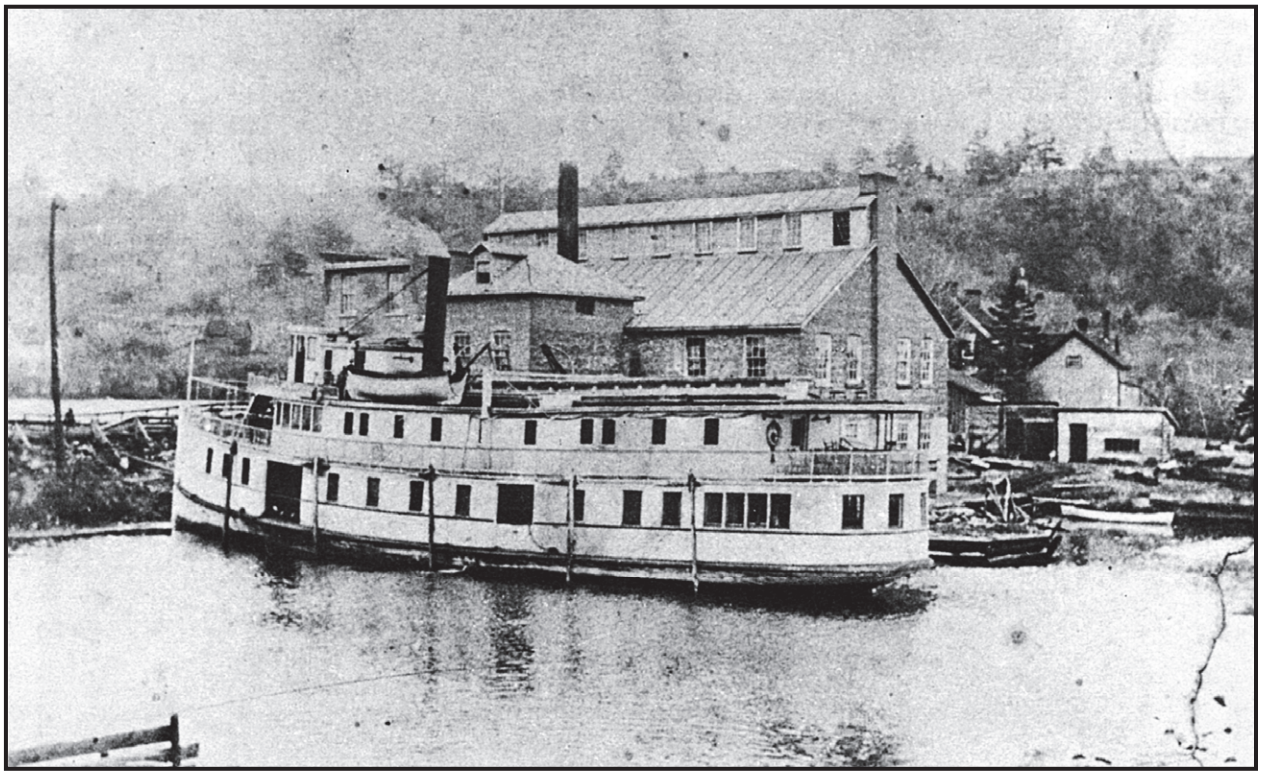
The principal ports of call between Kingston and Ottawa were Newboro, Westport, Smiths Falls, Merrickville, Burritts Rapids, and Manotick. There were docks at each, not to mention many at intermediate points. Work to date on this project has elucidated very little tangible information on this subject. A half-dozen maps dated 1860 for Hog's Back, Black Rapids, Chaffey's, Old Sly's, Isthmus, and Kingston Mills, indicate that docking facilities consisted of one or more landing stages or piers 20 to 30 feet in length at each location. The curious aspect is that maps of these small canal stations show docks and wharves, whereas those preserved in the National Map Collection of the principal ports of call along the Rideau do not.



North entrance to Inner Bay, Kingston Harbour, 1923. (Ordnance Land Photo.)



General view of Westport, showing several waterfront facilities, ca. 1900. (Mrs. H.H. Roberts, Westport.)



Unidentified steamer, thought to be *Rideau King*, at Plating Factory, Westport, ca. 1910. (Mr. H.H. Roberts, Westport.)



Steamer *Rideau Queen* at Tett's Wharf, Newboro. Wharf and warehouse illustrative of forwarders' facilities along the line of the canal and waterway, 1910. (Mrs. Florence Wright, Newboro, Ont.)

THE RIDEAU CARRYING TRADE

The commercial period of the Rideau Canal will be considered in relation to the three periods under which the evolution of the steamer was treated in the first section. The first period, 1832-50, spanned the era when the country was opened for settlement and includes that period when the canal served a trunk role as part of the old triangular route. The second, 1850-90, covers the period when the region reached commercial maturity and the railway appeared. The final period, 1890-1935 and later, witnessed a golden age both of the steamboat and of the canal in terms of freight and passenger traffic, in so far as can be determined from the extant statistical evidence, followed by an ineluctable decline and the demise of the waterway as a commercial carrier. An attempt will be made to describe the Rideau forwarding trade over the course of this roughly 90-year period, characterized by major technological change in transportation on both land and water. The story is enacted on a small scale, for as early as 1848 the Rideau Canal had been superseded as a trunk or through route by the St. Lawrence, and so relegated to a subsidiary role.

The Early Years: 1832-50

The Bytown correspondent of the Montreal paper, the *Canadian Courant,* reported on 29 May 1832 that the steamer *Union* entered the Rideau by the Bytown locks the same day that the *Pumper,* with Colonel By's party aboard, arrived from Kingston. With the *John By* and *Rideau,* these steamers inaugurated the 100-year commercial period on the Rideau, commencing as a trunk route to the interior.[1]

The key factor in the economic life of the upper province in these years was the British market. The Corn Laws assured colonial exporters of wheat and flour a duty-free market in the United Kingdom, and the voracious demand of the Royal Navy stimulated the colonial square timber trade. Hence the upper province's principal exports were wheat, flour and timber. The early traffic pattern, until the mid-1840s, consisted basically of steamers loaded with merchandise and immigrants, towing empty barges, moving

up the Ottawa from Montreal to Bytown, and thence through the Rideau to Kingston, where trans-shipment of goods and passengers took place to larger Great Lakes vessels; the heavily laden barges, loaded with the province's staple exports, were poled or sailed down on the swift-flowing, rapids-strewn St. Lawrence to Montreal where the goods were shipped overseas.[2] Indeed a function of the Ottawa-Rideau up-trade at this time was to supply empty barges at Kingston for the conveyance of wheat, flour and pork in the St. Lawrence down-trade.[3] Until 1846, although Britain's economy was rapidly changing from an agricultural to an industrial one, for which cheap bread became the prime requisite, colonial exports of wheat and flour, staples giving a good cash return, were assured of a sheltered market in the United Kingdom; mills proliferated and the timber trade flourished in the virgin stands of the upper province.

This period was one of heavy immigration from the Britsh Isles. Although free land grants, except for discharged soldiers and United Empire Loyalists, ceased in 1827, by 1852, such was the influx of needy settlers that the population of Upper Canada exceeded that of Lower.[4] Up-bound vessels from Montreal to the interior via the Ottawa and Rideau were heavily laden with immigrants who favoured this longer but less arduous route until completion of the St. Lawrence canals in 1848. In 1840 and 1841, 12,000 immigrants, most of whom were deck passengers on steamers or barges, were conveyed via the Ottawa and Rideau to settlements in the upper province, a figure which rose the following year to 30,000, reaching a peak of 89,562 in 1847 and declining to 26,412 in 1848;[5] thereafter the shorter and more direct St. Lawrence route siphoned off the immigrant trade, for the alluring settlement region lay in the lower lakes rather than the Rideau. Since the lock records on which these early figures are based recorded only toll-paying passengers, and as deck passengers travelled toll free and are subject to rough calculation only, accurate passenger statistics for the early pioneer period are lacking, and remained so until 1873. Nevertheless some comparisons can be drawn. The figure of 89,562 passengers for 1847 offers a stark contrast with the figure 27,417 in 1906, which was the peak year in the 62-year period 1873-1935, indicating that in its heyday during the immigrant period roughly three times the numbers travelled the Ottawa-Rideau route than in the busiest season for the 1873-1935 period. At the same time steamers and barges alike upbound from Montreal in the 1840s were laden with merchandise for the homesteaders in the crude pioneer settlements to the west: textiles, wheat, flour, lumber and potash - a derivative of wood ash much in demand in the United Kingdom and on the continent.

Until the mid-1840s the under-powered steamers of the day were unable to make head, unless very lightly laden, against the rapidly flowing St. Lawrence. With the advance

in steamboat technology and the provision of more powerful engines, forwarders on the St. Lawrence were able to vie with competitors on the Ottawa-Rideau route for the up-trade. The breaking of the monopoly and the lowering of tolls in 1843 on the Ottawa-Rideau system kept this route competitive in the up-trade with the St. Lawrence until the completion of the latter's canals in 1848.[6]

The goal of the Montreal merchants and St. Lawrence forwarders, and more specifically within the context of this study the Rideau forwarders, was the capture of the western export trade; only by doing so could these routes realize their full potential. This objective was thwarted, in the first instance by the completion of the Erie Canal in 1825, a year before the first contracts for the Rideau had been let. The Erie Canal provided a faster and cheaper route for agricultural exports from the Mid-West to tidewater and according to one authority reduced Montreal's commercial hinterland by half.[7] The militarily secure but commercially flawed Rideau Canal could in no wise compete on an equal footing with the Erie Canal. The aspirations of Rideau forwarders were also frustrated by the opening of the St. Lawrence canals late in the period (1848) which at once rendered the Rideau a bypass insofar as a trunk route from the west was concerned. Vessels could now take the more direct route from Montreal and tidewater to the lower lake region, and the St. Lawrence continued to dominate the down-trade. These two developments were the forerunners of others in mid-century which would jeopardize the future of the Rideau as a principal artery of commerce.

In the early years of the Rideau Canal, timber and agricultural products, chiefly wheat and flour, also potash, made up the bulk of the region's exports. The repeal of the Corn Laws in 1846, whereby the British market was thrown open to grain imports from any quarter, in conjunction with the reduction of colonial preferences for timber imports, seemed at the time to spell ruin for the colonial economy. Although Britain’s shift to an industrial economy wore an ominous aspect at the time, dislocation and ruin did not follow.

The repeal of the Corn Laws led to a shift in the export market from the United Kingdom to the United States and the British market for square timber was displaced by the American for sawn lumber. Not only lumber but agricultural products such as oats, potatoes and livestock found a market in the neighbouring republic, a process which has continued from that day to this over a century later. In addition to the aforementioned factors, the same year that Britain abandoned the Corn Laws in favour of free trade, the American Drawback Act gave to Canadian shippers duty-free access to the American canal and river systems for their exports to the United Kingdom and Europe.[8] The Canadian colonies were more than compensated for the threatened loss of the British market by the opening of the

American, a trend which was to continue over the whole course of the next century. Notwithstanding British repeal of the Corn Laws and reduction in the colonial timber preference, Canada did not altogether lose her place in the British market, particularly for timber. Nonetheless for the future Canadian trade was increasingly to follow a north-south orientation in the second half of the nineteenth century.

In addition to the opening up of the American market, local or regional markets were established. As early as 1836 Bytown had become the best market for local farm produce. In fact wheat for export was grown only in the vicinity of the St. Lawrence, whereas flour mills in New Edinburgh were drawing on regions as far afield as the Bay of Quinte.[9] The lumber camps of the Ottawa, having outrun local agricultural production, "imported" products from the Rideau.

The major changes in the overall trade pattern in the upper province for the period 1832-50 were thus the completion of the Erie Canal in 1825, which deprived the Rideau and St. Lawrence canals in advance of the immense carrying trade of the American Mid-West, and the opening of the St. Lawrence canals (9-foot draught) in their entirety in 1848, which rendered the Rideau route a bypass for what remained of the export trade from the lower lake region to Montreal. As a result of the latter, steamer and barge traffic diminished on the Rideau to its lowest ebb since 1836.[10] Nonetheless this period of pioneer settlement induced the first of two peak traffic periods on the Rideau route in 1841, with no fewer than 24 steamers, three self-propelled barges (known as Ericsson propeller barges) and 171 unpowered or tow barges serving the Rideau and the triangular Montreal-Bytown-Kingston trade.[11]

Robert Drummond et al., Pioneer Forwarders

One of the pioneer forwarders on the Rideau was the Scottish-born contractor, Robert Drummond, builder of the canal locks and an 18-foot dam at Kingston Mills, as well as the works at Brewer's Mills and Davis lock. The versatile Robert Drummond was also a shipbuilder and captain. As seen in an earlier context, the first steamer to navigate the whole length of the canal, the *Pumper,* was built by Drummond. In 1831 Drummond completed in a Kingston shipyard the 110 foot *John By,* 200 tons register. Her accommodation was probably considered reasonably commodious at the time, with a ladies' cabin 22 feet by 24 feet, and gentlemen's 41 feet by 20. Her engine developed 75 horsepower.[12] Unfortunately she proved somewhat of an embarrassment to Drummond, for despite her name she could not be operated on the Rideau Canal since she drew too much water, although designed with a draught of only 3.5 feet.[13] The *John By* was confined to the St. Lawrence. In the early years of the Rideau, as in the latter

instance, a number of vessels were operated by individual entrepreneurs, in which the owner of the vessel would often be the captain as well. Such seems to have been the case with Robert Drummond.

In 1833 Drummond operated a weekly service with the steamer *Rideau,* leaving Kingston for Bytown on Monday mornings, and departing Bytown on the return run Thursday mornings. The *Rideau* carried both passengers and freight.[14] Early in July the *Rideau* on leaving Kingston ran aground in shoal water known as The Shallows; she was aground two and a half days before continuing her run to Bytown. She was reported as carrying between 70 and 80 passengers, but only a few of these would have had cabin accommodation.[15] Later that summer the steamer *Margaret,* also owned by Robert Drummond, joined the *Rideau* to provide a bi-weekly service between Kingston and Bytown. The vessels departed each terminal on Mondays and Thursdays, meeting at Pike's Falls on the Tay.[16]

The following spring the *Rideau* came up the Ottawa from Montreal through the new Grenville-Carillon Canal with two barges in tow. Early in May 1834 a Bytown correspondent reported to the editor of the *Montreal Gazette* that the steamer *Rideau,* Robert Drummond in command, arrived from Kingston with two barges in tow, laden with 3,000 bushels of wheat for Thomas McKay's New Edinburgh mills, indicating that as early as 1834 the New Edinburgh mills were providing a market for wheat from the Rideau region. Besides wheat the *Rideau* carried 95 barrels of potash, and over 90 barrels of beer, cider and whiskey in addition to pork, ham and cheese. Provisions for the Ottawa River lumber camps were shipped to Bytown, for winter distribution. Several cabin passengers and a number of deck passengers were aboard. At this time freight and insurance rates were lower on the Rideau than on the St. Lawrence.[17] The same month (May 1834) the *Rideau* departed Bytown for Montreal, towing two barges, the *Iroquois* with a cargo of 2,500 bushels of wheat, and a second barge with another 1,400 bushels.

By May 1834 there were five steamers in the triangular service: Robert Drummond's *Rideau* and *Margaret*, the *Thomas McKay* operated by Yarker, Vanalstine and Bennett of Kingston, the *Enterprise* operated by a group of Perth merchants, and the *Toronto*, run by one Parker of Kingston.[18] The *Thomas McKay*, designed for the Rideau trade, was launched in the first week of April 1834. Measuring 105 feet in length by 28.5 in the beam, she was fitted up in “superior style” with a 20-berth gentlemen’s cabin and a 12-berth cabin for the ladies. She was built with a promenade deck fore and aft and propelled by a 25-horsepower engine. Drawing but 2.5 feet of water aft and 16 inches forward, the *Thomas McKay* was well within the specifications for the Rideau Canal.[19]

The immigrant trade was running full spate in the 1830s and 1840s, with rivalry already evident between forwarders using the Rideau route and those committed exclusively to the admittedly shorter (178 miles Montreal to Kingston, as compared with 246 via Bytown and the Ottawa-Rideau system) St. Lawrence route. In mid-May 1834 the Kingston *British Whig* reported the arrival of nearly 200 immigrants at Kingston from Bytown aboard the *Thomas McKay* fully loaded, and a few days later the *Enterprise* with two barges in tow as far as Long Falls. St. Lawrence forwarders had tried to dupe immigrants on the Montreal docks into using their route, which at that time entailed a number of trans-shipments or portages around rapids. These St. Lawrence forwarders disputed the claim of a Kingston shipper to having received consignments from Montreal via Bytown in only five days, whereas Robert Drummond averred that there had been several instances of consignments reaching Kingston from Montreal on the Ottawa and Rideau route in less than five days.[20] In the first week of June more than 300 passengers, having resisted the wiles of touts extolling the rival route, arrived at Kingston by the *Thomas McKay* and *Rideau* via Bytown. They expressed entire satisfaction with the service. The *Margaret* was to join the service shortly.[21] Conditions were nonetheless rough for immigrants. Many travelled on decked barges, and of course, cabin accommodation was available for only the few who could afford it. An item from the *British Whig* as late as 14 July 1847 condemned the deplorable landing conditions on the D.J. Smith wharf in Kingston, so stacked with steamboat firewood that there was space for the weary immigrants neither to stand or sit, and no drinking water. A couple of passengers had fallen off the congested wharf and narrowly escaped drowning.[22] After the hardships endured by so many immigrants in the overcrowded fetid 'tween-deck accommodation of immigrant ships which took up to a month to make the Atlantic crossing, the final stage of the journey from Montreal deck passage would probably have been suffered stoically.

The fare from Montreal to Kingston in 1834 for cabin passengers was "60 shillings & found" (£3-0-0 with meals), whereas the fare for immigrants deck passage was only £0-12-6, with a 50 pound luggage allowance, presumably free of charge. Freight rates were £0-2-9 per hundred-weight for merchandise, and the tariff for commodities forming the principal items in the carrying trade of the time was as follows:

flour	£0-2-0	per bbl (barrel)
pork	0-3-0	"
ashes	0-5-6	"
wheat	0-0-8	bu (bushel)

Goods carried in decked-in barges could dispense with insurance.

Running time from Montreal to Kingston was generally four days.[23] Sometimes, however, it took longer, as witness the log of an unidentified steamer en route from Montreal to Kingston in August 1841:

> 13 Aug 1841 started from Montreal at 3 p m. Took on board . . . 5 1/4 cords wood. Towed to Lachine with 4 horses. Arrived at Lachine 15 min to 10.
>
> 14 Aug Steam up at 15 m to 6 a m; started 15 p 6. Broke a small wheel in . . . canal. Delayed repairing wheel till 11 a m. Steam up and started . . . at 4 p m. Went to anchor 4 miles . . . Lachine at 40 m b. 12 in consequence of one of the Tubes leaking. The water removed from Boiler & tube repaired. Steam up & started at 35 m b 5. Went to anchor 3 miles from Vaudreuil it being dark at 20 m b 8 p m. Distance covered--26 miles in 3 h 45 m.
>
> 15 Aug (Sunday) Started at 5 m to 6 o'clock A M. Got aground 1/4 mile Point Andrew Lock at 1/2 p 6. Got off and passed the Vaudreuil Lock at 20 p 9 A M Aground at upper end of Locks from 20 p 9 till Monday at 1/2 11 A M when towed off by the *Ottawa*
>
> 16 Aug Mon Commenced filling boiler and reshipping . . . at 12 o'clock Took in 1 cord 1/2 of wood from Macpherson Crane & Co. Steam up and started at 7 m past 2 o'clock p m Point Vaudreuil Arrived at Carillon Lock 20 m p 6. Distance travelled 30 miles in 4 h 13 m. Went to anchor in Carillon Locks.
>
> 17 Aug Tue Took in 1 cord of wood from Macpherson & Co. Steam up & started at 7 o'c a m. Got aground in passing Carillon 2nd Lock 1/4 p 7. Got off in tow of *Mohawk* at 40 m p 10. Aground at upper end of Chute a Blondeau Locks 30 minutes Towed by the *Mohawk* from Carillon Lock to Green Point Arrived at latter place at 20 m p 4 P M. Towed by 4 horses to Grenville & arrived there at 45 m p 7: Lay in canal during the night.
>
> 18 Aug Wed Took in 3 1/2 cords of wood from M & Sanderson at 4 o'clock A M Aground at the mouth of the Grenville Canal till 11 o'clock Started 15 m p 11 A M & arrived at wharf 2 miles below Georgians at 15 m p 5-- Tube gave way and went to anchor for the night.
>
> 19 Aug Thur Tube repaired. Steam up & started at 7 o'clock A M--arrived Georgians at 20 m p 7. Took in 1 cord of wood at 6/3. Detained half an hour. Stopped opposite . . . repairing tubes and taking in 1 1/2 cords of wood--9/9; detention 2 hours. Arrived at Bytown Locks at 10 p 4 P M Passed 8 locks 25 m p 5.

20 Aug Fri Rec'd 2 men. . . Bolton to assist in repairing Boiler etc. . . . Steamed up & started from Bytown at 30 min p 3. Aground 35 m 1/2 mile above Bytown. Arrived at Hartwell's Locks 4 miles from Bytown at 25 m p 5. Do.[ditto] at Hog's Back 6 miles from Bytown at 20 p 6. Do. at Black Rapids 10 miles from Bytown 15 to 9. A stump got into the propeller & stopped the Boat 1/4 mile from Long Island Locks at 1/4 to 10 P M--16 miles from Bytown. Went to anchor & passed by the steamer *Otter* on the starboard side at 1/4 p 3 Struck us on the figure head Rung our Bell and called out to the Boat to stop but we got no answer & it was with difficulty we could see the Captain of the *Otter* after she had run into us. Lock man told the *Otter* that we were lying close by.

21 Aug Sat Hauled up to the Long Island Locks & arrived at 8 o'clock A M Got into Lock--propeller would not go round. Got it straight and made up steam at 25 m p 2. A stump got into Propeller & stopped us 2 miles above Kemptville. Landing at 15 m to 8 P M Went to anchor it being dark.

22 Aug Sun Stump removed and steam up & started 1 Lock at 6 o'clock A M Arrived at Burritt's Rapids at 6 m to 7 A M Detained 12 minutes at Lock--42 miles from Bytown. 2 Locks Arrived at Nicholson's at 1/4 to 8 A M Detention passing Lock & getting up steam 40 minutes. 1 Lock Arrived at Clowe's at 5 m p 9 Detention 15 minutes. 3 Locks. Arrived at Merrickville 25 m to 10--47 1/2 miles. Detention passing locks & taking in 2 1/4 cords of wood--1 hour & 35 minutes. 1 Lock Arrived at Maitlands 30 m p 12 (56 miles from Bytown). Two tubes gave way and obliged to wait for Steamer to tow us.

23 Aug Mon *Wm Henry* came up at 9 o'clock A M Went in tow at 5 m p 9 1 Lock. Arrived at Edmond's at 35 min p 10 (60 1/4 miles from Bytown) Detention at Edmond's 35 minutes. 2 Locks. Arrived at Old Slys at 15 m to 12--62 miles from Bytown. Detention passing 2 Locks at Old Slys 40 minutes. 3 Locks Arrived Smith's Falls 25 m to 1--63 miles from Bytown. Detention passing 4 Locks 3 1/2 hours. 1 Lock Arrived 1st Rapids 20 m p 5--66 miles from Bytown. Detention 20 minutes. Went to anchor in Lake in consequence of the fog at 1/2 p 12 the steamer having gone in to Newport.

24 Aug Tue Started up at 1/2 p 7 A M & arrived at the Narrows at 15 to 9 o'clock. 1 Lock A M (86 miles from Bytown) Detention 40 minutes. 1

> Lock Arrived at the Isthmus at 10 m to 11 --90 1/2 miles from Bytown. Detention 30 minutes. Arrived at Chaffey's Mills 15 m to 2 P M 1 Lock 96 miles from Bytown Detention 32 minutes. 1 Lock Arrived at Davis's 5 m p 3 (98 miles from Bytown) Detention 38 minutes. 4 Locks Arrived at Jones's Falls 30 m to 6 (102 miles from Bytown) Detention 1 hour 35 minutes. Started from Jones's Falls at 5 m p 7& arrived at Brewer's Upper Mills at 30 m p 11 P M 114 miles from Bytown.
>
> 24 Aug Tue 2 Locks Detained passing 2 Locks & delayed taking up the steamer's anchor which had dropped--1 hour 20 minutes.
>
> 25 Aug Wed Started from Brewer's Upper Mills at 10 minutes to 1 o'clock A M & got aground at 4 1/4 miles from Brewer's Lower Mills at 30 m p 2 A M. Detention getting off, removing many cases from (Bridge)(?) & lightening her till 1/2 p 8 A M. 1 Lock. Started at 10 m to 9 and arrived at Brewer's Lower Mills at 5 m p 9. Distance 116 miles from Bytown. Detention 32 minutes. Started from Brewer's Lower Mills at 37 minutes p 9 A M. Arrived at Kingston Mills at 5 m p 11. Detention passing 4 Locks 1 hour & 45 minutes--126 miles from Bytown. Started from Kingston Mills at 30 m to 5 P M. [24]

The boiler-plagued and ill-fated vessel had been en route from Montreal to Kingston Mills, a distance a little over 240 miles, for twelve days.

Probably because of Robert Drummond's sudden death from cholera on 20 August 1834, in November of that year the sale of the *Rideau* and *Margaret* by auction was announced for 15 January in the New Year. The *Rideau* was pronounced in excellent running order, often having towed three and four heavily laden barges the previous season.[25] Notice of the sale of Drummond's two boats, the *Rideau* and *Margaret,* could not be found in the Kingston papers or elsewhere, but the *British Whig* lists vessels by these names operating with the Ottawa and Rideau Forwarding Company the following summer; on 11 August 1835, for example, the *Rideau* was reported at Kingston with 18 cabin passengers on board.[26] It is reasonable to infer that the Ottawa and Rideau Forwarding Company was the purchaser of the two vessels, and their operations are to be considered next.

The Ottawa Rideau Forwarding Company

This forwarding line originally was known as the Montreal and Ottawa Steamboat Company, (apparently also by the shortened title Ottawa Steamboat Company: in the absence

of charters one cannot be sure that abbreviated titles designate the selfsame concerns). Until 1837 this company held a virtual monopoly on the Montreal-Ottawa trade because they had sole access to the Vaudreuil lock, the entrance to the Ottawa from the St. Lawrence River.[27] Steamboats of the company's competitors were excluded from the lock, hence denied ingress to the Ottawa-Rideau system, but their barges were towed for a fee by the Ottawa Forwarding Company. Finally in 1841 the government built a second lock at St. Anne's, which broke the monopoly, anticipating which H. & S. Jones of Brockville and Hooker & Henderson of Kingston formed a rival company, with five steamers, to operate on the Rideau-Montreal service.[28]

This monopoly of the Vaudreuil lock was the subject of hard feelings, not to mention high freight rates on the Ottawa-Rideau route, which induced some shippers not to take as full advantage of the system prior to completion of the St. Lawrence canals as they otherwise might have done. The company found a defender nonetheless in an anonymous correspondent writing to the editor of the *Montreal Gazette,* who adduced that the Vaudreuil lock had been built at a cost of some £5,000 borne solely by the "Ottawa Forwarding Company". None of the St. Lawrence forwarders who now wished to use the Ottawa and Rideau route had offered any recompense to the builders, and the correspondent thus concluded that they were not entitled to access to the lock. The correspondent makes evident that this route was becoming attractive, for a recent traveller had publicized how much more comfortable the Ottawa and Rideau route was by steamer or barge than roughing it in a Durham boat ascending the St. Lawrence, and walking over rough portages around the numerous rapids.[29] In fact the Ottawa River and Rideau route was establishing its comparatively brief ascendancy (14 years to be exact) over the more direct upper St. Lawrence to the foot of Lake Ontario.

In 1834 the Rideau and Ottawa Steamboat Forwarding Company, (presumably the same company as the Ottawa Rideau Forwarding), published the following tariff for the Montreal-Kingston service:

cabin passengers 60 s found, or	£3-0-0
immigrants	0-12-6
	with 50 lb baggage

This notice, appearing in the Toronto *Patriot* for 27 May 1834, concurs with that published by the same company in the Kingston *British Whig* of the same date. Thereafter there is a discrepancy in the quoted freight rates. Those printed in *The Patriot* are the following:

freight (presumably general merchandise) £0-3-0 per cwt

whereas the *Whig* quotation was £0-2-9 per cwt

flour	£0-2-3 per bbl
pork	0-2-3
ashes	0-6-3
wheat	0-0-8 1/2 per bu

The company used decked barges towed by steamers, and adduced that freight insurance on these sheltered waters, presumably the Rideau waterway, might be dispensed with, a factor which no doubt was taken into account by shippers. The advertised time for the Montreal-Kingston run was four days. Settlement of accounts was by cash on delivery.[30] Obviously at this time the Ottawa-Rideau route had the advantage of the shorter but more arduous upper St. Lawrence for the up-river trade.

Early in 1835 the Ottawa Steamboat Company reorganized and reconstituted itself as the Ottawa and Rideau Forwarding Company. A meeting of the Kingston stockholders was held at the Commercial Hotel on 3 February 1835, and a motion passed that the Kingston committee contact the Montreal stockholders in order that agreement be reached on the valuation of the stock "of the late Ottawa Company".[31] The committee and principal stockholders of the new company, which had purchased three unspecified Rideau Canal steamers, was composed of Peter McGill, John Redpath (formerly one of the four principal contractors on the Rideau Canal, and with extensive commercial interests in Montreal), John Molson, Thomas Phillips, John Frothingham (who acted as chairman) and Emery Cushing. The company operated the steamers *Shannon, Ottawa* and *St Andrews,* in addition to five steamers on the Rideau and one building, and an undisclosed number of decked barges.[32] In April 1835 the company bought or leased Drummond's Wharf and store in Kingston, and undertook the construction of new wharves. They advertised through rates from Kingston to Montreal via the Rideau, with through service for freight barges on as favourable terms as may be had from Prescott to Montreal (a distance of 110 miles). Trans-shipment at Kingston for the downriver run was claimed to be prompt and expeditious.[33]

In mid-summer of 1835 the Ottawa and Rideau Forwarding Company published the following schedule:

from Kingston at daylight	Tue	*T McKay*	Capt	Chambers
	Thur	*Rideau*	"	Bowen
	Sat	*Bytown*	"	Robins
	Sun	*Margaret*	"	Moorehouse
from Bytown " "	Sun	*Rideau*		
	Wed	*Bytown*		
	Thur	*Margaret*		
	Fri or Sat	*T McKay*[34]		

Thus, with four steamers, the Ottawa and Rideau Forwarding Company scheduled four departures a week from either end of the canal.

The columns of the Kingston *British Whig* give details of cargoes and consignees for 29 May and 9 June 1835 which illustrate the nature of the carrying trade on the Rideau system at this time. On 28 May the *Thomas McKay* arrived at Kingston with what is described as a heavy load of merchandise for William Wilson and J.D. Bryce of that city, and A. Laurie & Co. of Toronto. On the following day the *Rideau,* with barge *Clara Fisher* in tow, arrived at Kingston with 70 passengers, and freight for Kingston, Port Hope and Toronto.[35] Again, on 5 June the *Thomas McKay* towing the barges *Jane* and *Iroquois*, departed Kingston with consignments of wheat and potash for Bytown, flour and potash for Montreal, and a further consignment for trans-shipment to Quebec. On the 8th the *Rideau* with the barge *Carillon* in tow, arrived at Kingston with 50 passengers aboard, and freight for Kingston, Cobourg, Port Hope, Toronto, Bath and Guelph. The *Rideau* had dropped the barge *Kingston Packet* at First Rapids to load a cargo of staves and the barge *William King* at Rideau Lake with merchandise for Perth. The *Margaret* with the barge *Emigrant* left Kingston for Montreal on 8 June with a cargo of staves and potash. Finally on 9 June the *Rideau,* towing the barge *Carillon,* departed Kingston with a consignment of pork for Bytown and flour for Montreal.[36]

The lock records, despite the vagaries with which the lockmasters made their notations, give a clear notion of the commodities conveyed, though not necessarily of tonnages, which had to await the compilation of canal statistics about fifty years after the period under discussion here. The Narrows lock record for May 1834 records the names of steamers locking through this month with a brief description of their cargo and passengers when carried:

Enterprise	6 cabin passengers
	3 3/4 tons of potash
	2 3/4 tons dry goods
Rideau	2 cabin passengers
	3/4 ton kegs of butter
Rideau	250 bu wheat
Enterprise	60 bbl pork
Thomas McKay	2 cabin passengers
Rideau	250 bu wheat
Thomas McKay	1 cabin passenger
Toronto	3 bbl potash
Rideau	2 cabin passengers

In addition during that month five other craft locked through the Narrows, described in the journal as rowboats and a batteau.[37]

The tolls collected at Jones Falls for the period 14 May to 5 September 1835, although indicating only the passengers and commodities on which toll was charged, reflect the character of the trade at the time. On 15 May the *Bytown* locked through Jones Falls for Merrick's Mills with a cargo of 500 iron bars, and on 3 June the same steamer bound for Bytown carried 5 bbl of potash and 500 saw logs. On 23 June the Kingston-bound *Rideau* passed Jones Falls with a cargo of 1 ton of potash and two oxen. On 2 July the *Rideau* was charged a toll of four shillings each on three cabin passengers journeying from Jones Falls to Kingston, and on 5 September the *Rideau* paid a toll of two shillings for one cabin passenger en route from Kingston to the Narrows.[38] It is of interest to note that Durham boats were still in use in 1836, the Narrows lock station recording the passage of one on 8 July loaded with 800 bushels of wheat and 12-and-a-half tons of potash.[39]

Competition for the immigrant trade was keen between the Rideau-Ottawa forwarders and those on the St. Lawrence in 1835. A correspondent in the *British Whig*, 22 September, alleged that St. Lawrence forwarders were issuing disparaging and false statements concerning the hardships and delays on the Rideau route, even to the extent of persuading ignorant immigrants to sign statements complaining of delays on the Ottawa-Rideau route, quite ignoring conditions on the St. Lawrence. For example, an Irish woman with small children spent three weeks coming up the St. Lawrence from Montreal to Kingston. By the time she reached Kingston, which was still 200 miles from her destination, she was penniless. Travel by Durham boat with the frequent portages was not to be compared with accommodation on the other route aboard a steamer or decked barge.[40] To counter such tactics and to promote the Rideau route, Captain Brush, agent for the Ottawa and Rideau Forwarding Company, made a tour in the summer of 1835, during which he established agencies in Oswego, Rochester, Buffalo, Cleveland and Detroit as well as Sandwich, London, St. Thomas, Hamilton, Toronto, Port Hope and Cobourg. Although the promotional trip was regarded as a great success,[41] the Ottawa and Rideau Forwarding Company was in trouble by the following year.

A board meeting was convened in March 1837, attended by Hon. Peter McGill, Emery Cushing, John Fisher, W. Bradbury, Adam Ferris, H. Venner, Charles Mittleburger, John Frothingham, John Redpath, Thomas Phillips, Benjamin Hall, John Molson, John Strange and Thomas McKay. The business of the past year had yielded no profit; there had been a loss of between £7,000 and £8,000. Competition had been keen, the regaining of lost customers was both difficult and costly, and the company had had trouble settling its accounts. Hence a price-fixing arrangement had been necessary, and the Ottawa and Rideau Forwarding Company had readily agreed to such a tariff with rival forwarders.

Without an advance of about £9,300 made by the treasurer, J. Frothingham, the business could not have been carried on; of this sum, the company still owed about £7,300. With the £1,300 owed other creditors, the company's total indebtedness stood at some £8,600, less the company's assets of about £3,400, leaving a net liability to the treasurer of £5,200. But of this fully £2,000 was needed as an advance for the operating expenses of the next season, to repair the steamers and purchase wood. The committee recommended a change in management.[42]

The result of the Ottawa and Rideau's adverse circumstances was a merger with Macpherson and Crane, forwarders, who were to combine their St. Lawrence service with the Ottawa and Rideau route. According to the account in the *Bytown Gazette,* 4 May 1837, Macpherson and Crane were to assume the overall direction of the enterprise.[43] Ottawa and Rideau Forwarding were to operate the service Montreal-Carillon-Grenville-Bytown, and thence through the Rideau Canal to Kingston. The following tariff was published for goods conveyed from Montreal to points on the Rideau:

earthen and glass ware	£1-5-0
furniture, dry goods, loaf sugar, tea, light packages	1-15-0
groceries, hardware, iron	2-10-0
ashes per bbl	0-3-9
flour " "	0-1-3
pork " "	0-2-0
butter " keg	0-1-0
wheat " bu	0-0-4[44]

The Ottawa and Rideau Forwarding Company opened its 1837 season with the steamers *Bytown*, *Cataraqui* and *Rideau* in the Rideau service, under the aegis of Macpherson and Crane.[45] The *Bytown* and the *Cataraqui* arrived at Bytown on 5 May, on what must have been the opening trip of the season, with cargoes of pork, flour, pease and cheese[46] (the latter commodity was to become one of the principal products figuring in Rideau trade in the latter part of the 19th and early part of the 20th centuries). The *Cataraqui* in August of the previous summer had established a record in towing five barges into Kingston, each laden with about 100 tons of freight.[47]

The *Cataraqui* under the command of Captain Chambers, figured in an unseemly incident at Smiths Falls early in June 1837 when John Jones, the lockmaster at Smiths Falls, observed the crew of the *Cataraqui* making fast their lines to the swing bars of the lock. Jones told Chambers not to do so. The captain ignored him, on which Jones threatened to report him. Chambers swore at the lockmaster, and challenged him to settle the matter with their fists. Jones attempted to resolve the matter with a few cutting and well-chosen words:

> I told him I did not want to disgrace the public works with a ruffian of his character, then he spit (sic) in my face and immediately a fight commenced . . . Some of his men ran at me with cudgels, only for some raftsmen I would have been injured.[48]

The sequel to this fracas is unknown, but it is unlikely in those times that the skipper was dealt severely with in court.

The Ottawa and Rideau Forwarding Company lost the *Bytown* on the night of 19 October 1837 in Kingston harbour. She was lying at Counter's Wharf when a gale struck the harbour with such force that the vessel was torn from her moorings, driven ashore and wrecked ("the upper cabin and deck being entirely carried off"). Captain Bowen lost his trunk containing the not inconsiderable sum of £200, as well as a parcel, the property of the Commercial Bank, valued at £1,000.[49] The *Bytown* under Bowen's command had apparently been a very popular boat with passengers, attributable, noted the *Bathurst Courier,* to her master's courteous service.[50]

Successive vessels in Rideau service bore the name Bytown. The *Bytown* II, as she would have been designated at a later period, served briefly as a prison ship. On 14 June 1838 she arrived at Bytown from Kingston with 15 convicted rebels from the ill-fated uprising of 1837 under escort of a detachment of the Queen's Rangers and a sheriff. Sentenced in Toronto, the condemned men were bound for convict settlements at an undisclosed location.[51]

The Ottawa and Rideau Forwarding Company lost a vessel, the *Rideau,* through a boiler explosion on leaving Grenville on the Ottawa on 1 May 1838. Two of her 12 passengers suffered fatal injuries. The coroner's inquest charged the company with operating a steamer with defective boilers, which were found to be "old, sagged in the flues, & unprovided with stays." The *Rideau*'s engineer testified that there was no steam gauge on board. The captain of the vessel was faulted for towing three barges with the boilers in this condition, and the company for operating the steamer in the first instance.[52] It will be recalled that safety regulations at this early date were in a most rudimentary stage, and virtually unenforceable.

On 5 September 1838 a new steamer, the *Hunter*, built in Prescott the summer of 1838, departed Kingston under Captain Hunter on her first run to Bytown. She replaced the *Rideau* which had apparently survived her boiler explosion but was relegated to the less arduous Kingston-Prescott service.[53] Three years later the *Hunter* was in service with the Macpherson and Crane fleet, indicating that the Ottawa and Rideau Company had been absorbed by its partner by that time. But as late as autumn of 1839 a correspondent writing to the editor of the *Montreal Courier* complained that only "the Ottawa Co"

could operate on the Rideau since it had the sole access to the lock at Vaudreuil, the navigational entrance to the Ottawa River. The same letter charged the forwarders with acting in collusion to maintain high freight rates to the detriment of the farmers and merchants of Upper Canada.[54] In this issue of 31 October the *Montreal Courier*'s editor repeated the charges of monopoly and price fixing against the Ottawa and Rideau Forwarding Company, which was, he alleged, exploiting the farmers and merchants of Upper Canada and would force Kingston merchants soon to abandon the Montreal market in favour of the American. The editor predicted that the construction of the St. Anne's lock (completed in 1843), offering an alternative ingress to the Ottawa River, would alleviate the situation.[55] Two years later, in July 1841, another forwarder, Sidney Jones, wrote to H.H. Killaly protesting his exclusion from the Vaudreuil lock by the Ottawa and Rideau Forwarding Company, despite his willingness to pay a toll. He was forced to use instead the St. Anne's lock, where one Mr. Wilkinson charged an exorbitant toll of £2-0-0 per boat.[56]

In 1841 there were six forwarding companies operating on the Rideau and the triangular route. In addition to the Ottawa and Rideau Forwarding Company, treated in conjunction with Macpherson and Crane, which operated a total of 11 steamers and 45 barges, there were:

Hooker & Henderson	3 steamers	26 barges
J Jones & Co	3	25
Sanderson & Murray	2	+ 3 Ericsons (presumably powered barges) + 22 tow barges
Wm Dickinson & Co		15 barges
McGibbon & Ferguson		24

Total: 19 steamers, 3 self-propelled barges, and 157 unpowered or tow barges.[57]

The Rideau service was approaching its first of two peak periods. At this point the operations of Macpherson and Crane, forwarders active in the pioneer 1832-50 period, merit attention. Although Macpherson and Crane flourished into the 1850s, the company's activity as a whole will be considered in the following section.

Macpherson and Crane, Forwarders

This forwarding line, which began operations on the St. Lawrence as early as 1819, was carried on by three partners, John Macpherson of Kingston, Samuel Crane of Prescott, and David S. Macpherson of Montreal. The firm was styled "Mcpherson Crane & Co."[58] The above quoted 1841 list of forwarders shows Macpherson and Crane in partnership with the Ottawa and Rideau Forwarding Company. It is presumed

that Macpherson & Crane absorbed the Ottawa and Rideau Company in 1837.

In 1841 one of the Macphersons gave evidence on the company's operations before a select committee of the Legislative Assembly inquiring into the forwarding trade. He testified that the company maintained 11 steamers in service on the St. Lawrence between Kingston and Lachine, and five more on the Rideau Canal. It operated a daily service from Lachine and Bytown to Kingston, on rather irregular schedules because all the steamers were used for the towing of barges. The company operated 45 barges averaging 90 tons burthen each, in addition to which they chartered about 75 more, averaging 70 tons apiece. For want of freight they had had to lay up a number of the chartered barges, as had other forwarders; demurrage charges per vessel *per diem* (the payment due the shipowner by the charterer for delay in loading or unloading beyond prescribed limits in the charter) ran to between £4-0-0 and £6-10-0. The fare from Montreal to Kingston for immigrants was £0-10-0 and for soldiers £0-7-6. In his opinion the best tow-boat for the Rideau service was a steamer developing 30 horsepower and fitted with a low-pressure engine. The best canal steamers cost about £4,000 each, and six were needed to operate a daily service. The upward passage, Montreal to Kingston via Bytown, averaged 5 days; downward Kingston to Montreal on the St. Lawrence, with a fair wind, 48 to 60 hours. The proportion of upward to downward freight was in the ratio 18:70.[59] Samuel Crane also appeared before the committee. He testified that rates could be reduced through the medium of increased competition, but that prior to 1840 a price-fixing agreement among the forwarders had been in force which kept the rates high. The previous year they had shipped down to Montreal about 703,000 barrels of flour (287,000 American), and approximately 16,000 tons of merchandise up from Montreal, including 2,400 tons of salt. Yet they had been laying vessels up for want of freight.[60]

The fact was that the Rideau route was suffering competition for the trunk trade from the cheaper Erie Canal. A ton of freight conveyed from Montreal to Kingston via the Rideau Canal cost £3-2-6, whereas in the same 1838-40 period a ton of freight conveyed a more or less similar distance on the Erie Canal was charged £2-4-4. The select committee of the legislature attributed the higher costs on the Rideau route to the absence of tow paths and the fact that the forwarders engaged in the trade were private companies rather than a government service.[61] One might surmise that private and competing companies would provide the cheaper service, but as we have seen, a price-fixing arrangement had been in force in the Rideau service until quite recently which would have kept the rates up.

In 1846 Macpherson and Crane, together with Hooker Holton and Company, and H. Jones and Company published the following tariff schedule for the Montreal-Kingston service:

pig iron, brick, coal, salted fish, pitch, tar and resin	£0-1-0 cwt
bar iron	0-1-3 "
heavy hardware, groceries, crockery rod hoop & sheet iron, boiler plate	0-1-6 "
dry goods, glass, powder	0-2-6 "
salt in bags or barrels	0-1-6 "[62]

In January 1847 the same consortium of companies published a freight tariff in Kingston's *British Whig* substantially the same for goods shipped up to Kingston, with the exception of dry goods, glass and powder, now only £0-2-0, down sixpence per hundred-weight from the previous summer. In addition the freight rates for the following items in the down trade were quoted:

flour	£0-1-6 bbl
pork & beef	0-2-3 "
tobacco	0-10-0 "
butter & lard	0-0-10 keg
wheat & other grain	0-0-6 60 lb[63]

Insofar as the previously quoted tariff of 1837 may be compared with that of ten years later, flour, pork and wheat paid higher rates in 1847 and butter two pennies less per keg. There was a dramatic decrease in freight rates for dry goods from an 1837 quotation of £1-15-0 to a mere half-crown (£0-2-6). This same year Macpherson and Crane, along with Hooker Henderson, James A. Walker & Co., and H. & S. Jones & Co., established a warehousing business, at the following rates for a ten day period:

flour	£0-0-1 per bbl
beef & pork	0-0-1 1/2 "
ashes	0-0-3 "
grain	0-0-1/2 bu[64]

Macpherson and Crane operated the steamer *Perth* over a 16-year period. The *Perth,* 55 tons register and 102.5 feet in length, was built in Prescott in 1837.[65] Her 1847 schedule called for a departure from Kingston Tuesday mornings at 9:00, arriving the following evening in Bytown at 7:30, a 34-and-a-half hour run. She left Bytown Friday mornings at 9:00 to arrive in Kingston Saturday evening at 8:30, making the same time.[66] She called en route at Kingston Mills, Upper Brewer's, Jones's Falls, the Isthmus, Oliver's Ferry, Smiths Falls, Merrickville, Burritts Rapids, Beckett's Landing, and Long Island. At Bytown she made connection with the Ottawa River boats for Grenville and Montreal.[67] As Smiths Falls was the more or less mid-point on the waterway, leaving in the morning from either end the steamers almost invariably were scheduled to call at this important town in the dead of the night.

Another well known Macpherson & Crane steamer was the *Beaver,* skippered by Captain J. Patterson. She too was on the Bytown-Kingston service, and was of similar dimensions to the *Perth,* but apparently a little faster, with a 27-hour schedule between Kingston and Bytown.[68] In 1849 she locked through Kingston Mills with a cargo of potash and potatoes and 10 cabin passengers. She had on one occasion carried 44 deck passengers.[69] In 1850 Macpherson & Crane were running a fleet of six steamers on the Rideau Canal. The *Beaver* maintained a bi-weekly service, connecting at Bytown with the *Charlotte* for Montreal. The *Caledonia* ran a weekly service, freight only, from Montreal to Bytown and thence to Kingston. Likewise the *Juno* and *Mercury,* freight boats, made connection on a tri-weekly basis with steamers on the Montreal-Burlington run. The *Beaver* operated between Bytown and Kingston bi-weekly, and the *Perth* was kept at Bytown (1850 season) for towing rafts.[70] The steamer *Prince Albert* under Captain Friel operated the length of the Rideau waterway. She took 51 hours from Bytown to Kingston, but returned from Kingston in only 26 hours. The *Beaver* maintained a 23-hour schedule Bytown to Kingston, and 26 hours on the return run.[71]

The *Beaver* operated on both the Rideau and the Ottawa. Her earnings per trip on the Rideau for the months of August and September 1852 have been recorded. In the course of these two months, the *Beaver* made 13 trips, for which her total earnings were £250-18-4: the revenue per trip varied from a low of £13-9-11 to a high of £26-18-10.[72] For the last four trips of the 1852 season the *Beaver*'s earnings were £109-13-3.[73] The account of the steamer *Perth* for the four weeks ending 16 November 1852 shows aggregated earnings of £54-18-3, mostly for towing:

11 Oct towing 2 barges Kingston to Chaffey's & back 220 miles	£21-5-0
5 Nov tow to Isthmus & return 80 miles [Kingston]	5-0-0
5 Nov tow *Union* Kingston to Rideau Lake return 118 miles	7-7-6
6 Nov tow *Thistle* and *Oxford* Kingston-Smith's Falls return 140 miles	17-10-0
11 Nov freight on 118 kegs of butter Smith's Falls via Kingston	2-5-9
16 towing schooner 1 1/2 hr	1-10-0[74]

Macpherson and Crane's wood for the 1853 season, delivered in December 1852 and sufficient for six steamers, came to £39-8-6. It consisted of tamarack, hemlock and unidentified hard and soft woods. The invoice reads as follows:

Meteor	3 cords	tamarack	@6/	£0-18-0
Charlotte	9 "	hemlock	5/6	2- 9-6
Juno	21 cords	hemlock	5/6	5- 2-6
Perth	3 "	hard	7/6	1- 2-6
	63 "	soft	5/6	17- 6-6
Otter	9 "	soft	5/6	2- 9-6
Beaver	15 "	tamarack	6/0	4-10-0
	27 "	soft	5/6	7- 8-6[75]

Obviously at this date (1852-53) the Macpherson and Crane fleet was still burning wood in their fire-boxes, wood still being in good supply in the Rideau region.

From this same period Macpherson and Crane's meat bills for four of their steamers covering the month of October 1852 came to £35-5-4.[76] Macpherson and Crane's Journal for 1852 contains an itemized account, presumably for the season, of the operating and provisioning expenses of the steamer *Beaver:*

Washing account [presumably laundry]	@	£2- 2- 6
Byce & Co. for cordage		15-16-10
A Foster for groceries		12- 1-3
A Foster for oil		1-13-6
blacksmith work		1-17-7
O Watkins hardware		2- 8-4
R McDermott groceries		29-14-4
tinsmith		5-16-8
John Fraser hardware		5-13-5
T Duff stationery		5- 9-2
A Sands 48 cords of wood		12- 0-0
Wm Wilson blankets		9- 8-0
A Rap bread		24-15-8
U Budin beef		82- 6-8
S M Wilkinson crockery		1-12-6
Arthur Foster groceries		6-10-7
Thos Henning groceries		23- 2-4
Total:		231-12-4[77]

Since the *Beaver's* earnings for the months of August and September 1852 aggregated £250-18-4, and assuming that the foregoing expenses were for the season (not certain), and allowing for crew's wages and perhaps other running expenses not tabulated herein, it may reasonably be surmised that Macpherson and Crane was not operating the steamer at a loss.

In any case the Macpherson and Crane business extended far beyond the Rideau Canal. In 1851 they acquired the Kingston Hooker and Henderson wharf, at the foot of Princess Street, for use in their Hamilton-Montreal service.[78] In addition to this, Macpherson and Crane advertised a daily service in 1850 from Montreal which connected with the New York, Vermont and Canada Line.[79]

Termination of the long-established Macpherson and Crane service has not been ascertained but the company

survived into the second period of this study. An 1857 reference to the company states that its stock had been acquired along with that of Robertson Jones and Company by the Ottawa River and Rideau Canal Company. The Ottawa River and Rideau Canal Company continued to operate the *Charlotte* and *Juno* to and from Montreal serving all points on the Rideau Canal that season.[80]

Hooker and Henderson, Forwarders

Another firm active in the Rideau and triangular service in the early period was the firm of Hooker and Henderson. Prior to 1 April 1838 a Montreal house, known as Henderson, Hooker and Company, and a Prescott office, taking the title Hooker, Henderson and Company, had operated a partnership. At that date the partnership was dissolved, and the forwarding business continued under separate heads: the Montreal firm under James Henderson and Donald Murray, and the Prescott house under Alfred Hooker and Francis Henderson.[81] In February 1841 Hooker and Henderson, with head office in Kingston, announced the opening of a new service with the commencement of navigation, using five steamers on the Montreal-Kingston route via the Rideau. Arrangements were to be made for passage through the Ste. Anne's lock into the Ottawa,[82] which apparently miscarried, for Francis Henderson, in testifying before the select committee of the legislature on 26 August 1841, stated that the company was only operating between Lachine and Kingston on the St. Lawrence with four steamers.[83]

By the spring of 1848 Hooker and Henderson had put a superior steamer, the *Prince Albert,* on a fast service (no tows) between Bytown and Kingston, operating a 27-hour service the length of the waterway, two return trips per week.[84] The *Prince Albert* was powered by two horizontal low-pressure engines, and was described as superior to any vessel in towing. Although primarily a passenger boat, she also carried freight. She made connection at North Kingston and Bytown for Montreal, her rates being advertised as "not higher than the St. Lawrence." This was significant because all the St. Lawrence canals were opened in 1848.

In the spring of 1850 the *Packet* described the accommodation of the *Prince Albert* as the "most commodious ever stationed on the Rideau route," with cabin berths for 30 passengers, the gentlemen's quarters below and the ladies' on deck.[85] However, an English passenger of the time, William H.G. Kingston, found her accommodation primitive and confined:

> She had an upper open deck. Under it was the ladies' cabin, very narrow, with narrow berths, and a passage outside round it, and a small gallery at the after part. Beneath it again, was the gentlemen's cabin, with rows of

sleeping places at the sides, and a narrow dinner-table down the centre. The accommodation was thus very confined and rather less airy than we could have desired.[86]

Indeed the *Prince Albert*'s accommodation would have been deemed primitive 25 to 30 years later, and may have been so by English and American standards at the time, but for the Rideau at mid-century she was considered the last word.

The *Prince Albert* was sold at auction at Bytown in 1850. She was still running in 1857, operated at that time still on a bi-weekly Kingston-Bytown service, by the forwarder Edward Smith.[87] Down-freight was trans-shipped at Ottawa to the *John Stewart* for Montreal, and up-freight off-loaded at Port Elmsley or Oliver's Ferry.[88]

Hooker and Henderson advertised the following freight tariff for 1845:

Montreal to Kingston, up trade	
salt in bags or bbl, coal tar	£0-1-3 per cwt
pitch and resin in bbl	£0-1-3 per cwt
pig iron, coals & salt in bulk	0-1-6
bar, hoop, rod & sheet iron	0-2-0
tin, Canada plates & fish in bbl	0-2-0
dry goods	0-3-0
Kingston to Montreal, down trade	
flour	0-1-9 per bbl
pork, beef or lard	0-2-6 "
ashes	0-5-0 "
butter & lard	0-0-10 keg
wheat and other grain	0-0-7 60 lb
staves	7-10-0 per standard mile
West India staves	2-10-0 per 1200 pieces

The company insured all down-freight on the riskier St. Lawrence "unless the owners give orders to the contrary in writing. "[89] A comparison of the Macpherson and Crane rates for 1846 with those of Hooker and Henderson for 1845 indicates that with one exception, salt, the former were lower, although given the time difference it is not clear whether the rate differential is significant. Both companies charged the same rate for butter and lard.

Until 31 March 1845 Hooker and Henderson operated under a complicated co-partnership scheme, with head offices in Montreal, Kingston and Bytown. At this time the agreement was terminated, and the business reconstituted as Hooker Holton and Company of Montreal, and Hooker Henderson and Company of Kingston. The directors were Alfred Hooker, Francis Henderson, and Luther H. Holton, James Henderson having died.[90] Hooker and Henderson is alleged to have failed about 1850 through "speculating in flour and pork."[91]

Other Forwarders

Another well-known early forwarder was Murray & Sanderson, which in 1844 advertised up-service, Montreal to Kingston via the Ottawa and Rideau and down-service Kingston to Montreal via the St. Lawrence. This company operated steamers, "Ericson propellers" (thought to be powered barges, although they may have been propeller-driven steamers as distinct from paddle-wheel types), schooners and barges.[92] The company leased a storehouse at the foot of Gore Street in Kingston, and had extensive premises in Brockville, Bytown and Montreal.[93]

The People's Forwarding Line in the spring of 1844 advertised a three-steamer service, besides barges, on the triangular route, the steamers being the *Favorite* (Captain Jones), the *Britannia* (Captain Maxwell) and the *Rob Roy* (Captain Dickinson). The company used the Custom House wharf in Kingston as well as the Lake Ontario Mail Line dock; G.W. Johnson acted as their Montreal agent, and George Henderson acted for them in Kingston.[94] The *Favourite* (or *Favorite,* alternate spelling) departed Kingston on Saturdays at 12:00 noon, and the *Rob Roy* from Kingston Wednesdays at 10:00 A.M. People's Forwarding maintained in its advertisements that its boats were fitted up in a style equal to any on the route.[95]

It is suspected, although not demonstrated, that the People's Ottawa and Rideau Line, formed in 1849, was a derivative of the earlier People's Forwarding Line. The principals of the new company were Clemow, Jones and Company of Montreal, Francis Clemow and Company of Bytown, and Dickenson, Jones and Company of Kingston.[96] The company advertised a thrice weekly Montreal-Kingston service via the Rideau in 1849 and announced its debut by alleging that many of the forwarders were deserting the Rideau up-route as a result of the completion of the St. Lawrence canals.

Another forwarder who joined the Rideau service with a new fleet of steamers and barges, just before the opening of the St. Lawrence canals in their entirety, was that of James A. Glassford and George Smith. Glassford and Smith figured on a freight capacity of 20,000 barrels of flour per month.[97]

The Rideau at Mid-Century

According to V.A. George, there were five steamers in the Rideau service in 1834, 22 in 1841 and 31 in 1850.[98] As has been noted the St. Lawrence canals were completed in 1848, to which the Rideau route immediately lost most of the trunk trade from the west, as had the St. Lawrence itself, in larger context, to the Erie and Hudson River system, although what impact this had in itself on the Rideau system is difficult to assess. However, there were nine more steamers operating in 1850 on the Rideau than in 1841,

which suggests that the overall effect of the St. Lawrence canals may not have been as great as suspected. In any case it is only from 1873 that accurate and comprehensive canal statistics dealing in tonnages are available. The sundry volumes of lock journals record numbers of vessels and the commodities making up their cargoes, from which an idea of the amplitude of the trade only may be derived. Suffice it to say that the completion of the St. Lawrence canals seems to have finished the Ottawa-Rideau system as a trunk route to and from the western region of the lower lakes.

The Middle Years: 1850-90

This 40-year period witnessed the transformation of the region to an established agricultural, lumbering and mining one, bearing few marks of the vanishing frontier of the previous generation. In exports the American market largely displaced the British, and the sawn lumber trade for the square timber. Mining products and cheese assumed large proportions in the carrying trade with the decline of wheat and flour as major exports. In these years, although the lumber trade flourished for a time, by the 1870s the prime timber in the Rideau corridor had been cut, and by the 1890s the demise of the flourishing saw mills was foreseen. By the mid-1890s powered vessels had supplanted unpowered craft as the principal carriers, and despite the railway threat, a luxury passenger trade developed along the scenic waterway which largely sustained itself until the post-war 1920s and 1930s. Increasingly from 1841 to completion of the 9-foot St. Lawrence canals in 1848 the original circular traffic pattern was disrupted, since the more direct St. Lawrence route captured the up-trade on the trunk route. Empty barges too could now be more expeditiously moved to the interior via the St. Lawrence, rather than the former Ottawa-Rideau system. The Rideau Canal nonetheless retained considerable custom for both cargo and passengers between Kingston and Ottawa, and points between.[99]

The transition from the square timber to the barged lumber trade destined for American points in the years 1861-75, in combination with the export from the Rideau region of iron ore, induced an increase in both steamer and barge traffic, particularly at the Kingston end of the waterway (in volume about five-fold that at the Ottawa end).[100]

Finally in the period 1875-95 the Rideau traffic pattern had again become bi-directional. By this time timber resources in the Rideau region had become depleted, and hence lumber exports came increasingly from the Ottawa and the Gatineau, through Ottawa and thence on the Rideau Canal to Kingston for export. The lumber barges moving from

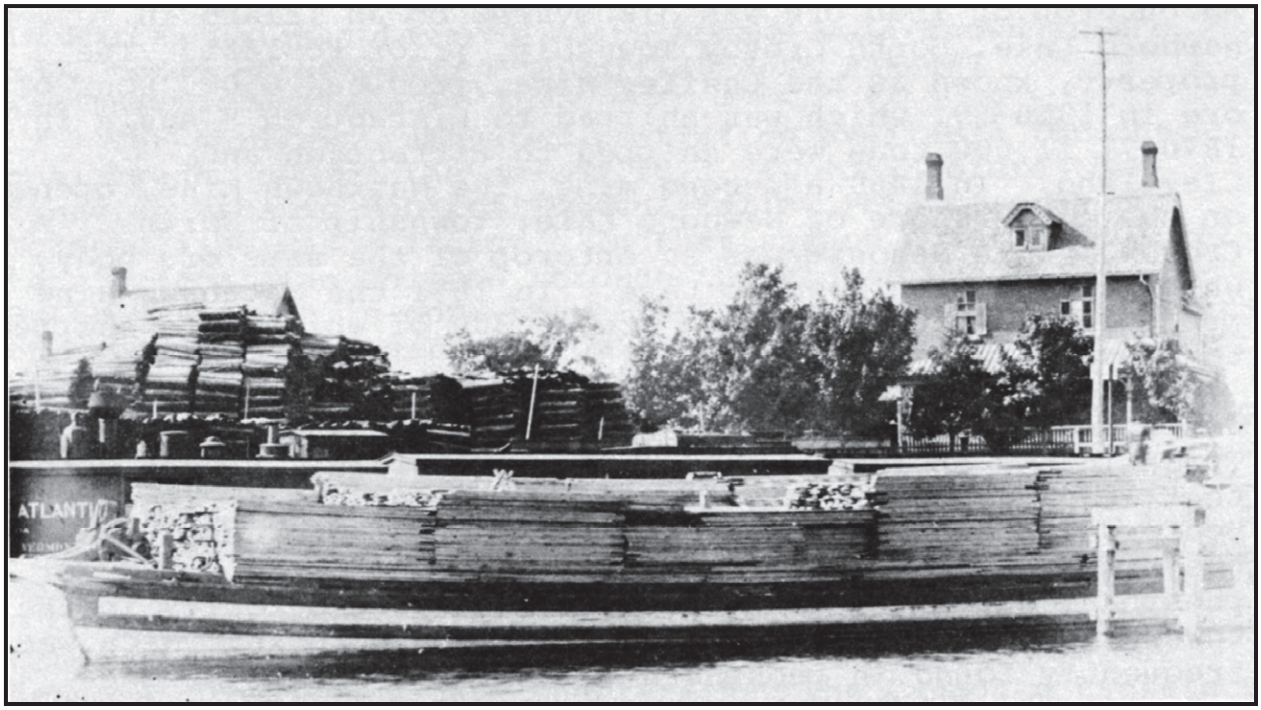
Ottawa to Kingston were counter-balanced by coal barges (American imports) moving from Kingston to Smiths Falls and Ottawa. Inasmuch as the Rideau region was not well served at this time either by roads or railways, the canal and waterway provided the principal transportation system for goods and passengers,[101] a development lasting well into the 20th century.

The Lumber Trade

As early as 1854 the editor of the *Ottawa Citizen* commented enthusiastically on the transition from the square timber to the sawn lumber trade.[102] Although the Rideau had never been dominated by the square timber trade to the degree that the Ottawa had, the traditional export of timber in rafts or as barge cargo continued alongside the rapidly expanding trade in sawn lumber for the American market[103] under the stimulus of the Reciprocity Treaty of 1854. This agreement, destined to be short-lived (it was abrogated in 1866), allowed free trade in natural products, which acted as a tremendous stimulus to the sawn lumber trade along the Rideau as elsewhere. The Tetts and the Chaffeys in the Newboro region developed a brisk export trade in sawn lumber from their own mills, which was shipped to Kingston and trans-shipped to Oswego and Cape St. Vincent. The high- pitched whine of sawmills, working day and night, rent the air in the townships of Bedford and North Crosby. The magnificent stands of white pine were quickly depleted by about 1875, but the lumber trade continued unabated for the rest of the century as hitherto less desirable timber was felled to meet the demands of industry. Sawn lumber originally had been floated out in rafts, but from the 1850s increasingly went by barge. Annual statistics embracing vessel and freight tonnage, and passenger traffic begin only in 1873. To take but two categories of export, square timber and sawn lumber, a trend favouring the latter is discernible in the period 1873 to 1888-89.

In 1873-74 barges and steamers (mostly the former) freighted 20 tons of square timber through the Rideau, and 1,990 tons were rafted.[104] Five years later, 1878, the figures were 23 tons by barge and 1,420 tons in rafts.[105] In 1881 all the square timber tonnage (1,482 tons) was rafted.[106] Passing on to the 1885-86 season, 2 tons only of square timber went as deck cargo, and only 682 tons by raft,[107] declining to a mere 220 rafted tons for the 1888-89 season, at the close of the mid-period.[108]

Turning to the trade in sawn lumber for the same period in 1873-74, 13,757 tons went through by barge, and 121 by raft.[109] In 1878 barges carried 14,061 tons, whereas only 42 tons were rafted.[110] By 1881 the freight tonnage for sawn lumber conveyed by barge or steamer had



A common cargo shipped by barge was sawn lumber for the American market from the 1870s. This photo was taken on the canal near the Ottawa East Bridge in September 1892. (Mr. N.B. Ballantyne.)

fallen to 8,103 tons, in contrast to what occurred nationally where exports of wood products had a banner year[111] but 1885-86 witnessed a surge in the sawn lumber trade with freight tonnage by barge totalling 39,200, with an additional 69 tons rafted.[112] At the close of this period, 1888-89, freight tonnage of sawn lumber by barge reached 59,390 tons, a mere 22 tons going through in rafts.[113] According to A.R.M. Lower, the peak period for the lumber industry in eastern Canada was the last three decades of the 19th century (1870-1900).[114]

The Mining Industry

From the mid-1850s valuable mining properties were developed in the Rideau corridor, which added considerably to the carrying trade of the Rideau Canal. Phosphates were mined from 1855 in North Burgess Township, Lanark County, an area directly south of Perth; some properties continued to produce into the 20th century, many of the phosphate mines later being worked for mica. Phosphates were also found in North Elmsley Township, which lies between Smiths Falls and Perth. In Leeds County phosphate was mined in the townships of Bastard, South Crosby, and South Burgess, the region roughly from Rideau Lake south through Portland and Elgin to Jones Falls.

An outcrop of iron ore was discovered on an island in Newboro Lake, South Crosby township, prior to 1851. The property, known as the Chaffey Mine, produced 6,000 tons of ore in 1858-59, which was shipped to Pittsburgh. Again in 1870-71 11,000 tons was shipped to Pittsburgh and Cleveland. In 1860 a second mine, the Matthews Mine, opened on the north shore of Newboro Lake, township of North Crosby. This deposit was an outcrop of the same ore body, which ran beneath Newboro Lake. In 1871 the Matthews Mine produced 4,000 tons of iron ore, 3,300 of which was shipped to Cleveland.[115]

The mineral resources of Frontenac County were described in a speech delivered to the Kingston Board of Trade in the spring of 1889 by Joseph Bawden. Bawden noted that lead was found in extensive deposits in Storrington, Bedford and Loughborough townships. Frontenac County was at the time thought to be the richest region in the world for phosphate deposits, with scattered but rich deposits in the townships of Bedford, Portland and Hinchinbrooke. Mica was frequently found in phosphate veins (mica was to become significant in the next century), and was in demand by the electrical industry. Iron had been found at Sharbot Lake in the northern part of the county, but the find had not yet been analyzed.[116]

Canal statistics summarizing the carrying trade for the period 1873-89 indicate a fluctuating production and shipment in mine products, the trade in kryolite alone (with which is listed "other ores") increasing steadily to 1881; the figure for 1873-74 was 1,264 tons shipped,[117] compared with 4,329 tons in 1881[118] dropping back by 1888-89 to a figure comparable to that at the start.[119] The rest of the figures appear in the appendices. This traffic descended the Rideau to Kingston, where it was trans-shipped to consignees as far afield as Europe in the case of mica. The actual carrying trade in mineral products will be considered in more detail with the forwarders who were chiefly engaged therein.

The Coal Trade

Coal imported from Pennsylvania through Oswego and Kingston became a major commodity in the Rideau carrying trade with the construction of the Canadian Pacific Montreal-Toronto line through Smiths Falls and Peterborough in the early 1880s. This line was completed in 1885. Smiths Falls became a major divisional point with a voracious demand for coal; by this time the railways had been using coal in the main for 15 to 20 years, as had the steamboats. The advent of the Canadian Pacific Railway at Smiths Falls was not a direct threat to the Rideau Canal, and indeed for a few years proved a considerable stimulus to the canal carrying trade. Canadian Pacific coal was shipped from Oswego to Kingston where it was trans-shipped into

canal barges and coal boats for the 65-mile run to the yards in Smiths Falls. Several boats became well known in the coal trade--the *Jeska, TJ Waffle, John Randall* and the *Buena Vista.*[120]

The earliest tabulated statistics available for the coal trade are for the season 1873-74, long before the Canadian Pacific Montreal-Smiths Falls, Peterborough and Toronto line was a factor. In that season a total of 3,481 tons of coal was shipped through the Rideau Canal.[121] By this time it is more than likely that the Rideau steamers themselves had converted from wood to coal. Ten years later, 1883, the coal traffic had declined to about two thirds of that volume but then in 1885-86 it rose steeply to 9,107 tons,[122] and in 1888-89 at the end of the period under consideration, to 11,976 tons.[123] Throughout the era of commercial navigation on the Rideau the coal trade fluctuated considerably, but from 1914 declined sharply to more or less what it had been in the early 1880s.

Unfortunately for the forwarders in the Rideau coal trade, they kept the Canadian Pacific business for a few seasons only. At a date undetermined the Canadian Pacific ceased bringing their coal into Smiths Falls by water, having found that it was more economical, and undoubtedly faster, to ship it in all the way by rail in the original American trucks, by arrangement with whatever American railways had been hitherto delivering it to Oswego.

Wheat, Flour and the Cheese Trade

It has been asserted that with the gradual exhaustion of the soil the trade in wheat and flour declined, to be supplanted in large measure by the cheese trade. Although the Canal Statistics record the Rideau Canal trade in both wheat and flour, the figures for cheese are not adumbrated at all, cheese being lumped in with animal products, agricultural produce, or some such generalized designation. This is an unhappy hiatus in any study of the Rideau Canal forwarding trade, for cheese figured largely in canal shipments until the days when motor transport replaced it. Neither the railways, nor steamboats, could begin to compete with truckers for that sort of trade.

Earl Allan Haslett attributed the expansion of the cheese industry to exhaustion of the more fertile land, improved transportation and the abrogation of the Reciprocity Treaty. His study is province-wide, but is informative on the Rideau region. The first cheese factory established within the corridor was that of P.W. Strong in Leeds County, 1865.[124] Private ownership of small factories predominated in eastern Ontario, whereas in western Ontario co-operatives were the rule. In the 1860s the United Kingdom constituted the principal world market for cheese. By the year 1874 Canadian cheese had become

popular in England, so much so that by 1890 the United Kingdom imported 50 per cent of its cheese from Canada.[125] The peak period for cheese production in the Rideau region was the 1880s and 1890s, with Leeds County predominating in the former period, and Carleton in the latter.[126] A speaker before the Kingston Board of Trade in 1898 asserted that the economy was largely dependent on butter and cheese exports, and that the industry should be given every encouragement. He suggested that the Butter and Cheese Association be invited to hold its 1899 convention in Kingston.[127] So dominant was the cheese trade on the Rideau that many of the best known steamers - *Rideau Belle, Rideau King, John Haggart* among others - were known as the "cheese boats." New Zealand producers, however, gradually elbowed Canadians out of the United Kingdom cheese market, in part because of rising production costs in Ontario and the increasing domestic demand for milk and butter.[128] According to Coral Lindsay, the last consignment of cheese on the Rideau was shipped by the *Ottawan* in 1930.[129]

Statistics for the trade in wheat and flour, formerly the export staples of the Rideau region, begin only in 1873-74. Wheat traffic tails off sharply from 1,231 tons in 1873-74[130] to 179 tons in 1878,[131] thereafter declining to 75 tons in 1885-86[132] picking up again to 238 tons for the season 1888-89.[133] Flour tonnage maintained a more even tenor: it was 98 tons in 1873-74[134] and reached a peak for the period of 398 tons in 1885-86.[135] Without figures for the wheat and flour trade prior to 1873, when these commodities were staple exports, further conclusions cannot be drawn.

The Passenger Trade

In 1874, the first year for which comprehensive statistics are available for the Rideau service, a meagre total of 874 passengers booked passage somewhere on the Rideau Canal. We have already seen that the opening of the St. Lawrence canals in 1849 and of the Grand Trunk from Montreal to Toronto in 1856, put an end to the Rideau Canal as a link in a trunk route to the lower lake region to the west. From mid-century, therefore, the Rideau passenger trade became a regional one between Kingston and Bytown. Traffic increased noticeably in the later 1870s, however, attaining a peak of 5,371 by 1880. The decade of the 1880s witnessed an erratic fluctuation in passenger figures for the Rideau, reaching a nadir of barely one thousand in 1884, but registering a considerable recovery by 1890 (4,193 in 1888 and 3,921 in 1890).[136]

Indeed the origins for the spectacular expansion of the Rideau passenger trade dating from 1896 and reaching its apogee in 1906, may be traced to the 1870s and 1880s with the debut of the luxury passenger steamer.

Canadian Canals and the Rideau

Before passing to an account of a few of the principal forwarders of the 1850-90 period, one may well ask oneself whether the Rideau Canal had not already become a mere bypass in comparison with the St. Lawrence canals, the Welland and the Sault Ste Marie on the upper lakes; or again with more comparable waterways, such as the Chambly. Again the researcher is bereft of adequate statistics for the meaningful pre-1848 period, and must rest content with financial figures of upkeep and revenue collected for the various canals until 1873, when figures on numbers of vessels and tonnages become available.

Perhaps the figures of gross revenue will best serve in an attempt to compare the volume of traffic on the Rideau Canal with that on the Chambly, the St. Lawrence and the Welland. In 1855 the gross revenue for the Rideau Canal was $13,938.55, compared with $74,791.60 for the St. Lawrence canals, and $225,839.93 for the Welland Canal. The Rideau's revenues, dwarfed by those of the St. Lawrence, exceed only those of the Chambly Canal ($10,121.25).[137] Taking the same statistics four years later (1859), the gross revenue for the St. Lawrence canals exceeded that of the Rideau nearly seven times: $10,743.90 was the figure for the Rideau Canal, and $72,866.06 for the St. Lawrence canals. This same year the return on the Chambly Canal, $16,132.54, surpassed the figure for the Rideau.[138] By 1863 the disparity had increased; in that year, the Rideau grossed only $7,685.16, whereas the Chambly took in $25,263.51, the St. Lawrence canals $119,416.22, and the Welland Canal $240,899.95.[139] These figures illustrate clearly the significance of the Rideau Canal in the overall transportation system of the province at the time.

The first canal tonnages available are for the year 1858, which unfortunately for our purposes, lump the Rideau and Ottawa canals together under one head. In that year the Rideau-Ottawa system passed 534,467 vessel and freight tons, compared with 1,363,368 for the St. Lawrence canals, and 2,003,883 for the Welland.[140] Five years later, in 1863, figures for the Ottawa and Rideau were 736,189 compared with 1,931,442 for the St. Lawrence system.[141] The first year for which traffic tonnage figures for the Rideau Canal are available is 1873. In 1878 the vessel tonnage on the St. Lawrence exceeded that on the Rideau by a factor of ten: the figure for the St. Lawrence canals was 1,730,286 and for the Rideau Canal 153,304 - the Ottawa canals passed 432,475 vessel (or register) tons.[142] Figures for the years 1883 and 1890 (1883: Rideau 172,930 vessel tons, Ottawa canals 536,654 vessel tons;[143] 1890: Rideau Canal 140,678 vessel tons, Ottawa canals 400,239 vessel tons[144]) indicate that the disparity in traffic between the Rideau Canal and the Ottawa canals was on the increase.

M.K. Dickinson, Forwarder

In 1844 Moses [Moss] Kent Dickinson (1822-97), founder of Manotick (1859) and mayor of Ottawa (1864-1866) launched himself in the forwarding business at Kingston with the purchase of a steamer and a barge. In 1846 he bought a second steamboat and barge. From these modest beginnings he built one of the most flourishing forwarding companies on the Rideau spanning mid-century, selling out only in the mid-1860s. Dickinson forwarded flour and feed from the mills of Merrickville, Westport and Burritt's Rapids to Bytown and Kingston, cheese for export to the United Kingdom, and was active in the timber trade. Timber was shipped through the Rideau to Kingston, and thence trans-shipped to lake schooner for Oswego from whence it proceeded on the Erie Canal to various industrial centres in the eastern United States. In 1848, perhaps influenced by completion of the St. Lawrence canals, Dickinson moved to Montreal. Although he still operated in the Montreal-Bytown-Kingston triangular trade, he now envisaged serving the Richelieu River-Lake Champlain route with the products of Ottawa Valley lumber camps.[145]

From his Montreal office Dickinson in 1854 operated five steamers (*Lily, Albert, Britannia, Leeds, St George*) and 18 barges in the Quebec-Montreal, Bytown-Rideau Canal service,[146] with connections for Boston and New York.[147] The *Bytown Gazette,* 3 June 1858, carried an advertisement for the Ottawa and Rideau Transportation Line, of which M.K. Dickinson of Montreal was the proprietor. Whether this line was a subsidiary he had acquired, or his old company under a new name, has not been determined. The six-vessel fleet consisted of five different vessels (*Erie, John Stewart, Alert, Whitehall, Breeze*) to those he had been operating four years previously plus the *Leeds.* The Ottawa and Rideau Transportation Line served Quebec, Montreal, and all ports of call on the Ottawa and Rideau.[148] A subsequent advertisement in the *Ottawa Citizen* of 22 September 1863 gives further detail on Dickinson's operation. The *Brittania* and the *Bytown* were operated as both passenger and freight steamers, whereas the *Lily* and the *John Stewart* carried freight only. There were four tugs (the *Prescott, England, Leeds* and *Erie*) and 45 barges. The tugs and barges were used in the lumber trade, Ottawa to Grenville, whereas the *Bytown* and *Brittania* operated on the Rideau between Kingston and Ottawa.[149] The *Bytown* carried passengers and freight on a bi-weekly schedule between Kingston and Ottawa. She left Ottawa Mondays and Thursdays at 7:00 A.M., arriving in Kingston at 11:00 A.M. the following morning, and departed Kingston Tuesdays and Fridays at 3:00 P.M., arriving in Ottawa Wednesdays and Saturdays at 7:00 P.M. (28 hours each way). The *Britannia* was in the same service,

but was available for tows on request, hence her schedule could not have been as tight as the *Bytown*'s.[150]

The following season, 1864, Dickinson added two new "upper cabin" steamers to his service, the *Kingston* and the *City of Ottawa*, which operated between Kingston and Ottawa carrying both passengers and freight four times weekly. The tug *Queen of the Isles* operated to all points on the Rideau Canal, and the tug *England* on the Ottawa as far down as Grenville.[151] The new *City of Ottawa,* 107.5 feet in length by 16.4 feet beam, registered 130.35 tons, and was a paddle-wheeler[152] at a time when the screw propeller predominated in the Rideau service. The *City of Ottawa* had 10 state rooms, each fitted with two berths, a ladies' cabin with eight double berths, and a saloon 90 feet in length. Her appointments were described as "in most recent and improved style," and she steamed at 12 knots. M.K. Dickinson was described in the *Ottawa Citizen* of 8 July 1864, which carried the above description, as "principal forwarder," "proof of the increased prosperity of the Rideau Canal business."[153]

Commencing 24 October 1864, Dickinson initiated an Ottawa-Prescott steamer and stage service even though the Bytown and Prescott Railway had been operating ten years at this time. The *Queen of the Isles* left Ottawa daily except Sunday at 6:30 A.M., arriving at Kemptville at 12:00 noon where she made connection with the stagecoach which deposited the passengers in Prescott at 5:00 P.M. Leaving Prescott by stage the following morning at 6:00 for the 4.5-hour run to Kemptville, connection was made with the Queen of the Isles at 1:00 P.M. which arrived in Ottawa that evening at 7:00[154] (it is believed that the Prescott and Ottawa Railway was closed down for some reason at this time, and so travellers no doubt appreciated this one day service between the two towns). The fact that the *Queen of the Isles* had previously been advertised as a tug would lead one to wonder what sort of accommodation she provided, but as pointed out previously, many steamers of this period served a dual purpose. The following spring, 1865, the *Queen of the Isles* was back to towing barges, suggesting that the steamer-stage service of the previous autumn to Prescott had been a stopgap measure pending reopening of the railway. In 1865 Dickinson operated a fleet of 11 steamers and 50 barges.[155] The *City of Ottawa* and the *Bytown* again offered a passenger and freight service the length of the Rideau Canal, 27 hours Ottawa to Kingston, and 28 hours on the return run. Connection was made at Smiths Falls with the Brockville and Ottawa Railway,[156] completed in 1859, which operated a lumber railway to Almonte via Smiths Falls. According to V.A. George, this railway, along with the Ottawa and Prescott (1854) and the Grand Trunk Montreal-Toronto line (1856) had comparatively little effect on the canal trade,[157] notwithstanding which by 1867 Dickinson was feeling the pinch of railway competition.

In that year he reorganized the Dickinson line into a joint stock company with a capitalization of $500,000 which was offered in one thousand shares of $500 each. The board of directors was composed of Moses [Moss] Kent Dickinson himself, then resident in Ottawa, George Heuback of Montreal, Lawrence Barnes of Burlington, Vermont, Joseph Merrill Currier of Ottawa, and Ezra Butler Eddy of Hull. The range of operations was to include the Ottawa, Rideau, St. Lawrence, Richelieu and Chambly Canal.[158] Two years later Dickinson sold all his interests in the new concern, known as the Ottawa and Rideau Forwarding Company, on the grounds that the carrying trade was failing. In 1870 he moved from Ottawa to Manotick, which he had founded, and where he died 19 July 1897.[159] Dickinson's pessimism on the score of the forwarding trade was premature, but already railway competition was a factor to be reckoned with. The 1870s as has been seen was a depressed period and on the basis of scanty figures, freight traffic on the Rideau appears to have declined from the 1860s. In any case, one of the Rideau's principal forwarders, at the age of 47, thought that the carrying trade had seen its best days, and that he would be well advised to sell out his interest while he was ahead.

Benjamin Tett and the Chaffeys

Benjamin Tett came to Canada in 1820, first settling in Perth, but in 1827 moving to Newboro near the height of land in the Rideau corridor. Here Tett established a general store dealing in merchandise and provisions, and leased land from the government to build a sawmill which was completed in 1831. Shortly after completion of the canal, Tett in partnership with John Kilborn, built a 100-foot warehouse at Newboro.[160] Benjamin Tett was joined in his provision and forwarding trade by his sons, George and William, who operated sawmills at Bedford Mills at the other end of Newboro Lake from Benjamin Tett's establishment at Newboro. George and William Tett subsequently left their father's business to go into boat building, but the elder Tett was joined by his son John. Benjamin Tett formed a close association, for a period an actual partnership, with the Chaffey brothers, one of whom, John Chaffey, married Tett's daughter, Mary Ann.[161] Tett sublet land to John, George and William Chaffey, who built sawmills, ran a general store and operated a flourishing shipyard. Both the Chaffeys and Tett developed iron, phosphate and later mica mines.[162]

In 1833 Benjamin Tett became Thomas McKay's agent for the purchase and forwarding of wheat to the latter's New Edinburgh mills.[163] Tett's early trade largely comprised wheat, flour, potash and lumber. Writing to the manager of the New Edinburgh mills in February 1836, Tett

advised him that he had on hand for shipment some 2,200 bushels of top quality wheat at "the old landing." McKay had requested that Tett buy wheat at £0-4-8 per bushel, but Tett considered he could get it for £0-4-6.[164] The trade in wheat, flour and potash continued briskly throughout the 1830s and into the 1840s. Tett was generally short of cash, and conducted much of his business on credit.[165] There is plenty of evidence that much of his trade was on the basis of barter. Writing to John J. Curtis of Syracuse in September 1835, Tett proposed to ship lumber in exchange for salt. He could deliver lumber in Kingston at $12.00 per thousand (presumably board feet) for "clear stuff", $9.00 per thousand for "second sort", and $7.00 for "third sort." He could take delivery of 100 barrels of salt delivered "free of freight" at the Rideau and Ottawa Forwarding Store in Kingston.[166] In the winter of 1840 an abundance of wheat was being prepared for shipment to New Edinburgh; Tett wrote to McKay requesting an advance of £100 for the purchase of wheat, anticipating that he would need all of that.[167] He shipped a considerable amount of wheat, flour and potash to Montreal; wood ashes also figured largely in his export trade. An idea of the shipments from Bedford Mills, an establishment run by Tett in conjunction with the Chaffey brothers, for the years 1834-48, may be had from the following return:

wheat	6,384 bu
flour	24 bbl
potash	49 "[168]

Probably the lumber trade bulked largest in the Tett enterprises. From Bedford Mills alone 1834-48 the Tetts and Chaffeys shipped the following total consignments:

sawn lumber	412,000 ft
saw logs	1,900 pieces
deals	3,500 "
square timber	300,000 ft
cordwood	42 cords[168]

The Tett enterprises found a ready market for sawn lumber in New York state about mid-century. Trans-shipment was effected at Kingston from Rideau barge to lake craft, steamers or schooners, or again barges, for Cape Vincent. One such consignment cleared Kingston in August 1852 by the propeller *Hope* with two barges in tow, contained 147,200 feet of lumber, and a later shipment in October was made up of 114,825 feet of lumber.[170] The sawn lumber trade for the New York market flourished from 1850 to 1880, thereafter declining. Indeed the saw mills at Bedford Mills closed down in 1879[171] which did not, however, mean the end of traffic in wood products.

A ready market in the 1880s developed for railway ties under the stimulus of railway construction. Late in 1880

Tetts contracted with the firm of Hebron Harris of Ottawa for the carriage of railway ties from the Gatineau River and from Burritt's Rapids on the Rideau to the dock of the Rome and Watertown Railway at Cape Vincent at rates of 6 3/4 cents and 5 cents per tie respectively. These rates prevailed from the opening of navigation in the spring to 16 August 1881.[172] An order was received about the same time from Skillings Whitneys & Barns Lumber Company of Ogdensburgh for a consignment of seasoned pine, hemlock and ash to be delivered to Alexandria Bay.[173]

There was also a ready market for tan bark. J. Carrington & Sons of Gananoque placed an order with Tetts in February 1881 for 125 cords of tan bark, but Tetts had already disposed of all their bark.[174] Hemlock, tamarack, railway ties, "binders", "floats" and "stretchers" were all in demand. The St. Lawrence Steamboat Company in September 1881 gave Tetts an order for 100 to 500 cords of hardwood to be delivered at the Cape Vincent docks.[175] In September 1881 Calvin and Son of Garden Island, a considerable forwarding house in the St. Lawrence trade, placed a large order with Tetts for binders, floats and stretchers. The previous spring the Tetts had orders for 1,000 to 1,400 cords of hardwood and 300 to 400 soft.[176] Foundries, such as Chown and Cunningham of Kingston, required softwood for their fireboxes. The considerable demand for these derivative products notwithstanding, there was still traffic in sawn pine lumber: D. Murphy of Ottawa shipped by the Tett barges *Manitoba, Columbia* and *Mary Bedford* 45,989 pieces of sawn pine to the Oswego Manufacturing Company which arrived at Oswego on the 3-4 June 1890.[177] Apparently in some cases the Tett barges were towed across the lake, for the following year Murphy informed Tett that the Oswego Lumber Company

> are refusing to load scows, such as yours and the tow belonging to the *Free Mason* as they cannot get the lumber through without being more or less damaged from wet in crossing the Lake, so that we will be unable to load your barges again for that route.[178]

In 1899 Tetts received a noteworthy order from the building committee for St. George's Cathedral, Kingston, for white or Norway pine of prime quality.[178] One would surmise by this late date they would have had trouble filling the order. Consignments of lumber were being shipped by the Rideau Lumber Company of Ottawa, per Tett's barge *Columbia,* to consignees at Gananoque, and to such intermediate points as Westport, Newboro, Seeley's Bay and Morton, as late as 1905.[180] The relentless depletion of the forest went on here as elsewhere, so that by 1910 there was little marketable timber left to cut and Tett's sawmill closed down.

Enough has been said to indicate that Tetts owned a small fleet of their own. In February 1877 J.P. Tett bought

the tug *Elswood* and the barges *Quebec* and *Ontario* from John Chaffey for $4,000.[181] In 1875 Tetts built the tug *Mary Bedford,* in 1879 a second tug, the *Edmund,* and in 1884 the 102-foot, 84-ton barge *Columbia.*[182] By 1908 Tetts were trying to dispose of a part of their fleet. The Dominion Dredging Company considered purchasing the *Edmond* and *Columbia* for $4,000, but it is not known whether the deal was made.[183]

The third considerable traffic handled by Tett Brothers was that of mineral products. The location of iron, phosphate and mica deposits in the counties of Lanark and Leeds has already been described. Although the working of mica deposits pertains to the late rather than the 1850-90 period it was a vital part of the Tett enterprises and will thus be treated in this section.

As early as the year 1841 Benjamin Tett wrote to the Montreal firm, Scott and Shaw, concerning a recently opened lead mine 10 miles from Newboro, in which he held a part interest.[184] In the 1870s the Tetts and Chaffeys operated phosphate mines in the townships of Loughborough and Bedford, Frontenac County. Phosphates were shipped to Kingston and Montreal, a traffic that continued into the 1890s. For example, in 1876 the tug *Elswood* towing the barge *Ontario* freighted 163 tons of phosphate from Loughborough township to Montreal. The following year output from the Pixley mine in Bedford township was loaded aboard the barge *Quebec* (264 tons) and steam barge *Flora* for delivery to an undisclosed consignee. In 1880 loads of phosphate were shipped by sailing scow down Devil Lake to Bedford Mills, and the tug *Edmond* loaded phosphate at Poole's Mill on Opinicon Lake for delivery to Knowles and Company in Montreal.[185] In 1892 the Tetts dealt in phosphates with the Houston Narcotic Cure Company of Buffalo and with Robert C. Adams of Montreal.[186] There was traffic too in the products of quarries; on one occasion, date unspecified but from the context of the records in the 1870s, the tug *Edmond* and barge *Columbia* loaded 820 tons of soapstone from an island on the lower Rideau for conveyance to Montreal.[187]

As the phosphate deposits were worked out the same properties often disclosed mica, which became a prime export in the 20th century. In June 1899 the W.H. Sills Mica Company of Chicago placed orders with Tett Brothers for all the good amber mica they could ship.[188] On 14 August 1899 Tett wrote to G.B. Macdermott of Glasgow informing him that his current contract for the sale of mica would expire on 30 September, and that Tett Brothers were presently shipping the products of four mines to consignees in the United States. Tett was also at this time supplying F.W. Webster and Company, an Ottawa firm (address 274 Stewart Street); in May 1900 Tett shipped by the *James Swift* 25 barrels of mica to Webster's.[189] A Toronto firm, Johnson Willats and Company, contacted Tett in November 1901

requesting a sample of his mica, which if satisfactory, would be followed by a large order; Tett also dealt with Dick Kerr and Company and with Kent Brothers of Kingston. The mica trade carried on by Tetts throve to 1907, but was reported as only fair by 1910.[190] Foreign contacts were made; for example, in June 1907 the Swiss Mica Insulating Works of Breitenback, near Basle, requested samples of Tett's amber mica, and in August Pawling and Harnishfeger of Milwaukee requested samples.[191] Tett's mica properties were located in Bedford township. In 1922 the Tetts leased one of their mica mines to A.G. Martin for a year which may indicate that the production was tailing off by this time.[192]

The Tett business ended as it began, with the grocery and provision trade. Perhaps one typical consignment shipped by James Swift of Kingston per the tug *Edmond* in 1889 will indicate the range of commodities handled by a general store at that period. The 2,940-pound consignment ranged from foodstuffs and hardware to household goods, horse shoe nails and whips.[193] Another consignment, from James Richardson and Sons of Kingston consisted of:

361 37/56 bu of corn in 200 bags

228 15/60 bu wheat No. 2 hard in 110 bags[194]

In 1898 Tett was still dealing with James Swift, Kingston wholesaler, for grocery stock:

2 cases biscuits
2 boxes "
2 " confectionery
1 " peanuts
1 lot of furniture
2 cadd of tobacco

plus sundry grocery, hardware items as purveyed in a general store.[195]

During the navigation season, Tett wrote to a shipper, freight could come by water without trans-shipment at Kingston. At other times goods were moved overland, by railway from Kingston 60 miles to Brewer's Mills, thence by railway another 40 miles to Newboro, and finally six miles by wagon to Bedford Mills. During the closing stages of the navigation season (mid-October to mid-November) Tett relied upon his own boat.[185]

Tett continued to supply railway ties late in the century, as shown for example by the contract signed with the Brockville Westport and Sault Ste. Marie Railway on 15 June 1894 for hemlock ties or "sleepers" at 18 1/2 cents each delivered on the dock at Westport.[197]

By 1916 changing economic circumstances had reduced Tett's flourishing enterprises to the general store and "a moderate farm business".[198] By that time the family's multiple enterprises had lasted 85 years.

Adam Foster, Forwarder

Adam Foster was the captain and part owner of one of the best-known Rideau steamboats, the *Olive* (1875-82). The outside dates of Foster's forwarding business cannot be determined from the Foster Papers, but they do reflect aspects of the kinds of activities in which he was engaged.

In July 1879 Foster was in the wheel-house of the 95-foot *Olive,* 84 tons register. The vessel operated between Montreal and Smiths Falls, calling at all points along the Ottawa and Rideau. The *Olive* was a dual-purpose steamer with a passenger-carrying capacity of 20. Her cargo was principally made up of coal oil, sugar, meal, flour, farm implements, tea, hardware, dry goods and soda. Calls were made along the line of the Rideau for consignees at Manotick, Kemptville, Burritt's Rapids, Merrickville, Irish Creek, and finally Smiths Falls.[199] The cargo manifest on this run included the following items:

4 ploughs @40¢ each for J.B. Wright, Picton
5 bbl cement @25¢ per bbl for L.M. Clark, Smiths Falls
1 parcel @25¢ for Wm. M. Meith, Smiths Falls
3 bbl oatmeal @25¢ each for Alex May, Smiths Falls
20 bags oatmeal @l0¢ each, Wilson Garrett, Smiths Falls
2 bbl oatmeal for Robert Bates, Merrickville
1 parcel Mrs. Thos. Meikle, Merrickville
1 box for Z. Ault, Lindsay's Wharf
mowing & reaping machine, H. Bulger, Portland
2 boxes Moag Fergusson & Co., Oliver's Ferry
5 sacks wool Watchburn & Co., Manotick,@ 20¢ apiece [200]

On 8 April 1882 Foster sold his interest in the *Olive* to Ogle Carrs of Smiths Falls;[201] it is not known whether he immediately acquired another steamer or chartered vessels for his business. In any case, by 1900 he was operating two steamers, the *Kenirving* and the *John Milne.*

The former vessel was built by Foster himself in Smiths Falls in 1900, and given this curious composite name after Foster's two sons, Kenneth and Irving. The *Kenirving* was a single-decked, round-sterned vessel, 104 feet in length, admeasuring 69.70 tons registered, and her engine was a high-pressure type, developing 25 horsepower. Foster sold the *Kenirving* to Edward Smith, a steamer captain of Storrington township, on 2 January 1901, at the same time taking a mortgage on the vessel for $7,000 at 5 per cent, which was discharged five years later.[202]

Foster was active at the turn of the century in the apple and coal trade, besides the forwarding of general merchandise. The first item to appear in the Foster Papers

relative to this later period of trading is a letter, dated 10 January 1900, from Thomas W. Barnes of Hamilton, a dealer in sand, remonstrating with Foster over freight rates. Apparently Foster had understood that the sand would be loaded at the TH&B (Toronto Hamilton and Buffalo line) for 55 cents per ton, whereas Barnes thought that he had made it clear at the time that the sand must be shipped via the Grand Trunk at an increased rate.[203] The outcome of this minor misunderstanding is unknown.

Foster had an account with D. Noonan of the Rideau Lakes Navigation Company. Rideau Lakes and Navigation Company invoices for the period June to November 1900 inclusive billed Foster for $460.39 for goods shipped *per* the *James Swift*.[204] From this one deduces that Foster's business was too extensive to be accommodated entirely in the *Kenirving* and *John Milne.* During roughly the same period Foster ran an account with the Ottawa Forwarding Company with his former steamer, the *Olive,* the freight on which came to $740.90. The invoices reflect the varied nature of his forwarding trade:

10 bags fertilizer Wm. Poole, Portland
8 " flour (consignee illegible)
10 " cattle feed W.H. Foreland, Plantaganet
40 " sawdust F.W. Aske, Green Point
1 vice Lewis Bros., Montreal
1 box glass M. Rheaune & Bros., Montreal
1 bale feathers A. Feather & Down Co., Montreal
10 bags fertilizer W.N. Mockitt, Ottawa
6 bags and 8 quarter bags flour, P. Coutts, Rideau Ferry
1 bbl paint P.D. Dodds & Co., Montreal
1 bag (illegible), E.A. Anderson, Garritt's Rest
3 cases soft drinks, F. McDonald, Garritt's Rest
20 bags corn, 16 qr. bags flour, 2 bags ground meal, Tate, Andrewsville
3 cases ginger ale, D. O'Neill, Burritt's Rapids
2300 ft lumber, Ogle Carrs, Smiths Falls
14 qr. bags flour, 12 1/8 sacks flour, R. Bate, Merrickville
10 bags corn, 2 bags ground meal, C.H. Tate, Andrewsville
1 bag apples, Mrs. Burrill, Kemptville
22 bags potatoes, Mrs. [illegible]
1 lot furniture, C. Dowcitt, Portland
1 large kettle, Thos. Bush, Portland
1 spring mattress, Mrs. Beton, Burritt's Rapids [205]

Foster also dealt in coal. In September his account with the Scranton Coal Company stood at $608.37; the *Kenirving* and *John Milne* called at Oswego for coal ordered from this company.[206] The Oswego agent for the Scranton Coal Company early in November 1900 wrote warning Foster of the risk of sending his steamers across Lake

Ontario that late in the season and noted that the schooner *Wells* had gone aground the previous night.[207]

Foster was in fact a wholesale and retail coal dealer, one of whose principal connections was with the Central Canada Coal Company in Belleville. Foster's forwarding trade, as has been indicated, was of a very general character. For example, in October 1900 Captain Foster secured a contract in Belleville with the Abbott-Mitchell Iron and Steel Company for freighting 90 tons of iron to Smiths Falls for $1.50 per ton.[208] As late as the first week in December of this year Foster freighted a cow from Kingston to Carleton Place.[209] There are several letters and invoices in the Foster Papers relating to cargoes of apples from as far afield as Trenton and Picton for consignees in Kempville, Carleton Place (Mitchell and Cram, grocers) Ottawa and Alexandria. Foster's principal agent in the apple trade was A.S. Wickware of Picton.[210] Freight on a barrel of apples from Trenton was $1.90.[211] Foster was an example of the small entrepreneur frequently seen in both the early years and latter days of commercial navigation on the Rideau.

Montreal & Ottawa Forwarding Company

This company, with head office in Montreal and capitalization of $50,000 distributed in 500 shares of $100 each, was incorporated in June 1865. It specialized in parcel goods and freight on the Quebec-Montreal-Ottawa and Kingston route. The Montreal and Ottawa's principals were John McLennan, Jean Baptiste Anger and William McNaughton of Montreal, Jacques Felix Sincennes of Sorel, and Malcolm McNaughton of Ottawa.[212] John McLennan was president, and William McNaughton, with Jean Baptiste Anger, directors.[213] In Ottawa the company's offices and warehouses were located on the west side of the canal basin, where its Ottawa agent, Denis Murphy, had his office.[214]

Other Rideau Forwarders

One strictly regional line, operating between Buttermilk Falls (Bedford Mills), Devil Lake, Desert and Canoe lakes, of which Alexander Morris and R.J. Cartwright were the principal shareholders, was the Bedford Navigation Company, organized as a joint stock company. John R. Cartwright, William H. Wilkins, James L. Cartwright, W.I. Morris, John L. Morris, and John Manion had lesser holdings. The route served by these forwarders lay to the west of the Rideau route, south-west of Westport and Bedford Mills. This company was organized about 1867 for the timber trade. It had a capital stock of $10,000 put on the market in $20 shares.[215]

The *Ottawa Directory* for 1870-71 lists another

forwarder, W.H. Easton and Company, with offices and warehouses at the end of Little Sussex Street on the eastern side of the canal basin. They were advertised as operating six steamers and 12 barges dealing in flour, provisions, wood and a general commission business; their notice claimed that the concern was the successor to the business established by M.K. Dickinson.[216] The city directory of 1875 carried a similar advertisement, but with the title of the firm now R.M. Easton rather than W.H. Easton. Its office was located at Easton's Wharf, Little Sussex Street, Canal Basin, and it advertised its business as job freighting primarily flour, meals, cordwood, shingles and brick between Montreal-Ottawa-Kingston and intermediate points.[217]

The Mid-Period in Retrospect

According to V.A. George's tally of steamers in the Rideau service culled from lock records at First Rapids, the Narrows and Jones Falls, 39 steamers were operating in 1890,[218] representing an aggregate tonnage of 64,000, a figure, however, dwarfed by the unprecedented expansion in steam tonnage by 1894. In the four-year period 1890-94 steam tonnage on the Rideau nearly trebled (to nearly 170,000 tons), the all-time peak for the 41-year period (1873-1914) for which steam tonnage was compiled separately from unpowered craft. The expansion in steam tonnage is a trend with its origins well defined in the middle pre-1890 period.

The Late Period: 1890-ca.1961

In the latter days of the Rideau as a commercial route, its forwarding trade fell victim to technological and regional economic change, a demise delayed, however, until the outbreak of the 1914-18 War. The quarter-century preceding this watershed in the world's history witnessed high levels of traffic, passenger and freight along the Rideau. Indeed it may be said that the Rideau Canal in the waning days of peace shared in the reviving national prosperity of the late-Victorian and Edwardian eras.

From 1896 the national economy recovered from the doldrums that had prevailed for the previous 20 years, and with the war the country became more of an urbanized and industrialized society than had hitherto been the case.

In general, agriculture became more specialized and was carried on upon a larger scale, with increasing mechanization. In the Rideau corridor, however, with the exception of dairy farming, agriculture turned more upon small-scale general and subsistence farming, with those

regions of shallower and less fertile soil reverting to scrub bush. Post-war prosperity was succeeded in October 1929 by the stock market crash and the Great Depression, a traumatic and stultifying experience for most of the western world, from which it was only restored to economic health by the onset of the 1939-45 war. The two World Wars were the making of the Canadian industrial economy, but in this by no means all regions shared equally. Before discussing individual forwarders on the Rideau as its century of activity drew to a close, it will be helpful first to consider the fluctuating tonnages of key commodities in the Rideau trade, and the overall volume of Rideau traffic compared with that on the main arterial route, the Great Lakes and St. Lawrence, as well as secondary waterways like the Ottawa and Chambly canals.

The Lumber Trade

The lumber trade had long been a staple export from the Rideau region. In 1890 the tonnage of lumber passed through the Rideau Canal stood at 38,651.[219] By 1900 the lumber traffic on the Rideau, now designated "forest products", was at about the same level, 37,925 tons. This level was more or less maintained through the first decade of the century, but by 1914 the figure had been more than halved. Notwithstanding the demands of war a further decline of about a third (to a mere 10,211 tons) occurred in 1915.[220] In the post-war years forest products declined steeply to under one thousand tons, reaching an insignificant figure (49 tons) by 1961.[221] The following year commercial traffic, to all intents, ceased on the Rideau. The lumber trade in its pristine vigour did not survive far beyond the first decade, and in the inter-war period, dwindled to a mere vestige of its former volume. The pulp and paper industry on the Ottawa continued to flourish; indeed it supplied the nation's principal export, but in this the Rideau region played an insignificant role.

Ores and Minerals

Traffic in mineral products, by contrast, built up to a peak of 118,195 tons in 1914. The figures for mineral products were first combined under one head in 1911; in that year 14,172 tons[222] were transported on the Rideau. That figure was exceeded seven to eight times in 1914 (118,195 tons)[223] tailing off to less than half that for 1918, but rising again to a post-war peak of 69,280 tons in 1920.[224] The ore traffic remained at more or less this level until 1929, when there was a sharp decline (16,448 tons), and plummetted to only 552 tons in 1930[225] as a result of the depression. A final upsurge in Rideau mineral traffic occurred in 1953 (1,004 tons),[226] attributable perhaps to the demands of the Korean War. In 1956 the

mineral tonnage reverted to a very modest level (26 tons, hardly half a barge load), ceasing altogether in 1959.[227] By that time there was little else, other than tourists, moving on the Rideau Canal.

Grain and Agricultural Produce

In later years the earlier breakdown in returns for various types of grain was abandoned; by 1893 the comprehensive but less meaningful heading "agricultural products" had been adopted in statistical returns. Allowing for this in the use of *Canada Yearbook* statistics, the annual conveyance of agricultural produce on the Rideau Canal during the decade of the 1890s varied from two to three thousand tons, with a peak in 1911 of 6,084 tons,[228] dropping to about half that figure in 1920, and declining still further to 2,212 tons for 1925,[229] a level comparable to that in the 1890s; 1930 registered another sizeable reduction in the volume of agricultural produce shipped on the canal to a mere 608 tons,[230] this no doubt attributable to the inroads made by the truckers. By 1941 no agricultural produce went by the Rideau Canal, the figure recorded for that and subsequent years being nil.[231]

The Coal Trade

It may be recalled that the coal trade bulked large in Rideau Canal traffic during the mid-1880s, stimulated by the Canadian Pacific Railway activity at Smiths Falls. In 1892 canal coal tonnage was down to 3,625.[232] It rose to over 17,000 tons in 1894, and was 17,679 tons in 1901;[233] thereafter it oscillated up and down for a number of years, finally declining to 3,054 tons in 1921.[234] Coal is likely included in the general heading "mine products" thereafter, so that figures for the amount of coal carried on the Rideau Canal cannot be followed after 1921; it would, however, be premature to assume that the coal trade had petered out on the canal by the early 1920s, for three thousand tons was not an inconsiderable figure by Rideau standards.

The Cheese Trade

Figures have not been found to illustrate the rise and decline of the cheese trade, which developed to a considerable degree in the years after 1890 since statistics for the cheese trade are screened under the catch-all "animal products."

Merchandise and Manufactured Goods

In examining the Rideau traffic described as merchandise and manufactures, determination of the overall trends are obscured by separate listings for merchandise (all items other than grains, vegetables, lumber and coal) from 1888-1903. From 1893 to 1903 manufactured items are tabulated separately from merchandise, whereas following a seven-year gap (1904-10) in which no figures were published, entries for merchandise are discontinued entirely. Figures under the heading manufactures are listed from 1911 to 1961, when freight service disappeared on the Rideau.

Merchandise shipments increased by a third (41,559 tons to 60,488) from 1888 to 1892, which proved to be a peak year for these shipments. Thereafter merchandise shipments followed a fluctuating decline to 1902 (15,929), one-quarter the level ten years earlier. A slight revival in 1903 was registered, 21,848 tons of merchandise moving on the canal that season.

Manufactured items shipped on the Rideau between 1893 and 1903 fluctuated roughly between two and five thousand tons per season, with the figures for 1899-1900 (4,900 tons) slightly higher than they had been (4,494 tons) in 1893. An undulating level in the shipment of manufactured items continued within the two to four thousand ton range to 1903.

The 50-year period 1911-61 opened with a peak season (114,937 tons) for shipment of manufactured goods, a figure in accordance with overall freight and registered vessel tonnage, the Rideau's best year in the course of the 88 years for which accurate tabulations are available. By contrast 1912 recorded a mere 18,814 tons of manufactured goods to pass through the canal, a figure barely 16 per cent of that of the previous season. Thereafter a steady decline set in to 10,186 tons in 1915 and 9,908 tons in 1918. The post-war years witnessed a modest revival in this trade, the decade of the 1920s ranging from 14,000 tons to over 26,000. The blighting effects of the Depression did not sharply influence the shipment of manufactured goods on the canal until 1935-36, when the tonnage dropped from 19,238 to 5,334, from which it never recovered. In the 1937-38 season the tonnage dropped to a negligible 33. The following 23 years, to the demise of the freight forwarding business in 1961, saw but a vestige of the former tonnage of manufactured goods moving through the canal, never more than 260 tons in any one season. During this closing period in the commercial life of the canal, shipments of forest products were slightly higher overall than manufactured goods, but those for ores and minerals were substantially higher (600 to 1,000 ton range), excluding the 1957 season of 5,610 tons.[235]

The Passenger Service

The Rideau passenger trade, composed of scheduled service on a particular route, and the holiday excursion trade laid on whatever routes would attract custom, fluctuated sharply in the 1890s, but from the turn of the century soared to levels unrivalled since the immigrant period, attaining a crest of nearly 28,000 bookings in 1906. Beginning in 1902, figures for the Rideau passenger trade climbed dramatically, but an inexorable falling off set in from 1910. Apart from a sharp but short-lived revival, 1917-19, the post-1910 decline proceeded precipitously until 1932, when there was a slight revival. The end of scheduled service occurred in 1935.

Probably the principal factor accounting for the volume in the pre-war years was the prosperity and increasing leisure of the more affluent classes, combined with inadequate railway service to many intermediate points along the line of the canal. In late Victorian and Edwardian times the motor car, primarily a plaything of the well-to-do, had yet to come into its own, and was as well none too reliable as a means of transportation. This was the era of the inter-urban trolley and the excursion steamer, offering picnic and moonlight cruises.

A prime example of the excursion trade of the late 1880s and 1890s is provided by the operation of the *Ella Ross.* The *Ella Ross* left Montreal Wednesdays at 1:00 P.M., arrived in Ottawa the following morning at 10:00 A.M., then proceeded through the Rideau Canal, arriving at Kingston Saturday afternoon. After laying over at the Thousand Island Park on Sunday, the vessel returned to Montreal on the St. Lawrence. A feature of the trip was passage through the Rideau Lakes and Thousand Islands in daylight, considered the highlights of the cruise. The cost of the excursion, including meals and cabin, was $18.00. When the service began in May 1887, the *Ella Ross* was the only steamer providing such an excusion through all three waterways. Some idea of the accommodation provided aboard the *Ella Ross* was given previously; suffice it to add here that she was known at the time as the "iron palace steamer."[236] The curve of the passenger trade can be described as follows: in 1873, the first year for which figures are available, about 1,500 passengers took steamer passage on some part of the Rideau. An upward trend ensued between 1873 and 1880, the figure for 1880 being approximately 5,300 passengers. Passenger traffic thereafter declined to a mere 1,000 in 1884. Following 1884 the trend was generally upward (7,500 in 1892), with a pronounced increase from 1896, attaining a peak of 27,000 in 1906, and again a peak of 26,000 in 1910 following a temporary decline between 1906 and 1910. Following 1910 Rideau passenger traffic fell off sharply, but for a brief revival in the years 1917-19, reaching a nadir of a mere 600 in 1932; this was followed by a brief fillip to a figure of

3,200 for 1935, the last year for which passenger statistics are available,[237] and also the year in which scheduled passenger service through the Rideau system ceased, with the final run of the *Ottawan* at the close of the season that year.

These figures for the passenger trade, which increased so significantly in the early years of this century, should be accepted with an element of reservation. Indeed V.A. George attributes this phenomenon for the period of his study, ending in 1898, to the indiscriminate recording at lock stations of the increasing number of pleasure craft as steamers.[238] This contention has some plausibility since the early launches were steam-, rather than gas-powered, and we know that their numbers increased greatly after the turn of the century. The decline, however, in the Rideau passenger trade evident from 1922 on, does not quite accord with this theory, for pleasure craft of all descriptions virtually took over the waterway through the inter-war period of the 1920s and 1930s. And yet in the 1931-32 season Rideau passenger figures reached their lowest point since their compilation commenced nearly 60 years previously (1873). The figures for the passenger trade should therefore be taken in this light, as indicative of the overall pattern but apt to encourage an exaggerated view of the process.

Undoubtedly the motor car was the prime factor in the languishing passenger trade after 1920, and perhaps a contributory one as early as 1910. Even as truckers and the railways cut into the Rideau freight business, so the motor car and the motor coach between them finished off the passenger and excursion trade. The revival of the steamer passenger trade 1934-35, apparent in Appendix B, is difficult to explain, (other than V.A. George's previously cited explanation, transposed to a later time), but in any case it proved a flash-in-the-pan. The surviving excursion trade beyond this point consisted of privately run motor launches, such as Davis's *Vic II*, rather than steam-boats.

The Rideau Canal in Context

In comparing traffic on the Rideau and other canals a variety of statistics, beginning in 1855, are available. The statistics cover such subjects as revenue, tolls, number of vessels, overall vessel tonnage, and actual freight tonnage. For purposes of the text freight tonnage (for which figures are available on an annual as opposed to an occasional basis from the mid-1850s) has been considered the most significant in terms of traffic volume on one canal compared with another. Presumably one of the reasons why statistics for the Rideau are not available prior to 1856 is that the canal was under imperial authority.

For purposes of comparing freight tonnage handled on

the Rideau Canal with that on the St. Lawrence canals (the trunk route) and the Chambly Canal over a 50-year period (1888-1938), the following table derived from the Statistical Yearbooks is revealing:

year	St. Lawrence	Chambly	Rideau
1888	781,599	241,753	112,248
1889	1,439,144	271,336	54,946
1914	4,391,493	436,905	151,739
1918	3,031,134	369,186	54,136
1928	8,411,542	179,868	51,999
1938	9,236,318	94,697	1,623 [239]

From these figures the disparity between Rideau tonnage and St. Lawrence is readily apparent, as is that between the Chambly and Rideau to a somewhat lesser extent.

Reference to Appendix B indicates wide fluctuations for Rideau Canal freight tonnage for the period 1875-1919, with a peak of roughly 172,000 tons reached in 1911. The following figures illustrate this:

1875	60,000	tons
1876	35,000	
1877	131,000	
1884	76,000	
1890	113,000	
1902	51,000	
1911	172,000	
1918	54,000	
1919	104,000	
1938		
et seq	2,000 and under	

From these figures it is plain that in the fifteen-year period 1875-90 Rideau freight tonnage, despite an initial dip in 1876 and another dip in 1884, nearly doubled (46 per cent). From 1890 to 1902 freight traffic dropped off sharply to less than half the 1890 level. From this point through the first decade of the century Rideau freight traffic increased sharply to reach a high point of 172,000 tons in 1911, a figure more than thrice that of 1902. From 1911 through the war years freight traffic on the Rideau Canal declined, the tonnage for 1918 amounting to little more than 30 per cent that of 1911. Rideau trade revived in the following year to nearly twice the tonnage of 1918, but thereafter a steady and rapid decline set in throughout the 1920s and 1930s, reaching a negligible figure by 1938. The Second World War boom failed to revive the Rideau trade, and by 1961, as noted in an earlier context, freight statistics were no longer recorded for the Rideau.[240]

Nationality: Steam vs. Sail

From 1883 to 1925 inclusive, statistics for canal traffic distinguish between vessels of Canadian and American registry, with a further breakdown into steam-powered or sail for each nationality. For the period 1925-35, only the numbers, aggregate tonnages and nationality of the canal traffic is recorded.

As noted previously, the Rideau Canal was conceived and built by Colonel John By for steam navigation, towpaths being omitted. The only unpowered commercial vessels, according to present knowledge, to navigate the Rideau Canal at any period, were the numerous unpowered, or towed, barges and the early Durham boats and batteaux. The figures for sail appearing in the canal statistics presumably refer either to pleasure craft, or more likely all unpowered craft.

Until 1892, according to statistics compiled from the *Year Books,* unpowered or barge tonnage exceeded steam on the Rideau by a considerable measure, but thereafter the reverse was the case, barge tonnage indeed taking a precipitate plunge from 1893 to 1894, with partial recovery the following year, but thereafter well below steam aggregate tonnage.[241] This decline in barge traffic is attributable to the diminishing lumber trade, and falling production of iron ore and phosphates in the Rideau region, products for whose transportation barges were ideally designed.

The canal statistics record aggregate tonnages only of Canadian and American vessels, and numbers of vessels only of steamers and unpowered craft. In both instances the totals reflect the number of canal passages, rather than the number of individual craft or individual vessel tonnages using the canal in any one year. For the period 1883-1925 vessels under Canadian registry greatly exceeded those under American, aggregate tonnages some years approaching a ratio of 10:1 (Appendix B). American sailing vessels outnumbered American steam on the Rideau by a wide margin; the same held true, although to lesser degree, for Canadian vessels until 1892.

After 1925 figures distinguishing sail from steam are lacking. In any case it may well be that the designations become increasingly meaningless, with the proliferation of motor boats, skiffs, canoes, and other small craft of many descriptions. By this period the age of steam, insofar as transportation on inland waters was concerned, was drawing to a close.

Ottawa Forwarding & Ottawa Transportation Company

The Ottawa Transportation Company bears the distinction of operating the last passenger boat on the Rideau, the *Ottawan*, acquired with the rest of their fleet on the

company's absorption of the Ottawa Forwarding Company in 1912. The latter company was incorporated 21 March 1892, with a capitalization of $50,000 which was increased to $100,000 within the first year. Its directors were George Archibald Harris, Ralph Fuller Halcomb, and three Hall brothers, Edward Alexander, James Henry and William John.[242] An item from a Railways and Canals file of 1894 concerns a contract for the delivery of cement to lock stations gained by Captain D. Noonan of the *James Swift*, then in their employ.[243] Significantly Noonan became managing director and a principal shareholder in the rival Rideau Lakes Navigation Company on its formation in 1899; and in 1901, the *James Swift,* rebuilt following a fire and re-named the *Rideau King,* became part of that fleet. Another trim looking steamer operated by Ottawa Forwarding in its heyday was the 99 ton *Welshman*, 105 feet in length, built in Ottawa 1900.[244]

The Ottawa Transportation Company, whose early business consisted in the main of freighting bulk cargo on the Ottawa, was incorporated on 8 February 1892, with a capitalization of $225,000, issued in shares of $100 each. The two principal partners and trustees were Denis Murphy and John William McRae, Ottawa forwarders, who between them held over half the stock. The remaining stockholders were William C. Bangs and George A. Harris of Ottawa, James Wood, a Rockland lumber merchant, and James Williamson, a Grenville forwarder.[245] The company held its first meeting on 25 February 1892 in the offices of Denis Murphy, 32 Wellington Street, Ottawa, during which it was resolved that Denis Murphy be elected president, and James Wood vice-president.[246] Ottawa Transportation's charter was the standard one, authorizing it to operate, build, or lease steamers, barges, tugs; to engage in towing, forwarding, warehousing; to buy, sell, make advances on lumber, merchandise, coal, grain, live stock, ore, etc., and to acquire or dispose of stock. April 1893 the initial capital of $225,000 was increased to $500,000.[247]

By 1896 Ottawa Transportation found that the Ottawa Forwarding Company, which apparently operated on both the Ottawa and Rideau, was making serious inroads into its lumber trade to Montreal. By this time the lumber trade was in decline, and competition in bidding for what was left became keener. Ottawa Transportation in 1896 tried to reach a settlement with its rival, whom it may have conceived as an interloper in the Ottawa lumber trade, but at first was rebuffed. Agreement was finally reached whereby the Ottawa Forwarding Company agreed not to handle any lumber traffic on the Ottawa River, and to ship whatever lumber they were forwarding to Montreal, presumably from the Rideau, on Ottawa Transportation Company vessels in return for some concession in the lumber trade.[248] By the New Year 1900 an entry in its minute book observed that stocks of lumber "are much lighter than they have been for many

years."[249] The business appears to have flourished nonetheless, for in 1906 the company recorded a net profit of $55,735.94 and in 1907 the company operated a fleet of five steamers and barges.[250]

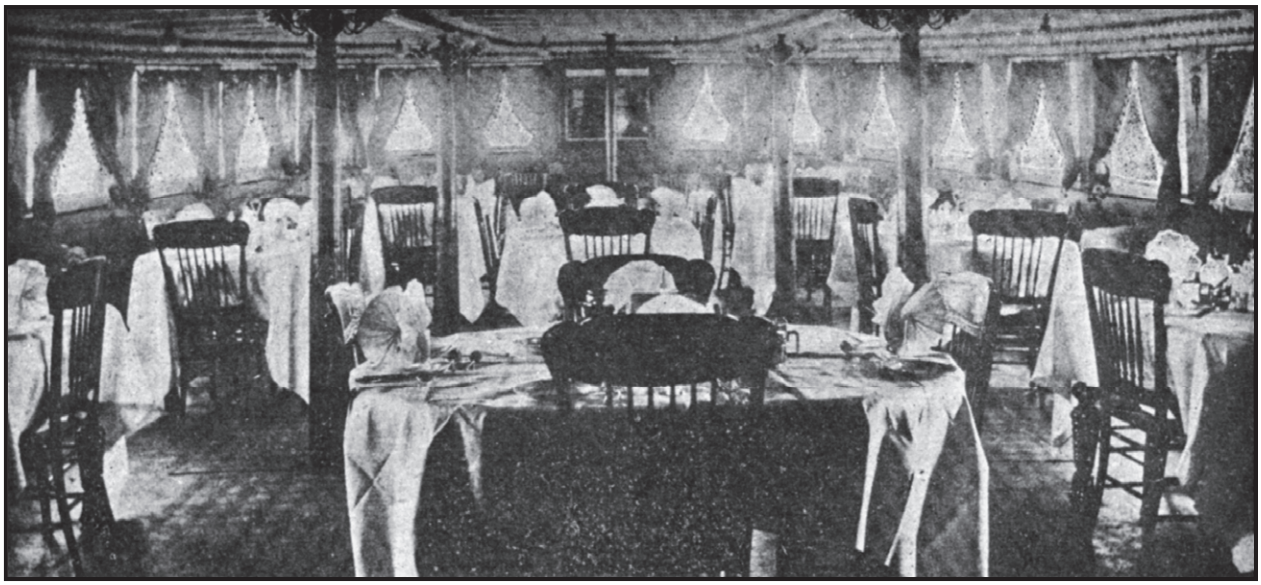
Five years later the Ottawa Forwarding Company was absorbed.[251] Included in the purchase price of $22,525 cash and $34,300 worth of Ottawa Transportation Company stock were four steamers - the *Scotsman, Hall, Ottawan* and *Glen Allan*, and buildings and sheds in the Ottawa canal basin and in the Wellington Basin, Montreal. The takeover was ratified by Ottawa Transportation Company shareholders on 30 January 1913. That year the company made a net overall profit, not allowing for depreciation, of about $41,000, and declared a dividend on their stock of 5 per cent and a 5 per cent bonus.[252] Of the four steamers taken over from Ottawa Forwarding, only one, the *Ottawan*, has been definitely identified with the Rideau service, whereas the *Hall* in the spring of 1895 was operating between Ottawa and Grenville.[253] It is of interest to note that George A. Harris, one of the five directors of the Ottawa Forwarding Company at its inception in 1892, at the same time held 185 shares of Ottawa Transportation Company stock.[254]

As is often the case, more is known about the formative years of this company than of its dissolution. In this instance, however, it may be noted that the charter of the Ottawa Transportation Company was given up on 19 October 1942.[255] This is not necessarily an indication however as to when it ceased operations.

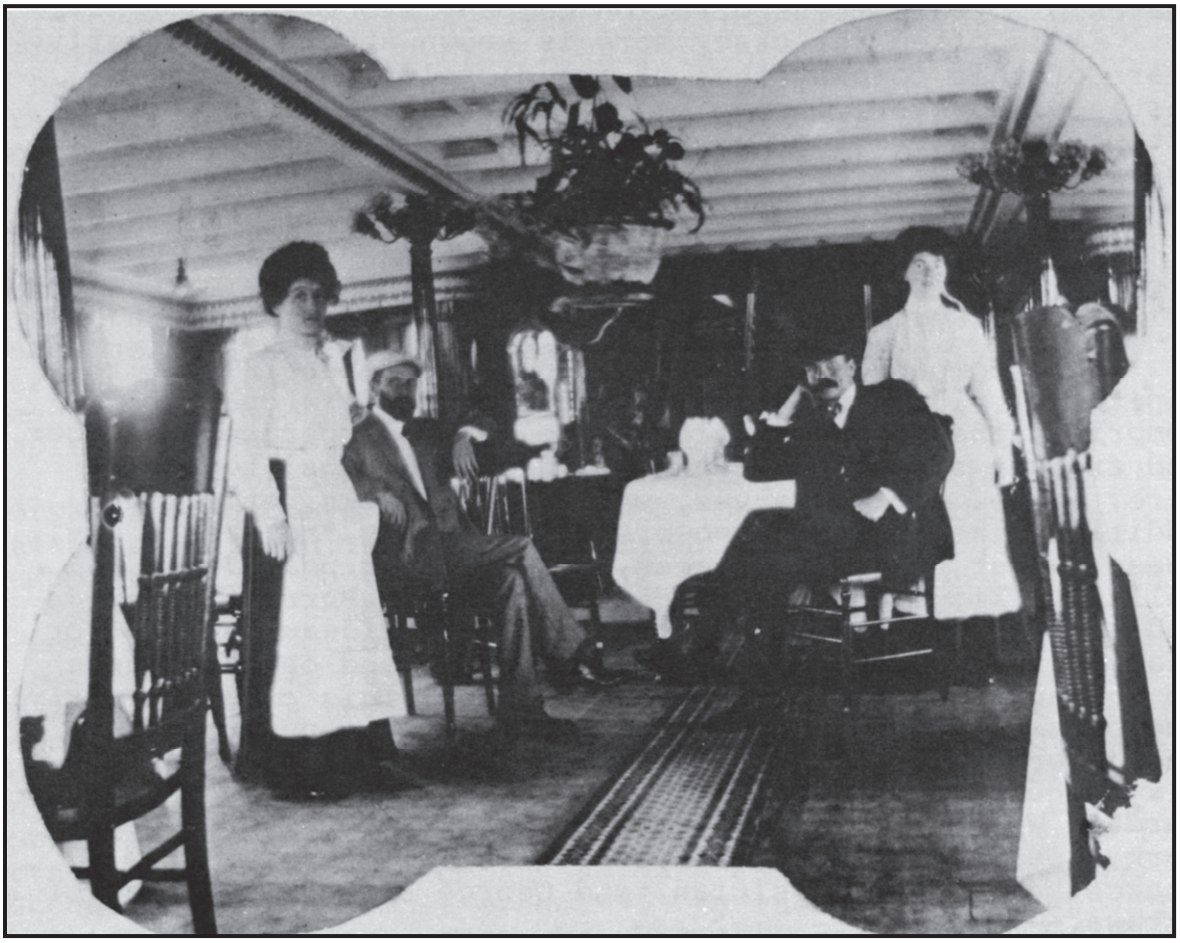
The Rideau Lakes Navigation Company

This company was incorporated 29 December 1899, with a capital of $100,000 issued in $50 shares. Its charter comprised the usual functions - to own and operate passenger and freight steamers, barges, dredges and tugs; to own, hire, lease, etc., wharves, warehouses, docks, etc. In addition, the charter empowered the company "to erect, buy, lease summer hotels, cottages, parks, at or near Jones Falls, or Kingston, also locations between Burritt's Rapids and Long Island, on both Upper and Lower Rideau Lake, at or near Chaffey's, and at or near Newboro," and operate these in conjunction with its steamship line. This clause clearly suggests the significance of the excursion aspect of the passenger trade at this point. The principal shareholders, six in number, were Daniel Noonan, James Swift, and Houghton Wardell Wilson, Kingston forwarders; M. Zimmerman of New York, described simply as a capitalist, Clarence Ransom Church, an Ottawa physician, and George Eldon Kidd, also of Ottawa.[256]

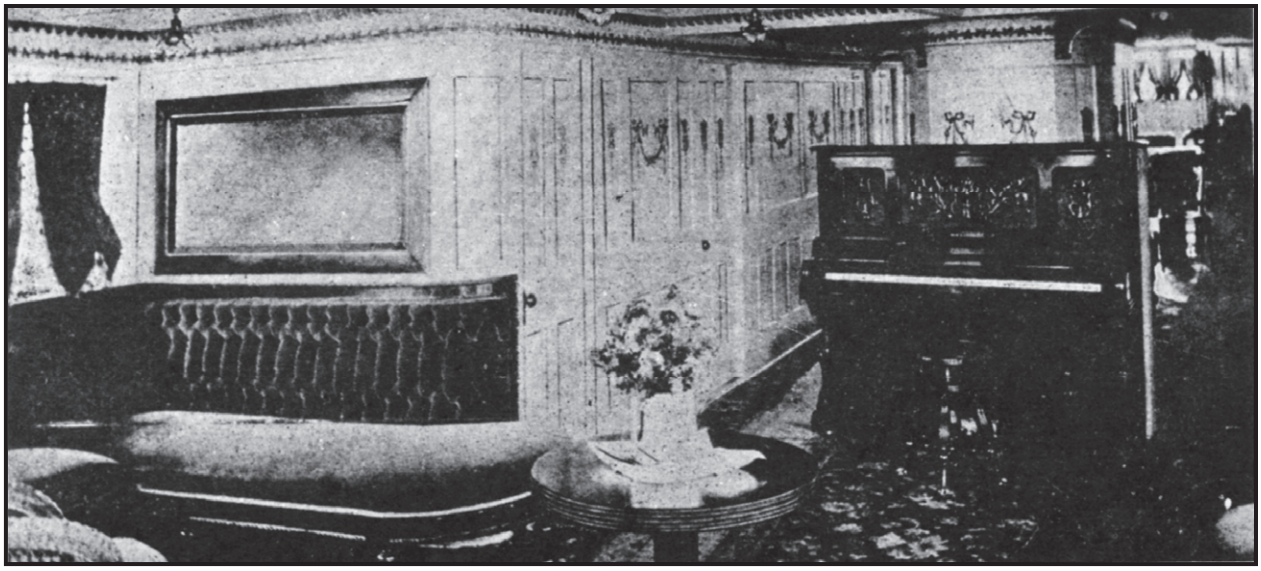
The company began operations throughout the length of the canal with two celebrated passenger steamers, the *Rideau Queen,* built 1900, 196 tons register, licensed



The *Rideau Queen*'s dining saloon, located in either the bow or stern section of the boat. (Public Archives Canada.)



The dining saloon of the *Rideau Queen*, n.d. Note the well-finished interior. (Mr. F. Flemming, Newboro, Ont.)

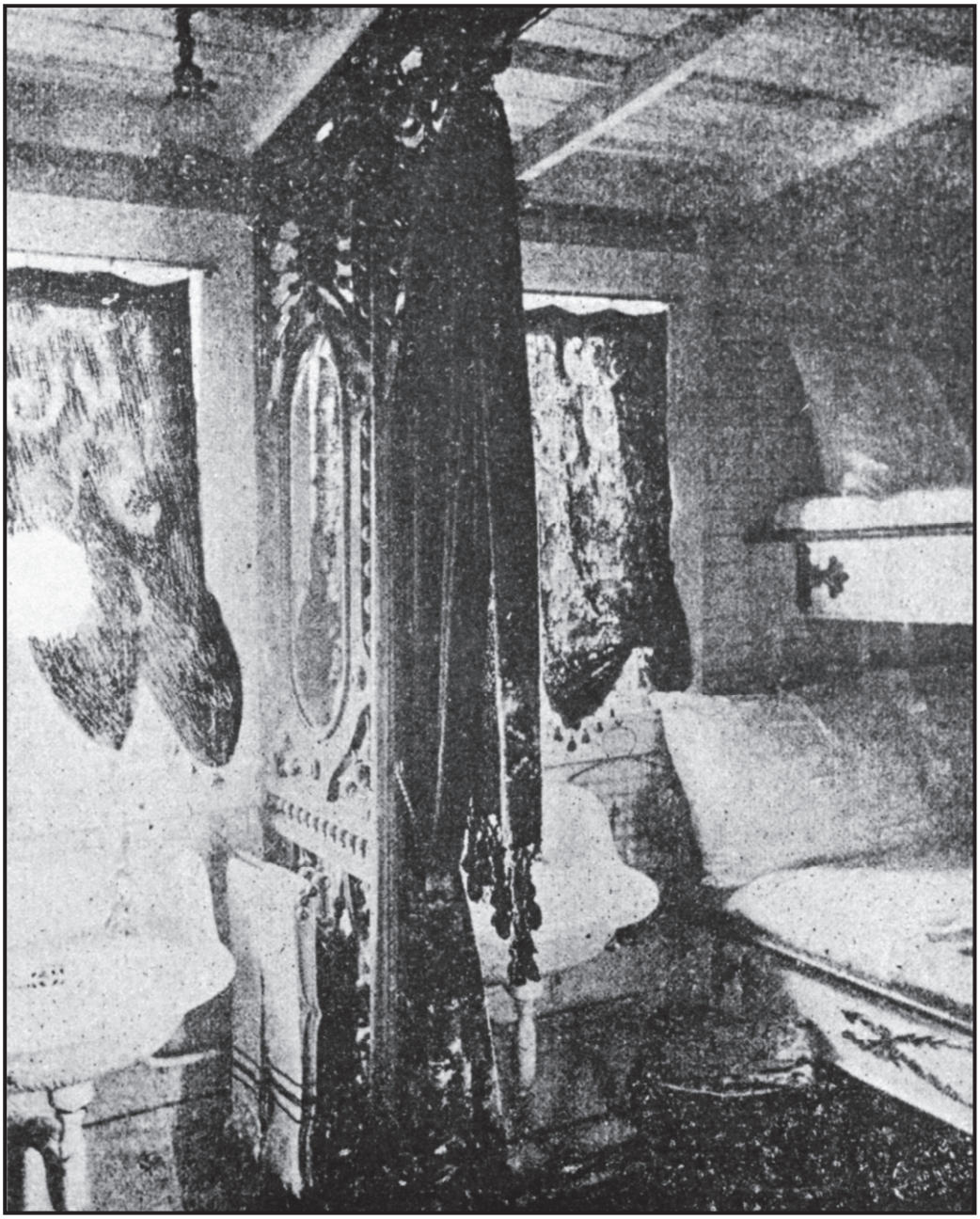


Interior view of the passenger lounge, *Rideau Queen.* Note the panelling, plush settee, carpeting, drapes, and piano, in the sumptuous Edwardian style. Other passenger steamers of the time, such as the *Ella Ross, Rideau King*, and somewhat later *Ottawan*, were similarly furnished. (Public Archives Canada.)

for 300 passengers in canal service,[257] and the *Rideau King* (formerly the *James Swift* pre-1901), built in 1893, 107 feet in length, 197 tons register.[258] A notion of the finished and gracious accommodation provided the passengers in dining saloons and lounges may be gleaned from the illustrations. The *Rideau King* and *Rideau Queen* had electric lighting, by no means common at the time, steam heat and steam-driven fans. Cabins went for one to five dollars, and meals in the dining saloon for 50 cents. The fare, exclusive of meals and cabin, was $3.00 from Kingston to Ottawa, and a return ticket could be had for $5.00. The *Rideau Queen* left Kingston for Ottawa Monday and Thursday mornings at 7:00 A.M., arriving in Ottawa at 6:00 the following morning. The *Rideau King* left Kingston Tuesday and Thursday afternoons at 1:00 P.M., arriving in Ottawa at 3:45 P.M. the following day. The *Rideau Queen,* at 23 hours en route, was thus a little faster than the nearly 27 hours required by the *King.* A passenger fancying a return cruise along the whole line of the Rideau could indulge himself for less than $20.00. The steamers made connection at Ottawa with the Ottawa River Navigation Company, the Canadian Pacific Railway, and several other railways, and at Kingston with the Thousand Island Steamboat Company, the Lake Ontario and Bay of Quinte Steamboat Company, the Grand Trunk Railway, the Kingston and Pembroke Railway, and the New York Central.[259]

Anticipating an upsurge in the tourist traffic, the

Rideau Lakes Navigation Company at the outset, set out to publicize the Rideau. In 1900 the company applied to the Department of the Interior for permission to reproduce the latter's best map on the Rideau region, a request with which the department readily complied.[260] The same year the company took officials of the New York Central on a tour of the Rideau in an obvious bid for the American market, in return for which the railway granted the Rideau Lakes Navigation Company ample advertising space in its



Passenger accommodation aboard the *Rideau Queen.* Note the portieres which may be drawn between what is apparently the two halves of a double cabin, also the provision of window drapes and a half-length mirror by the wash-stand. (Public Archives Canada.)

timetables.[261] This led to close collaboration between the two systems throughout the lucrative excursion and tourist trade period up to the outbreak of war. For example, in 1910 passengers could leave Ottawa aboard either the *Rideau King* or *Rideau Queen* on Mondays, Tuesdays, Thursdays or Fridays at 2:00 P.M. during the navigation season and make connections for New York via the New York Central at Clayton, New York.[262] At Kingston the steamers (this same season) connected with trains of the Grand Trunk and the Kingston and Pembroke railways, as well as steamers operated by the Richelieu and Ontario Navigation Company.[263]

Rideau Lakes Navigation undertook further publicity in 1914 with the publication of a little brochure entitled *Rest and Sport among the Rideau Lakes;* this pamphlet enjoined tourists and excursionists who had taken in the Thousand Islands not to miss the Rideau Lakes:

> To see the Thousand Islands without also seeing the Rideau Lakes is like going to Niagara Falls and being content with viewing them from the American shore.
>
> This is all being changed, and now very few are content to spend all their holiday at the St. Lawrence resorts. The Rideau Lakes trip has become famous, and is yearly attracting greater crowds who go away to swell the number of its enthusiastic admirers.[264]

In 1914 the New York to Ottawa through service via the New York Central to Clayton, thence Rideau Lakes Navigation, was still operated. The steamers left Clayton Tuesday, Wednesday and Friday at 9:00 P.M., and Sunday at 3:00 P.M., transferring passengers to the Rideau steamers at Kingston; those arriving in the evening could sleep aboard overnight before departing up the Rideau in the morning. Through tickets were purveyed by the Grand Trunk, Canadian Pacific and New York Central, as well as by the celebrated travel agents, Thomas Cook & Son, and the New York travel agency of Raymond and Whitcomb.[265] Rideau Lakes passengers arriving at Ottawa could book through, sleeping car-service to New York every evening from two railway terminals. Likewise at Kingston the same facilities were available to Montreal, Toronto, Detroit and Chicago.[266] Thus a traveller could conveniently combine a leisurely cruise on the Rideau with overnight pullman service to these principal cities.

The *Rideau King* and *Rideau Queen* called at more than two dozen places between Kingston and Ottawa, some of which (Nigger Head, Blake's Point, Garrett's Rest, Ely's Wharf, McCreary's) cannot have been more than landing stages at summer resorts.[267] *Rest and Sport among the Rideau Lakes* lists four resort hotels in 1914 - the Hotel Kenney at Jones Falls, Fisherman's Rest, Westport, and the Commercial House and Garrett's Rest in Portland as well as a boarding-house at Chaffey's.[268] Apparently Rideau Lakes



One of many resorts. Pine Lodge, Newboro Lake, ca. 1905-10. (Dr. H. Butman Collection.)



Hotel Rideau, Newboro, Ont., ca. 1905-10. (Dr. H. Butman Collection.)

Navigation invested in no hotels of its own, although its charter, as described hitherto, empowered it to do so.

The date of the demise of this once flourishing and enterprising company has not been ascertained, but according to a local history of Smiths Falls, Daniel Noonan, who was the moving spirit in the venture, died in 1914. It may be recalled that he had owned and operated the *Rideau King* when she was still known as the *James Swift* as early as 1893. She was broken up in 1918-19.[269] In 1918-19 the *Rideau Queen,* so lately the literal "queen of the Rideau", was relegated to freight service in the Bay of Quinte operating out of Brighton, although she was still owned by the Rideau Lakes Navigation Company.[270] The ultimate disposition of the *Rideau Queen* is unknown; the last record of her dates from 1931.[271] In 1963 the *Perth Courier* in a 1963 issue recalled the *Rideau Queen*'s palmy days when she was crowded with holiday-makers and was a familiar sight on the waterway 1900-14.[272] The steamer excursion trade, was never the same again after the war.



Another well-known Rideau resort hotel the Opinicon, at Chaffey's Lock. The magnificent stand of oak on the other side of the hotel is a not-to-be-forgotten sight. (From the Collection of Mrs. J. Laishley.)

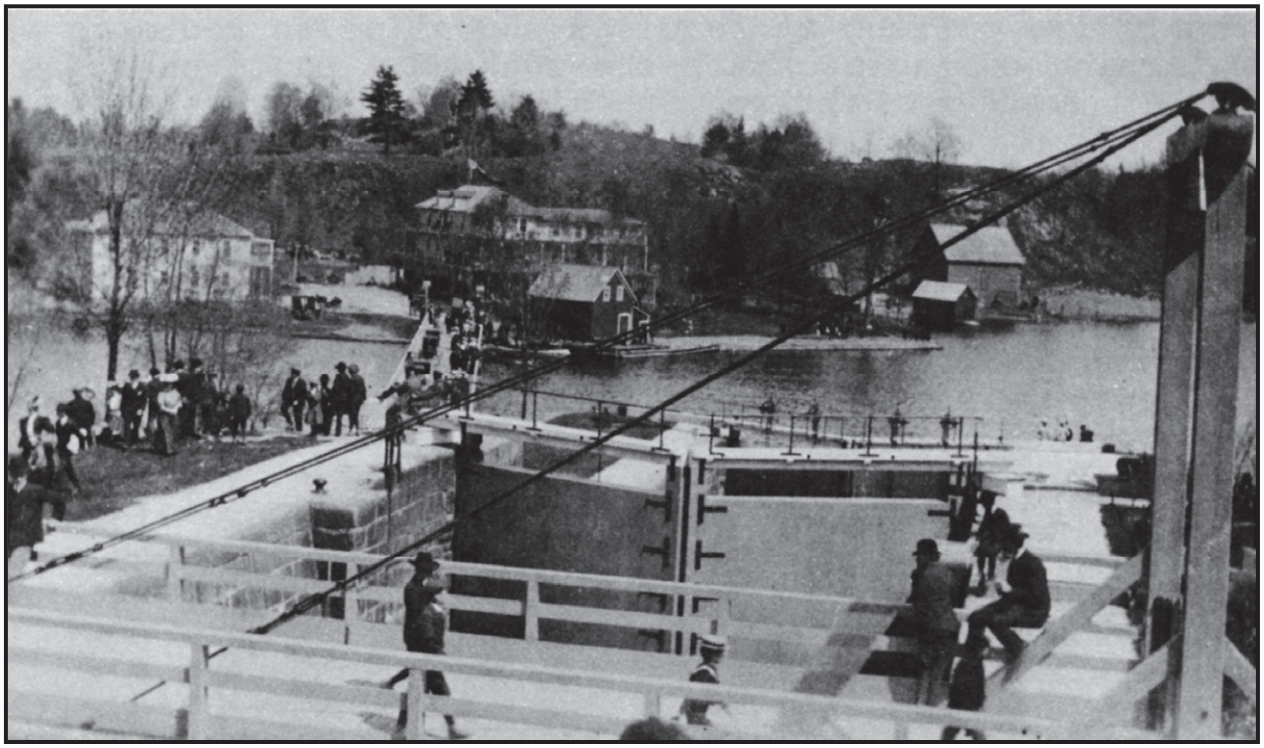
Captain G.A. Davis, Forwarder

Captain G.A. Davis, steamboat captain and forwarder based at Smiths Falls, operated a flourishing forwarding business from the early years of the present century well into the Second World War. For more than 40 years Captain Davis's steamboats and later gasoline launch (*Vic II*) were a familiar sight to cottagers and vacationists up and down Rideau Lake. In the main, Davis's forwarding business was supplying cottagers with groceries and household items, although in the early years he handled heavier cargoes.

From 1905 to 1914 Davis captained the *Lee*, a diminutive steamer of only 7 tons register, 46 feet in length by little more than 9 in the beam, and drawing four feet of water. The *Lee* was built in 1897, and her first owner was J. McGraw of Brockville, where the *Lee* was registered.[273] The *Lee,* with Captain Davis in the wheelhouse, ran daily except Sunday from Smiths Falls to Portland return, past Port Elmsley and Rideau Ferry, calling at cottages, on an average some 20 per trip, along the route.[274] In 1906 Davis acquired a second, somewhat larger steamer, the *Antelope*, which registered nearly 11 tons and was 60 feet in length and 11.5 feet in the beam. She was built in Kingston 1889, and was acquired by Davis on 15 May 1906.[275] (All three steamers owned and operated by G.A. Davis previously discussed). By at least the year 1913 (the date of purchase not having been determined) Davis had added the 73-foot, 40-ton *Victoria* to his fleet; she was built in a Kingston shipyard in 1900.[276]

The *Lee* carried a crew of four: captain, engineer, fireman and deckhand, and the *Victoria* five to six, including a first mate and sometimes two deckhands. The crew did not eat on board, but had their noon meal in a hotel in Portland. Both the *Lee* and the *Antelope* were chartered by other forwarders in the summer of 1908 and grossed $85.00 for five trips. Davis's vessels carried a variety of cargo: building supplies, furniture, coal, ice in blocks of 500 pounds, kegs of mica, and in the fall of the year, deck cargoes of cheese packed in crates. Groceries for cottagers have already been mentioned, and in the latter years when the gas launch *Vic II* alone was running, formed the bulk of the trade. On several occasions in 1910-11, when the Canadian Northern line from Ottawa to Napanee was under construction, the *Lee* carried blasting powder and dynamite from Smiths Falls to Lake Opinicon for one of the contractors.

Davis did not neglect the excursion trade. Several seasons in the early post-war years Davis ran what amounted to a businessmens' special; the *Victoria* left Smiths Falls Saturday evenings about 10:30 P.M. when all the stores and business offices had closed, stopped to drop off passengers at their cottages along the shores of Rideau Lake, arrived at Portland about 2:30 A.M. where she layed over until about 6:00 P.M. on Sunday and then returned to



View from locks, Jones Falls, 24 May 1907, showing Kenney's Hotel, and a wharf. (Mr. B.A. Campbell, Elgin.)



One of the most popular and scenically situated summer resorts, Kenney's Hotel, Jones Falls. This photo, from a painting by F.H. Taylor, 1896, hangs in the hotel lounge. (The Management, Kenney's Hotel, Jones Falls, Ont.)

Smiths Falls, calling at landings and slips en route to pick up returning cottagers after the weekend. Davis used the A. Gallagher wharf in Portland, until the government built one about 1920.

The G.A. Davis Papers contain no accounts for the operating expenses and revenues of the three steamers, but do contain a number of invoices indicating with whom Davis dealt. One invoice from the Davis Dry Dock Company, Kingston, for the first fortnight of October 1906, billed the steamer *Antelope* for sundry chandler's items - oakum, putty, turpentine, paint, red lead, tallow, nails, bolts, oak, elm, tamarac and pine lumber, - to the sum of $329.16. Davis bought his coal from Foster & Company, Smiths Falls. His engine oil and cup grease were also purchased locally at the Queen City Oil Company (head office in Toronto). In 1911-12 the premium for $1,500 coverage on the *Victoria* was $750 for one year. This can be compared with his premium to insure the gas launch *Vic II* for one year in 1941 - $16.60 premium for $500 coverage.

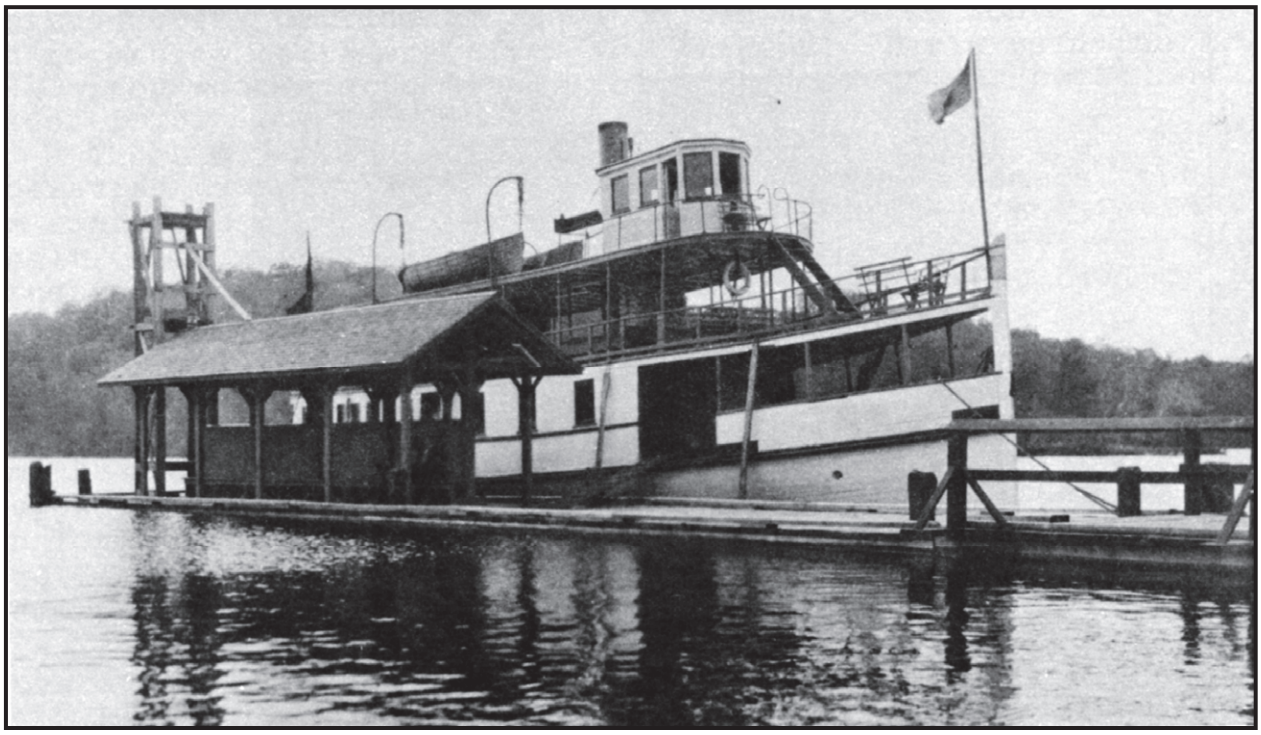
Like the much larger Rideau Lakes Navigation Company, G.A. Davis operated a joint service with a railway - in this case, the Canadian Northern. Effective 15 June to 15 September 1915, the Canadian Northern's Toronto-Smiths Falls-Ottawa-Hawkesbury and Montreal service offered a joint tariff with Davis's steamers; tickets were honoured on both train and steamer. The return fare Toronto to Rideau Ferry was $10.80. At Portland the Canadian Northern trains connected with the Davis steamers for resorts at Garrett's Rest, Pringle's, Sea Breeze, Poppen's, Whitcomb's, Star Island, Foster's and Rideau Ferry. The Canadian Northern provided branch line connections with Picton, Marmora, Tweed, Seeley's Bay, Crosby, Newboro, Westport, and Brockville. At Portland the Canadian Northern station lay less than a mile from the dock, for which conveyance could be had for 15 cents per adult and 10 cents for children. First class tickets were good for stopovers of up to a month, but second class tickets were valid for continuous passage only. Fares on Davis's steamers from Portland to various Rideau resorts were modest: to Garrett's Rest, Pringle's and Sea Breeze 40 cents return, 70 cents return to Star Island, 85 cents return to Foster's and Rideau Ferry, and $1.00 return to Smiths Falls.[277]

In 1924 the Smiths Falls *Record News* advertised a Smiths Falls-Portland service on the *Victoria* which left Smiths Falls at 8:15 A.M. and arrived at Portland at 1:00 P.M. Calls were made at Rideau Ferry and a number of cottages en route to deliver groceries and cottager's supplies.[278] According to a local history, this Smiths Falls-Portland service operated as late as about 1940, the *Victoria* having replaced the *Antelope* in 1910, being in turn replaced by the gasoline launch *Vic II* in 1934. There was a special Friday excursion in those years to Westport.[279]



Victoria wintering in lock, Smiths Falls, n.d. (Mr. G.R. Davis, Smiths Falls.)

An undated G.A. Davis handbill gives further detail on the *Vic II* service, which had been operating at a loss. To remedy this no supply orders for less than two dollars were accepted. Cottagers living some distance from the main channel had to arrange for delivery somewhere thereon. Whenever possible, passengers were asked to congregate at one centrally located dock in order to eliminate stops at a number of landing stages. The operating costs of *Vic II* worked out to about 40 cents per mile, and the average stop, calculating extra gasoline, running time etc., cost about 30



Steamer *Victoria* berthed at Government Wharf, Portland, early 1920s. (Mr. G.R. Davis, Smiths Falls, Ont.)



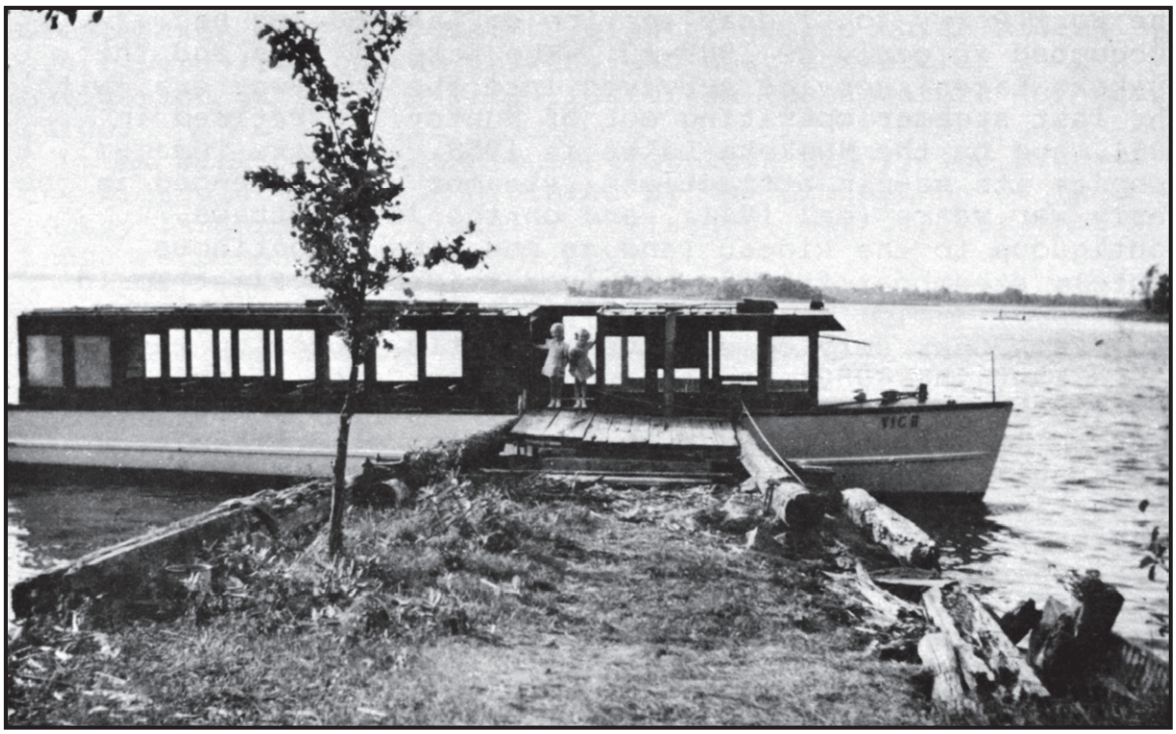
Vic II acting as cottage supply boat, n.d. (Mr. G.R. Davis, Smiths Falls,)

cents. Long runs into bays and inlets were unprofitable. The following fare schedule, presumably from Smiths Falls, was in effect:

Rideau Ferry & Ferguson's	65¢ return	45¢
Davidson's	75¢	50¢
Jones' & Richard's	$1.00	65¢
Code's	$1.00	65¢
Star Island	$1.00	65¢
Crawley, Higginson's, Stewart's, Houghton's Bay, Pine Brae, Ritchie's or Evans, Layng's, Carson's, Bellow's Bay, Daykins, Pendleton's, Taits	$1.10	75¢

On Thursdays in July and August special excursions, passengers only, were run to Westport; on these days passengers could board from any dock, signalling the launch with a white flag.[280] In his younger years, Davis's son, G.R. Davis, served on his father's steamers, and reputedly held the last master's certificate issued for minor inland waters. The elder Davis continued his forwarding trade to 1928, and died in 1941.

Both Adam Foster (discussed earlier) and Davis were forwarders who operated on a small but active scale late in



Gas launch *Vic II*, Briggs Island, 1944. (Mr. G.R. Davis, Smiths Falls, Ont.)

the period. Davis's trade illustrates well the decline of the Rideau forwarding operations: from its once flourishing and varied nature in which everything needed by a pioneer community was shipped up from Montreal, Kingston and Bytown to an attenuated grocery delivery service for cottagers. Even this trade did not survive as cottagers found it progressively more convenient to fetch their provisions in the family car from the nearest town.

The termination of the Ottawa Transportation Company's passenger service, Smiths Falls to Montreal, early in November 1935, marked the end of an era. The company's official notice of the withdrawal of the *Ottawan* appeared in the *Montreal* Gazette June 13 the following summer. A dwindling freight traffic continued for another quarter century, when all commercial activity ceased on the Rideau Canal. This fate was not peculiar to the Rideau. Mark Twain lamented the passing of the lofty Mississippi stern-wheelers as early as 1882 and by 1890 there were few left on that mighty waterway. Diesel-powered tugs with long and massive barge hauls replaced the colourful river steamer. On the Hudson River night boat passenger service was discontinued in 1939, and all passenger service in 1948.[281]

Likewise in Ontario the demise of the steamboat on all the minor inland waters was more or less contemporaneous with that on the Rideau, and attributable to the same cause - the motor car. On the neighbouring Trent-Kawartha system regular passenger service petered out about 1932, with occasional steamer excursions operating as late as 1944. The Port Perry to Lindsay service on Lake Scugog had succumbed as early as 1909-10. The Lake of Bays and the Muskoka Lakes' service survived into the post-war era, with the last steamer operating out of Huntsville retired in 1951, and on the Muskoka Lakes in 1958. On Lake Temagami, despite its scenic attractions, steamer service ended in the early war years (ca. 1941), and on the lower Ottawa, contiguous to the Rideau (and at one time a continuous route), steamboat traffic barely survived the First World War.[282]

Passenger service survived a little longer on the Great Lakes, but the 1950s saw the phasing out even of this trade, for in the prosperous years of mid-century, nothing could bear competition with the automobile for other than very long hauls, on which air service held the key to the future. Navigation on these great inland seas for the past quarter-century and more has been dominated by massive bulk carriers, freighting grain, ore and oil from the heart of the continent to tidewater.

A few generalizations and comparisons between Rideau steamers and those on an adjacent waterway, the Trent, may be of interest. In 1891 there were 15 steamers on the Trent. From the description of these vessels it is apparent that paddle-wheel propulsion survived longer on the Trent than on the Rideau. One steamer, the *Sunbeam,* combined

paddle-wheel and screw propeller, no instance of which occurred on the Rideau. One steamer at this date, the *Crandella,* 266 tons gross, 112 feet in length, was larger than anything on the Rideau. The rest of the 1891 list indicates vessels similar in size to those on the Rideau Canal. No Rideau steamboat, then or later, had the passenger capacity of either the *Crandella* (400) nor the *Esturion.*

The 1910 list for Trent steamers is notable for the disappearance of paddle-wheelers. Both the *Islay* and the *Otonabee* slightly exceeded in overall length anything on the Rideau; the latter was licensed to carry 444 passengers. Although a larger vessel than the *Otonabee,* the *Islay* carried fewer passengers and both the *Rideau King* and *Rideau Queen* were licensed for more in their hey-day. But apart from *Otonabee, Islay* and *Stoney Lake,* the Trent steamers were roughly comparable in size to those on the Rideau.[283]

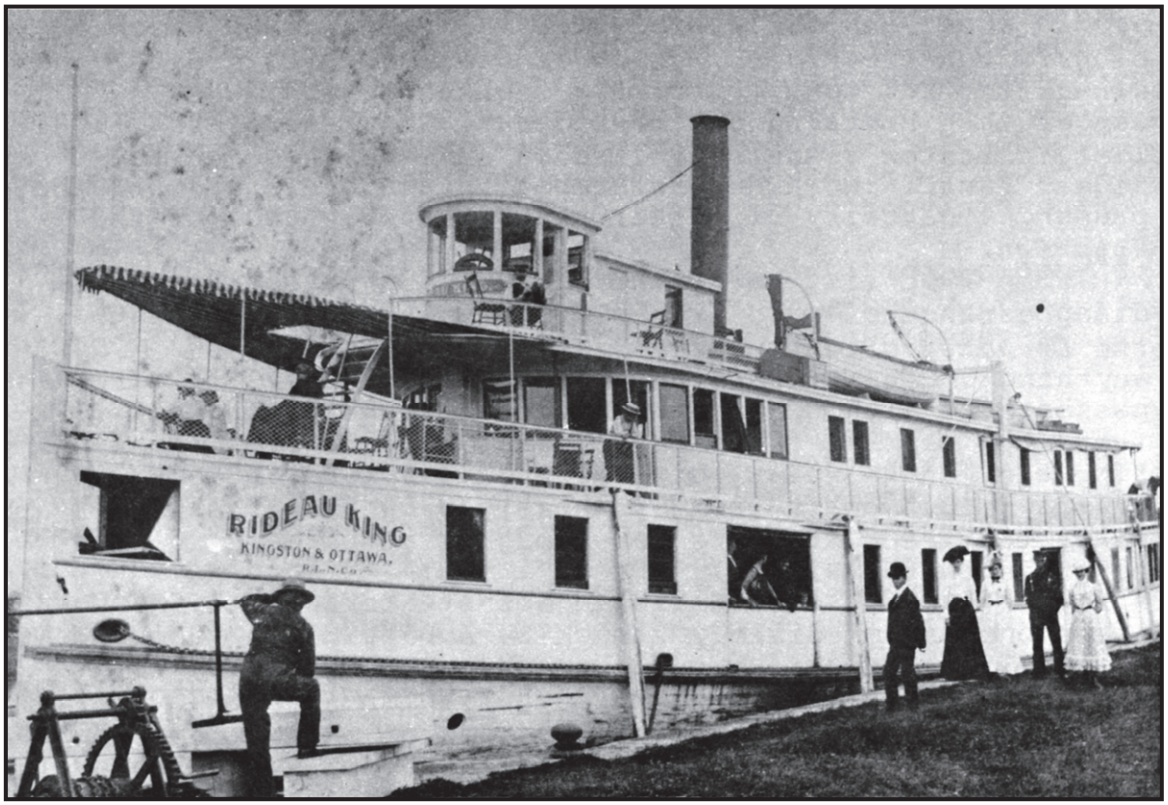
In glancing over a listing of steamers on the Muskoka Lakes one is immediately struck by a half-dozen vessels, led by the 152-foot, 744-gross-ton *Sagamo* (built 1906, scrapped 1969), and the 142-foot, 377 ton *Medora* (1893-1942), which dwarfed any vessel of any description on the Rideau. Many of the steamers, however, were more or less of equivalent size to those on the Rideau. One other point worthy of mention is the number of steel, and combination wood and steel hulls, on the Muskoka Lakes.[284]

It goes without saying that commercial boats on the Great Lakes were comparative giants, beside which Rideau craft were lilliputian indeed, and that commercial navigation is still a vital factor on these waters for bulk cargo.

As mentioned at the outset of this study, the size of the Rideau steamer was dictated by the dimensions of the locks, larger than initially envisaged, but smaller than those recommended by Colonel By.

Over the course of the century that the Rideau Canal was in active use as a commercial route it became clear that its scale was adequate to the requirements placed upon it. Had the region been blessed with anything like the resources and industrial base of the Great Lakes region, the works would have had to have been enlarged several times beyond what had been envisaged by Colonel By. As it was, they did the job nicely.

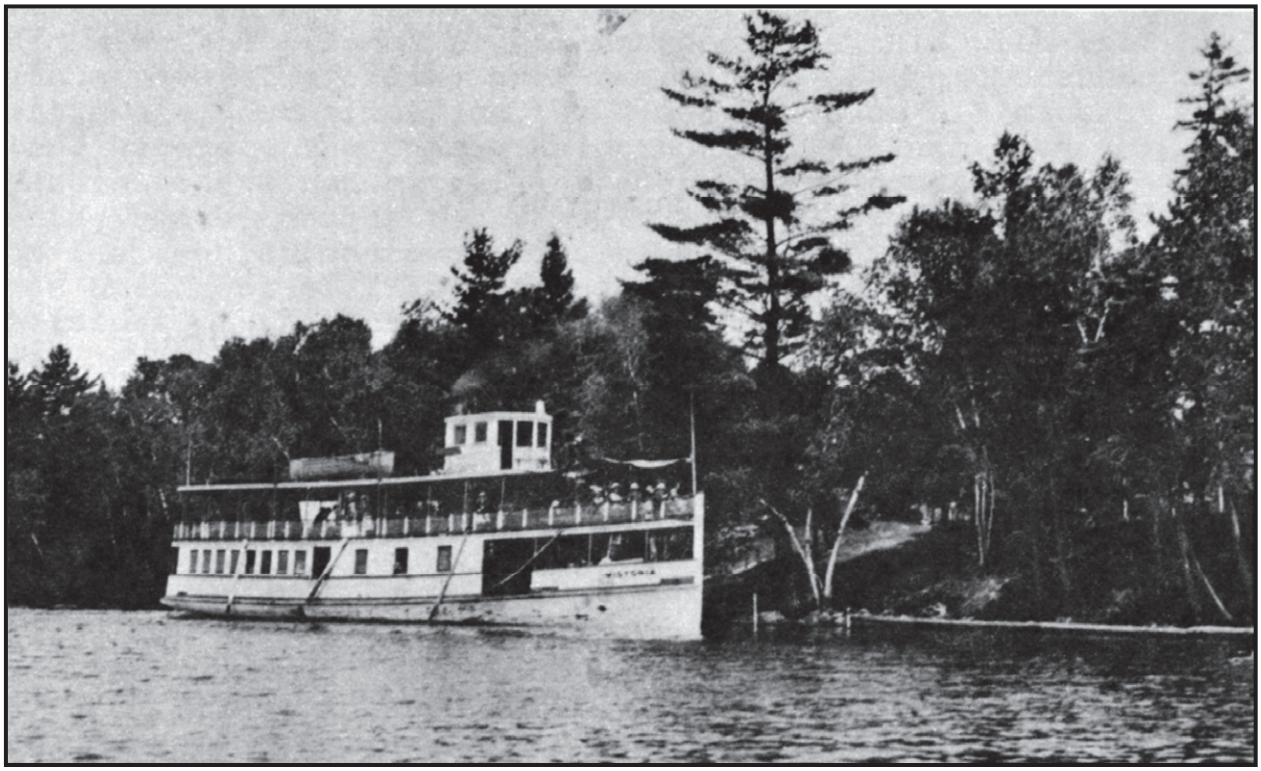
The end of commercial navigation on the Rideau, however, far from signalled its abandonment as a waterway.



Rideau King, 1 August 1902. (Mr. F. Flemming, Newboro.)



The *Rideau Queen* below Chaffeys, 1908. (Neil A. Patterson, Kingston.)



The *Victoria* at H.H. Layng's Wharf, Big Rideau Lake. (Mr. G.R. Davis, Smiths Falls.)

EPILOGUE: Summer's Idyll

The transition from a commercial to a recreational waterway where luxury launches, small motor boats, dinghies and canoes now hold sway, was a gradual and at the start an almost imperceptible one. The forerunners of the numerous progeny of pleasure craft appeared in the early 1870s. The names of some of the early pleasure craft may be recalled from the first chapter: the *Marquis of Lorne*, the *Bella*, the house-boat *Annandale,* the *Willard*, and the *Little Queen*, an early gasoline-powered launch. As early as 1875 John Fisher of Kingston operated a steam yacht, with ccommodation for 100 passengers on both the Rideau and Ottawa.[1]

Early in the new century the Rideau tourist trade got under way; resort hotels and cottages appeared in increasing numbers along the banks of rivers and lakes from the open cultivated shores of the Long Reach to the rocky and wooded banks of the Cataraqui. Indicative of the growing importance of the Rideau as a recreational centre was a new feature introduced by the *Evening Journal* (Ottawa) in 1904 entitled "Ottawans at the Summer Resorts." The paper noted that camps and cottages were numerous as far out of town as the Hog's Back. The same summer the *Journal* reported the appearance of a long narrow craft propelled by a pole, apparently a punt of some description.[2] In 1905 the *Journal* noted the rapidly growing popularity of cottages along the Rideau.

As far back as 1872 a Public Works memorandum, anticipating a tourist influx in the future, recommended the compilation of a complete map of the system based on a sound survey. The author suggested that the region would become popular with vacationers once the canal could be negotiated in 10 to 12 hours, but noted that under the "present slow and uncertain conditions even the wondrous beauty of the landscape attracts few visitors."[3] The map or chart had yet to be printed by 1888.[4] For several years petitions were submitted by the Kingston Board of Trade, among others, for the buoying of the channel. This was finally implemented in the summer of 1917.[5] Such aids to navigation had not been necessary in the days when commercial vessels manned by certificated crews were the main users, but from about 1910 on this was decreasingly the case.

As the Rideau Canal and waterway was taken over by holiday-makers, tourists, cottagers and sundry amateur boatmen of varying experience and skill, the question of

safety regulations inevitably arose. The legislators were faced with the dilemma of how to reconcile this with the obvious need of avoiding over-regulation of the operators of small craft, not simply on the Rideau, but all minor inland waters. The Canada Shipping Act 1906 excluded pleasure yachts not carrying passengers or goods for hire, fishing boats, barges and vessels without rigging or sail from the regulations requiring certificated officers.[6] By an amendment of 1934 passengers were excused from the provisions of the Act; those licensed to carry more than 40 passengers had to carry both a captain and mate with proper papers.[7]

Several writers have noted that the Rideau Canal, originally conceived as a defence measure against the possibility of American invasion, ended up attracting droves of summer visitors, many of whom were American. While this accorded with government promotion of tourism, and provided an important economic boost to the region, an incident occurred during the 1930s which revived some of the traditional animosities which had led to the construction of the canal. This incident devolved upon the flags flown by American yachts holidaying on the Rideau. This "flag controversy" was based on the apparently widespread practice of American boat-owners of showing their own flag only, on their passage through Canadian waters. International practice on the high seas was to fly the ship's national flag at the stern, and when in national waters, the flag of the host country from the mainmast. As a consequence some lockmasters and others along the Rideau resented the failure of many American boats to show the Union Jack.

It transpired that the flying of the host country's flag from the mainmast was only a courtesy, not a matter of international law or convention. In the uneasy post-war years a case in point arose on the St. Lawrence, when a German merchantman, the *Liselotte Esseberger,* passed through showing only the red, white and black swastika ensign of Nazi Germany. In June 1935 the deputy-minister of Railways and Canals applied this lesson to the Rideau,[8] thereby ending the controversy. Considering the fact that many pleasure craft had no mainmast from which to fly the Jack, and that more of them flew no flag at all, the affair in retrospect strikes one as something of a tempest in a teapot which was exacerbated, no doubt, by a bit of chauvinism on both sides.

Late in the period only the government patrol boats the *Loretta* and the *Agnes P,* and the research vessel *Radel II*, shared the somnolent reaches with the hundreds of tourist craft - some of which attained considerable dimensions. An exception and local spectacle was provided when, on 27 August 1951, four naval Fairmiles set out from Kingston under the command of Commander F.R.K. Naftel for passage through the Rideau Canal. These 112 foot vessels, designed for deep sea work as sub-chasers, and powered by twin diesels, were as large as the locks had ever

accommodated, with one or two possible exceptions.[9] The cruise was undertaken as a public relations programme in connection with the conclusion of reservists' summer training on the Great Lakes. Commander Naftel led the flotilla gingerly through the 47 Rideau locks to Ottawa, with gala celebrations at every point of call. Commander Naftel recalls that at Smiths Falls the mayor and council insisted on the officers attending a civic banquet where they were lavishly entertained. The Fairmiles were very close to the draught limit for passage through the Rideau locks, and often cleared the sills only by means of a surge of water let through the gates. The cruise continued down the Ottawa and returned via the St. Lawrence to Lake Ontario, from whence the vessels scattered to their respective bases on the Great Lakes.[10]

The Rideau Canal was once a hopeful aspirant for the through traffic of staples from the Mid-West, and for long the principal access to the Rideau region.

While it seems highly unlikely that the waterway will ever again play a role as a commercial facility, the growth of tourism and the desire of many to escape congested cities for a brief respite underline the fact the system still has a role to play in the economy of the area, and that the waterway itself will, for the forseeable future, still be an artery of navigation.



Commander F.R.K. Naftel on the bridge of a Fairmile. (Courtesy Department of National Defence.)



Fairmile at Ottawa River entrance to Rideau Canal. (Courtesy Department of National Defence.)

APPENDIX A. RIDEAU CANAL VESSELS

Aberdeen screw propeller (hereafter sc)

No.	100659
Port of Registry	Kingston, 1894
Builder	William Robinson, Westport
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Galleries	
Head	
Framework	wood
Length	51.0 (all dimensions are in feet,
Breadth	18.4 unless otherwise indicated)
Depth	4.2
Length Engine Room	4.2
Passenger Accomm.	40
Engines	upright, high-pressure, H.W. Petrie, Toronto cylinders 6 in.; 6.5 in. stroke; 6 h.p.
Gross Tonnage	12.65
Under Decks	8.34
Cabin on Deck	4.31
Deductions:	
Engine space	4.02
Register Tons	8.63
Owner:	William Cushing Fredenburgh, Westport
Subsequent Owners:	William Harty, Kingston, 3 July 1901; Claude W. Cole, Milford, 8 November 1906; 32 shares Amos Hudgin, Hallowel and 32 shares John Hughes, Hallowel, same date; Hudgin sold 11 shares to Calvin P. Scott, Hallowel, 6 November 1909; Hughes sold 11 shares to Calvin P. Scott, 6 November 1909; Hughes sold 21 shares to Amos Hudgin, 1 Feb 1910; Amos Hudgin sold 42 shares to Thomas G. McWain, Deseronto and Calvin P. Scott sold 22 shares to McWain, 31 August 1910, who became sole owner. McWain sold vessel to Harry Raymond Cory (no location), 9 August 1926.

Service	In 1897 the *Aberdeen* was in service Kingston-Ottawa, licensed for 40 passengers.

Advance barge

No.	-
Port of Registry	Kingston
Builder	Henry Roney, Garden Island, 1854
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Frame	wood
Length	109.4
Breadth	23
Depth	9.5
Tonnage	240 tons "carpenter's measure"
Owner	Edward Barry, Kingston
Subsequent Owners	Commercial Bank of Canada, by mortgage 24 August 1865; Commercial Bank by purchase 26 February 1866; George Matheison Kinghorn, Kingston, 4 June 1868; Montreal Transportation Co., 4 January 1870

Advance steamer sc

No.	-
Port of Registry	Kingston
Builder	George Chaffey, Bedford Mills, 1860
No. of Decks	"upper deck & no figure-head"
No. of Masts	two
Stern	round
Build	carvel
Length	66.3
Breadth	10.6
Depth	7.1
Length Engine Room	36.5
Passengers	-
Engines	-
Tonnage	50 (unspecified)
Owner	George Chaffey & Bros.
Disposition	vessel broken up & registry closed 10 November 1911

Adventure barge sc

No.	88575
Port of Registry	Kingston, 1873
Builder	George Dickson, Dog Lake, Frontenac County 1873

No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	103.6
Breadth	22.6
Depth	7.0
Tonnage	
Registered	103
cabin on deck	12.78
Owner	Kingston & Montreal Forwarding Co., Kingston
Disposition	Ship struck a rock, sank, Galops Rapids, St Lawrence, near Cardinal, 13 October 1885; registry closed 11 December 1885.

Adventure steamer, sc

No.	-
Port of Registry	Kingston
Built	Dog Lake, Ontario, 1873
Length	102.8
Breadth	23.3
Depth	6.9
Tonnage	
Registered	108
Owner	J. Carruthers, Kingston
Service	Vessel a freight steamer on Rideau and St Lawrence
Disposition	1884 machinery removed, converted to tow barge

Agnes P steam tug sc

No.	131138
Port of Registry	Ottawa
Builder	- , Buckingham, Quebec, 1913
Length	55.8
Breadth	13.4
Depth	5.6
Engines	5 h.p.
Tonnage	
Registered	18
Crew	four and one officer
Owner	Dept. Railways & Canals

Aid steamer, paddle-wheel (hereafter p-w)

No.	-
Port	Montreal
Built	Montreal, 1857
No. of Decks	one
No. of Masts	one

Stern	round
Build	carvel
Length	91.4
Breadth	13.4
Depth	7.9
Length Engine Room	53.2
Burthen	72 tons (unspecified)
Owner	George Smith, Montreal

Aid steamer, centre p-w

May not have operated on the Rideau but Ottawa only

No.	92295
Port	Ottawa
Build	Alexander Miller, Hull, 1886
No. of Decks	one
No of Masts	nil
Stern	round
Build	carvel
Head	blunt
Frame	tamarack
Length	65.0
Breadth	18.0
Depth	3.6
Length Engine Room	18.7
Engines	two horizontal high-pressure, by E E Gilbert, Montreal, 1871; cylinder 10 in.; stroke 30 in.; 30 h.p.
Owner	John A. Cameron, Thurso, Quebec, et al. (illeg); destroyed by fire August 1914

Alert barge

No.	-
Port of Registry	Kingston
Built	Macpherson & Crane, Kingston, 1848
Stern	Round
Build	Carvel
Length	88
Breadth	10.9
Depth	5.3
Tonnage	51
Owner	Macpherson & Crane

Alert steamer p-w

No.	-
Port of Registry	Montreal
Built	Montreal, 1855
No. of Decks	One
Length	89.5
Breadth	13

Depth	6.3
Tonnage	38
Disposition	registry closed 23 February 1875

Aileen

No.	116834
Port of Registry	Kingston
Built	Perth, 1904
Length	56.4
Breadth	11.8
Depth	4.4
Tonnage	
Registered	16
Owner	Peter Cavanaugh, Perth

Aletha steamer sc

No.	107748
Port of Registry	Kingston
Built	Davis Dry Dock Co., Kingston, 1901
No. of Decks	two
No. of Masts	nil
Stern	round
Build	carvel
Frame	wood
Length	107.4
Breadth	19.7
Depth	5.5
Length Engine Room	22.3
Engines	triple compound, Davis Dry Dock Co., cylinders, 8.5 in., 12.75 in., 21 in.; stroke 14 in.; h.p. 25
Gross tonnage	171.27
Registered tonnage	89.98
Owner	Aletha Roys & John Roys, Kingston
Subsequent Owners	Charles M. Roys, Kingston, druggist, 21 July 1903; Edwin E. Horsey, Kingston, 20 February 1909; Quinte Navigation Co., Picton, 6 March 1909; Ontario & Quebec Navigation Co., Picton, 31 December 1910

Alice barge

No.	-
Port of Registry	Kingston
Built	Robert Robinson, Portsmouth, 1854
Stern	round
Build	carvel
Length	88.3
Breadth	17.3

Depth	7.1
Tonnage	105 922/3500
Owner	Macpherson & Crane, Kingston

Alice steamer
(may not have operated on Rideau)

No.	-
Port	Montreal
Built	Brockville, 1854
No. of Decks	one
No. of Masts	nil
Stern	sharp
Build	carvel
Length	89.8
Breadth	16.5
Depth	5.4
Tonnage	78 2456/3500
Owner	Moss Kent Dickinson

Allie steamer, sc

No.	100414
Port of Registry	Ottawa
Builder	John Harris, Brockville, 1890
No. of Decks	one
No. of Masts	nil
Stern	spoon
Build	carvel
Head	sharp
Framework	oak
Length	40
Breadth	8
Depth	3
Engines	compound, Alexander Martin, Ottawa cylinders: 4.5 in., 6 in. stroke; 7.5 in., 6 in. stroke; 15 h.p.
Tonnage Registered	7.66
Owner	Alexander Martin, Ottawa, dentist
Subsequent owners	Andrew W. Jones & David M. Jones, Ottawa, gentlemen, 23 May 1901
Disposition	Supposed out of commission, notation 14 November 1919

Antelope steamer sc

No.	92398
Port of Registry	Kingston, 1889
Builder	Robert Davis, Kingston,
No. of Decks	one
Stern	round
Build	carvel
Framework	wood

Length	60.5
Breadth	11.5
Depth	4.8
Length Engine Room	15.7
Engines	compound, upright, Davidson Doran & Co., 1889; cylinders: 6 in., 8 in. stroke; 11 in., 8 in. stroke 15 h.p.
Gross Tonnage	19.59
Register Tonnage	10.88
Owner	John H. Davis, Gananoque, mariner George Shutlif, Gananoque, engineer
Subsequent Owners	James Francis Calvick, part owner, April 1891; John Arthur Davis, Leeds County, sole owner 27 November 1893; George A. Davis, Smiths Falls, 15 May 1906
Disposition	Registry transferred Ottawa 19 May 1910 no further information

Arrah Wanna steamer sc

No.	122352
Port of Registry	Kingston
Builder	unknown, Pamrapo, N.J., 1880 re-built Alexandria Bay, N.Y., 1899
No. of Decks	one one large cabin amidships surmounted by hurricane deck
Length	54.8
Breadth	9.4
Depth	2.7
Passenger Accom.	40
Registered Tonnage	16
Owner	Peter Cavanagh, Perth
Route	Kingston and Smiths Falls, 40 passengers, 1909-10; Perth-Rideau Lakes, 1911;
Disposition	Subsequently converted to a tug; broken up 1918-19 — "hull used up"

Beaver steamer

No.	-
Port of Registry	Kingston
Builder	Macpherson & Crane, Kingston, 1840
No. of Decks	-
Stern	square
Build	carvel
Galleries	no quarter galleries
Length	104.0
Breadth	16.7

Depth	7.2
Length Engine Room	56.0
Owners	John Macpherson, Kingston Samuel Crane, Prescott David Lewis Macpherson, Montreal (jointly)
Subsequent Owners	vessel changed hands several times, 1853-9, last owner James Merton, Kingston, brewer and distiller
Misc.	launched from marine railway, Kingston, 4 July 1840; fiddle-shaped; cabins full-beam of vessel
Route	bi-weekly service Kingston-Bytown.

There were a number of vessels of this name; without registry numbers it is hard to identify them other than by dimensions and date of construction.

Bedford barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1863
Length	103

Bella subseq ***Ida*** sc

No.	85367
Port of Registry	Kingston
Builder	Harris Williams, Brockville, 1881
No. of Decks	one
Stern	round
Build	carvel
Galleries	nil
Head	sharp
Framework	wood
Length	46.0
Breadth	8.0
Engines	upright, high-pressure, Black Bros., Belleville 1881; cylinders 7 in.; stroke 7 in. 10 h.p.
Registered Tonnage	5.64
Owner	William H. Mager (or Mayer), Merrickville, 1884; Arthur Starkey, Parry Sound, Ontario. 4 October 1888
Misc.	name changed from *Bella* to *Ida* 8 October 1887
Disposition	broken up, registry closed 29 December 1910

Bertha steamer sc

No.	96913
Port of Registry	Kingston
Builder	Lewis Francis, Kingston, 1891
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	51.4
Breadth	10.5
Depth	3.4
Length Engine Room	8.4
Passenger Accom	40
Engines	high-pressure, upright, Black Bros., Brockville, cylinder, 9.5 in.; stroke, 9.5 in.; 10 h.p.
Gross Tonnage Register	17.64
Tonnage	12.0
Owner	Arthur Chown, Kingston
Subsequent Owners	Ogle Carss, Smiths Falls, insurance agent, 9 May 1896; Frank Montgomery, Perry Sound, hotel-keeper, 1 May 1897

Birdie Jones steam yacht sc

No.	92665
Port of Registry	Ottawa, 1887
Builder	P.J. Waters, Ottawa, 1885 built in Hull
Length	28.3
Breadth	5.4
Depth	2.7
Length Engine Room	2.0
Engines	upright, John Dewey (or Deway), Ottawa; cylinders 3.5 in.; stroke 4 in.; 2 h.p.
Owner	Andrew William Jones, Ottawa
Disposition	supposed out of existence 25 February 1918

British Lion steam tug sc

No.	111441
Port of Registry	Ottawa
Builder	L.T. Easton, Merrickville built in Ottawa, 1900
No. of Decks	one
Stern	spoon
Build	carvel
Head	blunt
Framework	wood
Length	55.0
Breadth	13.5 or 15.5
Depth	6.2

Engines	upright, Hamilton Bros., Buffalo, 1876 cylinders 12 in.; stroke 12 in.; 48 h.p.
Registered Tonnage	17.29
Owner	Hiram Easton, Merrickville, gentleman
Subsequent owner	Eden Abbott Johnson, L'Original, 30 April 1903
Disposition	wrecked 11 June 1904; registry closed 7 February 1907

Brockville propeller

No.	-
Builder	Chaffey Bros., Bedford Mills, Brockville, 1863
Length	136

Burgess barge

No.	-
Builder	Chaffey Bros., Bedford Mills,1863
Length	102

Bytown steamer p-w

No.	-
Port	Montreal
Builder	Macpherson & Crane, Montreal, 1842
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Length	92
Breadth	17
Depth	5.8
Length Engine Room	40
Tonnage	34 2322/3500
Owners	Macpherson & Crane
Subsequent Owners	Robertson Jones & Co., 12 November 1853 Macpherson & Crane took mortgage "as security for debt with power to sell" 12 November 1853; vessel to be broken up, registry closed 30 November 1875

Bytown steamer (probably operated on St Lawrence)

No.	-
Port	Quebec
Built	John Bonner, Quebec
No. of Decks	One
No. of Masts	Nil

Rigging	standing bowsprit
Stern	square
Build	carvel
Length	102.6
Breadth	22.9
Depth	9.1
Tonnage	165 326/3500
Owners	William Price, Quebec, merch., 21 shares John Bonner, Quebec, merch., 21 shares John Molson, Montreal, merch., 22 shares
Subsequent Owner	Charles Edward Dunn, Quebec, merchant, 64 shares

Bytown steamer p-w

	(doubtful operated on Rideau)
No.	-
Port	Quebec
Built	George Erastus Humphrey, Quebec, 1854
Length	98.8
Breadth	22.2
Depth	7.7
Length Engine Room	46.5
Stern	round
Build	carvel
Frame	wood
Tonnage	43 469/3500
Owner	George Erastus Humphrey, Quebec, steamboat owner

Caledonia steamer

No.	-
Port of Registry	Kingston
Builder	Macpherson & Crane, Portsmouth, 1846
No. of Decks	one
Stern	round
Build	carvel
Length	93.0
Breadth	17.6
Depth	6.5
Length Engine Room	34.5
Tonnage	about 100 (unspecified)

Carlton steamer sc

No.	92388
Port of Registry	Kingston
Builder	Unknown, Westport, 1878
No. of Decks	one
Stern	square
Build	carvel

Framework	wood
Length	40.0
Breadth	8.2
Depth	2.3
Length Engine Room	10.0
Engines	vertical, high-pressure, Black Bros., Brockville, 1878; cylinders 6 in.; stroke 7 in.; 6 h.p.
Owner	George M. Beecher, Brockville, coal merchant and James E. Kincaid, Brockville, cabinet-maker
Subsequent Owners	Austin C. Coote, Hamilton, real estate agent, 13 June 1891; registry transferred to Hamilton, Ontario, 27 June 1891

Carlyle freight steamer & tug sc

No.	-
Port of Registry	-
Built	Bedford Mills, 1870
Framework	wood
Registered Tonnage	75
Engines	12 h.p.
Route	Rideau Canal & Bay of Quinte

Carlyle steam barge

No.	-
Port of Registry	Kingston
Builder	John Doran of Kingston, built in Newboro, 1870
No. Of Decks	one
Stern	square
Build	carvel
Length	105.3
Breadth	20.6
Depth	6.0
Length Engine Room	30.8
Tonnage	148 (unspecified)
Owners	Robert Makins, Kingston; sundry subsequent transactions; eventually owned by George Chaffey & Bros.

Cataraqui steam barge

No.	-
Builder	George Chaffey & Bros., Kingston & Bedford Mills, 1872
Length Register	105
Register Tons	128

Cataraqui steamer

No.	-
Port of Registry	Kingston
Builder	P.R. & B. Baupre, Portsmouth, 1847
No. of Decks	one
Stern	round
Build	carvel
Length	90.9
Breadth	17.0
Depth	7.2
Engine Room	on deck
Registered Tonnage	97
Owners	James Arthur Glasford, Kingston; many subsequent transactions; certificate *de novo* 15 March 1859

City of Kingston (formerly ***Prince Edward***)

No.	-
Port	Kingston
Builder	name illegible, 1841
No. of Decks	one
Stern	square
No. of Masts	one
Length	122.7
Breadth	15.5
Depth	8.9
Length Engine Room	58.8
Tonnage	150 registered
Owner	Henry Gildersleeve, Kingston

City of Kingston steamer
p-w

No.	71176
Port	Kingston
Built	William Ainslie, Kingston, 1874
No. of Decks	two
No. of Masts	nil
Stern	round
Build	carvel
Frame	wood
Length	102.0
Breadth	19.7
Depth	6.7
Length Engine Room	70.0
Engines	high-pressure, G.J. Trandy, Kingston, 1874
Tonnage	252.64 gross, 175.82 registered
Owner	W.B. & Samuel Anglin, Kingston
Subsequent Owners	Robert Davis, Kingston, shipbuilder,2 July 1887; re-registered and converted to barge 1888;

	William S. Craig, Kingston, 7 December 1888; Charles F. Gilersleave, Kingston, gentleman, 15 April 1889; John McKelvey and Samuel Birch, merchants, Kingston, 2 February 1891; William James Gates, Kingston, gentleman, 23 October 1899
Service	1874 passenger service, Rideau and St. Lawrence 1887 passenger service, Rideau; broken up
Disposition	vessel broken up, registry closed 31 December 1901

City of Ottawa steamer p-w

No.	-
Port of Registry	Montreal
Builder	Peter G. Waters, Montreal, 1864
No. of Decks	one
Stern	round
Build	carvel
Length	107.5
Breadth	16.4
Depth	7.5
Length Engine Room	41.5
Passenger Accom.	10 staterooms each with 2 berths ladies' cabin 8 double berths (total 36) saloon 90 ft. in length
Engines	low-pressure, 35 h.p. speed 12 k
Registered Tonnage	130.35
Owners	M.K. Dickinson
Subsequent Owners	Ottawa & Rideau Forwarding Co., 22 April 1867; Montreal & Ottawa Forwarding, 4 April 1868; Hugh McLennan, Montreal, merchant, 21 October 1870; James Park Jr., Montreal and William (illegible),Hudson, Quebec, 1 February 1872
Disposition	vessel burnt at St. Nicholas Flats, October 1879; registry closed 8 March 1887

Colonel By steam tug sc

No.	80911
Port of Registry	Prescott, Ontario
Built	Ogdensburg, N.Y. 1882
Length	45.0
Breadth	9.2

Depth	3.9
Engine	9 h.p.
Owner	David Eligh, Burrit's Rapids
Registered Tonnage	6.33
Disposition	sank at Mansfield Wharf, New Edinburgh

Columbia unpowered barge

No.	88567
Port of Registry	Kingston
Builder	John Harris of Brockville at Bedford Mills, 1885
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	101.0
Breadth	22.4
Depth	4.8
Registered Tonnage	84.14
cabin on deck	5.8
cabin below deck	6.78
Owner	John Pook Scott (32 shares) Benjamin Tett (32 shares)
Disposition	supposed out of existence, notation of 15 December 1937

Crosby barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1863
Length	102

Cruiser steamer sc (may not have been on Rideau service)

No.	75434
Port of Registry	Ottawa
Builder	Chaffey Bros.
Built	Portsmouth, 1877
No. of Decks	two
No. of Masts	two
Rigged	schooner
Stern	round
Build	carvel
Framework	wood
Length	83.2
Breadth	14.6
Depth	6.5
Length Engine Room	20.7
Engines	vertical, surface condenser, Clute Bros., Schnectady, N.Y., 1877; cylinder 10 in.; stroke 10 in.; 20 h.p.

Owner	Dept. Marine & Fisheries
Subsequent Owners	James Worthington, Toronto, contractor, and Dugald Graham, Montreal, gentleman, 3 October 1892; total of six joint owners, all of Toronto August 1894;
Disposition	registry transferred Toronto 9 August 1900

Cygnet barge

No.	-
Builder	John & William Chaffey, Bedford Mills,1869
Length	105

Daisy barge

No.	-
Port of Registry	Ottawa
Built	Ottawa, 1868
Length	91.7
Breadth	17.8
Depth	5.6
Registered Tonnage	87
Owner	Ottawa & Rideau Forwarding Co.
Subsequent Owners	George McCullagh, Brockville, 20 March 1876; John Thompson Wilson and William Stephen Patterson, Montreal, 12 December 1876;
Disposition	registry closed 31 December 1890

Daisy steamer sc

No.	88574
Port of Registry	Kingston
Built	Kingston, 1880
No. of Decks	one
Stern	square
Build	carvel
Head	eagle head
Framework	wood
Length	29.2
Breadth	7.5
Depth	2.8
Gross Tonnage	8.62
Registered Tonnage	5.86
Owner	Mary Jones, wife David Jones, Kingston, ship carpenter
Disposition	broken up, registry closed 31 December 1897

Daisy steamer sc

No.	100659
Port of Registry	Kingston
Built	Alexandria Bay, N.Y., n.d.
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	39.0
Breadth	6.1
Depth	3.1
Length Engine Room	6.0
Engines	coal oil, Shipman Coal Oil Engine Co., Rochester, N.Y., cylinders, 4 in.; stroke 6 in.; 5 h.p.
Gross Tonnage	3.82
less engine	1.22
Registered Tonnage	2.60
Owner	George Byron Magee, Merrickville
Disposition	registry transferred Ottawa, 23 June 1900

Dandy sailing vessel

No.	100655
Port of Registry	Kingston
Builder	James Jarrett, Seeley's Bay, 1894
No. of Decks	one
No. of Masts	one
Rigged	sloop
Stern	square
Build	carvel
Framework	wood
Length	80.7
Breadth	17.9
Depth	4.6
Gross Tonnage	49.50
Under deck Tonnage	47.80
Cabin Tonnage	1.70
Crew Space Tonnage	9.46
Net Tonnage	40.04
Owner	George P. Hawkins, merchant, Seeley's Bay and John W. Randall, mariner, Seeley's Bay
Subsequent Owners	John W. Randall bought 32 shares 26 October 1899 (Randall thus owned full interest this date); Capital Sand & Brick Co., Ottawa, 22 July 1901;
Disposition	registry closed 3 November 1920

Dandy steamer sc

No.	51656
Port	Montreal
Built	Buffalo (builder's name illegible), 1864
No. of Decks	one
No. of Masts	nil
Rigging	not rigged
Stern	round
Build	carvel
Frame	wood
Length	48.0
Width	13.0
Depth	5.6
Length Engine Room	22.9
Tonnage	46.0 gross 15.0 registered
Owners	William G. Perley, Ottawa, lumber merchant and Gordon B. Pattee (or Potter), Ottawa, lumber merchant
Subsequent Owners	William Myles, Toronto, merchant; William McCarney, Merrickville, gentleman, 25 May 1867; James Birkett (32 shares), William .Balderson (32), both of Ottawa, forwarders, 26 September 1867; James Birkett, sole owner, 1 September 1869; . . . Malone, Ottawa, 5 December 1872; Denis Murphy, Ottawa, and Margaret W. Buell, Montreal, 24 March 1880; Sincennes McNaughton Line, Montreal, 5 June 1883; Joseph Lariviere, 9 April 1902;
Disposition	vessel broken up, registry closed 26 February 1907

Dardanella, steamer sc

No.	-
Built	Bedford Mills, n.d.
Framework	Wood
Engine	1.2 h.p.
Registered Tonnage	19

D C West steamer sc

No.	72575
Port of Registry	Kingston
Builder	Robert Clayton Davis, Clayton, N.Y.,1874
No. of Decks	one
Stern	round
Build	carvel
Framework	wood

Length	65.0 increased to 80.4, 1877
Breadth	13.8
Depth	5.0
Length Engine Room	18.0
Engines	upright, high-pressure, John King & Co., Oswego, 1874; cylinders 12 in.; stroke 12 in.; 30 h.p., mounted above deck
Registered Tonnage	25.77 increased to 32.32
Owner	John Davis, Wolf Island, merchant; re-registered 26 May 1877 consequent alterations
Subsequent Owners	Kingston & Rideau Navigation Co., 26 June 1877; James Swift, Kingston, forwarder, 19 January 1884 John Fleming and Andrew Symon, Toronto, joint owners, February 1884;
Disposition	vessel burnt, registry closed 4 April 1917

Delta scow

No.	-
Builder	John & William Chaffey, Bedford Mills, 1864
Length	102

Dora steamer sc

No.	96710
Port of Registry	Ottawa
Builder	Alexander Miller, Ottawa; at Opemicon 1889
Length	61.6
Breadth	13
Depth	5.5
Length Engine Room	6.7
Engines	high-pressure, J. & O. Weir, Montreal; cylinders 10 in.; stroke 12 in.
Registered Tonnage	44.15
Owner	Alexander Lumsden, Ottawa, forwarder
Subsequent Owners	Department Public Works, 18 April 1904
Disposition	registry closed 20 February 1939

Edmond tug sc

No.	77635
Port of Registry	Kingston
Builder	David John Ainslie, Bedford Mills, 1879
No. of Decks	one
Stern	round
Build	carvel

Framework	wood
Length	56.4
Breadth	12.1
Depth	6.8
Length Engine Room	25.0
Engines	upright, high-pressure; cylinders 12 in.; stroke 14 in.; 40 h.p.
Owners	Benjamin Tett and John Poole Tett, Bedford Mills
Disposition	sunk August 1911 at "our lock here" (presumably Bedford Mills); sold chimney or stack 16 June 1913; sold hull to W.J. Waffle, Westport, 18 June 1913; hull raised and floated to Westport, 18 June 1913

Edna barge

No.	-
Builder	John & William Chaffey, Bedford Mills, 1868
Register Tons	121

Edward Cluff barge

No.	-
Port of Registry	-
Built	Ottawa, 1869
Length	92.0
Breadth	17.5
Depth	5.9
Registered Tonnage	88
Owner	Ottawa & Rideau Forwarding Co.

Edward Scott barge

No.	-
Port of Registry	-
Built	Ottawa, 1869
Length	92.0
Breadth	17.5
Depth	5.9
Tonnage	88 (unspecified)
Owner	Ottawa & Rideau Forwarding Co.

E G Laverdure

No.	-
Port of Registry	-
Built	Ottawa, 1889
Registered Tonnage	54
Service	passenger, Ottawa and Rideau; converted to tug c. 1902

Eleanor steam tug

No.	-
Port of Registry	Kingston
Builder	John Chaffey, Bedford Mills, 1866
Stern	round
Build	carvel
Length	47.0
Breadth	10.3
Depth	6.8
Length Engine Room	19.4
Registered Tonnage	10
Owner	John Chaffey, Bedford Mills, lumber merchant
Disposition	sunk in Lake Ontario, registry closed 31 December 1891

Ella C

No.	121954
Port of Registry	Port Stanley
Built	Dresden, Ontario, 1906
Length	37.0
Breadth	9.1
Depth	3.9
Registered Tonnage	5
Owner	Department Public Works

Ella Ross steamer

No.	77589
Port of Registry	Kingston
Builder	John McQuaid of Kingston, at Montreal,1873
No. of Decks	two
Stern	round
Build	carvel
Framework	iron (first in Rideau service)
Length	99.2
Breadth	27.8
Depth	6.4
Length Engine Room	46.0
Passenger Accomm.	7 staterooms main deck 19 staterooms upper deck 75 ft. plush carpeted saloon dining saloon seats 50
Engines	horizontal, low-pressure, Davidson Doran, Kingston, 1881; cylinders 22 in.; stroke 4 ft.; 85 h.p.
Gross Tonnage	324.88
Registered Tonnage	189.65
Owner	James Swift, Kingston
Subsequent Owners	John Daniel Murphy and James Edgar Pettigrew of Toronto, 12 March 1884;

	Rathbun Co., Deseronto, 20 December 1886; registry transferred to Deseronto, 31 March 1887; Wilson Garrett (for $11,800), 1 April 1887; Rathbun Co., 29 June 1894
Disposition	burned Parry Sound circa 5 June 1912; registry closed 11 February 1913

Elm barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1865
Length	100
Register Tons	146

Elswood steamer tug sc

No.	-
Port of Registry	Kingston
Builder	John Chaffey, Bedford Mills, 1865
Length	49.1
Breadth	11.8
Depth	5.9
Registered Tonnage	17
Owner	J. Chaffey, Bedford Mills
Misc .	engine & boiler transferred to *Edmund*

England schooner-rigged barge

No.	-
Builder	Geo. Chaffey & Bros., Bedford Mills, 1863 completed Brockville
Registered Tons	147

Eva Belle sc

No.	100652
Port of Registry	Kingston
Builder	William Robinson, Kingston, 1892
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	39.8
Breadth	7.8
Depth	2.7
Length Engine Room	8.2
Engines	upright, high-pressure, Black Bros., Belleville; cylinder 5 in.; stroke 6 in.; 6 h.p.

Gross Tonnage	10.10
less engine space	3.23
less water closet	.24
Registered Tonnage	6.63
Owner	John Dittrick, Perth, machinist
Subsequent Owners	Hiram W. Lockwood, Westport, gentleman, 10 September 1897; James C. Judd, Morton, barrister, 15 May 1901; Joseph Octave Reaume, Dept. of Fisheries, 7 September 1905
Disposition	notation December, 1946 vessel presumed out of existence

Flora steam barge

No.	-
Builder	George Chaffey & Bros., Bedford Mills, 1870
Register Tons	121

Forest tug sc

No.	-
Port of Registry	Kingston
Built	George Chaffey, Bedford Mills, 1861
No. of Decks	one
Stern	round
Build	carvel
Length	50
Breadth	9
Depth	7
Length Engine Room	25.1
Tonnage	33
Disposition	broken up 1877-8

Frances tug sc

No.	-
Port of Registry	Kingston
Builder	John Chaffey, Bedford Mills, 1864
No. of Decks	one
Stern	round
Build	carvel
Length	55.2
Breadth	11.4
Depth	7.6
Length Engine Room	31.6
Tonnage	36
Owner	John Chaffey, Bedford Mills, lumber merchant

Freemason steamer sc

No.	83294
Port of Registry	Kingston
Builder	Robert Davis, Kingston, 1883
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	95.5
Breadth	21.4
Depth	5.4
Engine Room	18.3
Engines	upright, high-pressure, Davidson Doran & Co., Kingston, 1883, 36 h.p.
Registered Tonnage	63
Owner	Robert Davis, Kingston
Subsequent Owners	Ira B. Folger & Frederick A. Folger, Kingston
Disposition	vessel broken up at Kingston circa 1895, registry closed 17 May 1895

Frolic steamer (may not have been on Rideau)

No.	-
Port of Registry	Montreal
Builder	W. & G.H. Tate, Montreal, 1890
No. of Decks	two
No. of Masts	nil
Stern	round
Build	carvel
Frame	wood
Length	47.0
Breadth	9.2
Depth	5.8
Length Engine Room	10.4
Engine	high-pressure, Weir, Montreal, 1890
Tonnage	15.49 gross 10.29 net
Owner	William Edward Christie, Montreal, insurance agent
Subsequent Owners	David H. Henderson, Montreal, lumber merchant, 9 July 1892; George Olds, Montreal, C.P.R. traffic man., 22 June 1894; James Gouverneur Ogden, Montreal, C.P.R. comptroller, 7 November 1900; Octave Moussette, Grand Mere, Champlain County, Quebec, boat owner, 11 November 1903
Disposition	registry closed 25 February 1916

Gatineau steam barge

No.	-
Port of Registry	-
Built	Brewer's Mills, 1873 re-built Ottawa 1888 and re-named H*arry Bate* re-built Ottawa 1902 and re-named *Sand King*
Length	103
Breadth	23
Depth	6
Subsequently:	
Length	108
Breadth	24
Depth	7
Registered Tonnage	254
Disposition	last trace 1911

Geneva steamer

No.	-
Builder	George Chaffey, Kingston, 1876
Length	103

Gen WB Franklin steamer sc

No.	-
Port of Registry	-
Built	Pamrapo, N.J.
Framework	wood
Passengers	40
Engines	1.2 h.p.
Registered Tonnage	15.86
Service	Passenger, Kingston-Ottawa

Gladys steamer sc

No.	100658
Port of Registry	Kingston
Builder	William O'Mara, Smiths Falls, 1894
No. of Decks	one
No. of Masts	two
Rigged	sloop
Stern	round
Build	carvel
Framework	wood
Length	75.7
Breadth	9.7
Depth	7.3
Engine Room	15.8
Engines	compound, Vulcan Iron Works, Ottawa 1894; cylinders 7 5/8 in. and 14 in.; stroke 14 in.; 9 h.p.

Gross Tonnage	26.01
Under deck	25.15
Cabin above deck	0.86
Engine	8.32
Registered Tonnage	17.69
Owner	Arthur W. Thompson, Ottawa, gentleman
Subsequent Owner	Ministry of Marine, 31 July 1903
Disposition	registry transferred to Ottawa 1 August 1903

Glide steam tug

No.	-
Builder	Chaffey Bros., Bedford Mills & Brockville, 1865

Great Britain steamer

No.	-
Port of Registry	Montreal
Built	Montreal, 1843
No. of Decks	one (with a break)
No. of Masts	one
Rigged	barge
Stern	squared
Build	carvel
Length	85.2
Breadth	16.9
Depth	5.4
Tonnage	79 2601/3500
Owner	Pierre Cartier (location ?)
Subsequent Owner	James Hodges, Montreal, civil engineer 9 August 1853; re-registered 1854

Hemlock scow

No.	-
Port of Registry	Kingston
Built	Portsmouth, 1864
No. of Decks	one
No. of Masts	one
Rigged	standing bowsprit, sloop
Stern	square
Build	carvel
Length	89.2
Breadth	22.9
Depth	5.0
Length engine room	16.0

Hemlock scow sc (originally ***Hemlock*** scow, see previous entry)

No.	-
Port of Registry	Kingston
Built	name illegible, Kingston, 1870
No. of Decks	one
No. of Masts	nil
Stern	square
Build	carvel
Length	88.7
Breadth	?
Depth	5.1
Tonnage	79 (unspecified)
Owners	Albert Nathaniel Guerney and John Newton Glidden (location?)

Harald steamer sc

No.	-
Port of Registry	-
Built	Detroit, Mich., 1877
Framework	wood
Engine	8 h.p.
Registered Tonnage	47
Service	freight, Rideau and St Lawrence

Hiram Easton tug

No.	-
Port of Registry	-
Framework	wood
Built	Merrickville, n.d.
Engine	4 h.p.
Service	tug on Rideau

Hope barge

No.	-
Port of Registry	Kingston
Builder	Macpherson & Crane, Kingston, 1851
No. of Decks	one
No. of Masts	nil
Stern	square
Build	carvel
Length	81
Breadth	15.5
Depth	5.4
Tonnage	67
Owners	Macpherson & Crane
Subsequent Owners	Robertson Jones & Co., 27 June 1853; Macpherson & Crane, by mortgage, date illegible

Horace Greely sail

No.	-
Port of Registry	Ottawa
Builder	W.A. Baldwin, Ottawa, 1870
No. of Decks	one
No. of Masts	nil
Rigging	nil
Length	97.6
Breadth	17.1
Depth	5.9
Owner	?
Subsequent Owners	George H. McCullogh, Brockville, 20 March 1876; John Thompson Wilson and William Stephen Paterson of Montreal, 8 December 1876
Disposition	dismantled 19 April 1890
Misc.	vessel originally under sail & apparently converted to a barge

Hunter scow

No.	-
Port of Registry	Kingston
Builder	Chester Stewart, Opinicon Lake, South Crosby, 1860
Stern	square
Build	carvel
Length	82.1
Breadth	16.5
Depth	5.2
Tonnage	64
Owner	Chester Stewart
Subsequent Owners	George Chaffey, Kingston; William Chaffey, Brockville; John Chaffey, Bedford township

Ida pass-freight steamer sc

No.	88564
Port of Registry	Kingston
Builder	Rathbun Co., Deseronto, 1884
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	83.6
Breadth	20.6
Depth	6.2
Engine Room	24.0
Passengers	50 (in 1885)
Engines	upright, high-pressure, Black Bros., Brockville cylinder 12 in.; stroke 14 in.; 75 h.p.

Registered Tonnage	131.28
Owner	Wilson Garrett, Smiths Falls, forwarder
Subsequent Owners	James Williamson Grenville (42 shares) and William J. McCarney (22 shares), Merrickville, 4 January 1887; James Williamson Grenville bought McCarney's 22 shares, becoming sole owner, 28 September 1887; Samuel S. Mutton, Toronto, 3 October 1887; Ogle Carss, Smiths Falls, 9 January 1888; Sherman P. Earle, Smiths Falls, (32 shares) 9 January 1888 and John E. Arnold, Smiths Falls, 9 January 1888
Service	weekly, Kingston-Ottawa-Montreal "comfortable passenger-freight vessel"

Illecilewaet steamer sc

No.	100048
Port of Registry	Kingston
Built	Brockville, 1897
Length	50.4
Breadth	7.8
Depth	4.5
Passenger Accomm.	25 (1909-10)
Engine	10 h.p.
Registered Tonnage	10
Owner	William T. Cassidy, Kingston

Ina steamer sc (not certain this on Rideau)

No.	92397
Port of Registry	Kingston
Builder	Cornelius A. Jones, 1889
No. of Decks	nil
Stern	round
Build	carvel
Framework	wood
Length	34.6
Breadth	10.1
Depth	3.2
Engine Room	6.6
Engines	upright, high-pressure, Dority, Toronto, 1888; cylinder 6 in.; stroke 4 in.; 6 h.p,
Gross Tonnage	10.78
Register Tonnage	7.33
Owner	Georgina Jones, Kingston, school teacher
Subsequent Owners	Alma Jones, 31 December 1889
Disposition	dismantled, registry closed 29 December 1891

Ireland schooner-rigged barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1863
Register Tons	146

Islide steamer sc

No.	-
Builder	Chaffey Bros., Bedford Mills, completed Brockville, 1866.
Length	74

James Swift steamer sc

No.	96920
Port	Kingston
Builder	Matthew R Davis, Kingston, 1893
No. of Decks	two
No. of Masts	nil
Stern	round
Build	carvel
Frame	wood
Length	107.0
Breadth	23.4
Depth	6.0
Length Engine Room	20.8
Engines	compound, upright, D. McEwen & Son Kingston, cylinders, 9 in. and 16 in.; stroke 12 in.; 12 h.p.
Tonnage	265.92 gross 68.66 under deck 112.78 'tween deck 84.48 cabin on deck deductions: engines 46.64 crew 22.05 197.23 registered
Owner	David Noonan, Kingston, mariner

John Haggart steamer sc

No.	92387
Port of Registry	Kingston
Builder	Robert Robinson of Kingston; built Perth, 1887
No. of Decks	two
Stern	round
Build	carvel
Framework	wood
	cabin on upper deck
Length	78.3 (99.9 in 1904)
Breadth	17.5 (17.5 in 1904)
Depth	6.0 (6.0 in 1904)
Length Engine Room	25.3

Passenger Accomm.	250 (1892) (Licensed to carry)
Engines	high-pressure, double, Davidson Doran & Co., Kingston, 1881; cylinder 11 in.; stroke 12 in.; 65 h.p.; steel boiler, Fitzgibbon, 90 Ib. pressure
Gross Tonnage	112.21
Registered Tonnage	59 10
Owner	Thomas Moffat
Alterations	Toronto 1902 (registered tonnage 59.61); Owen Sound 1919; re-registered 1891
Subsequent Owners	Thomas Moffat died 20 August 1899; John James Drummond, Midland, 29 April 1901; Albert G. Knowles, Sault Ste Marie, banker Joseph Ganley, Sault Ste Marie, contractor William C. Tremlin, St Joseph Island, Algoma, 9 June 1903
Disposition	scrapped 1928

John Randall steamer

No.	117121
Port of Registry	Kingston
Built	Kingston, 1905
Length	104.4
Breadth	22.5
Depth	6.3
Engine	13.5 h.p.
Registered Tonnage	53
Owner	Harold F. Randall, Seeley's Bay
Disposition	wrecked and sunk Lake Ontario service ca. 1920-21

Jopl launch sc

No.	100669
Port of Registry	Kingston
Builder	John Paul, Newboro, 1895
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	40.2
Breadth	7.4
Depth	3.6
Engine Room	6.6
Passengers	40 (1898-99)
Engines	upright, high-pressure, Black Bros., Brockville 1890; cylinder 4 in.; stroke 4 in.; 9 h.p.

Gross Tonnage	8.82
under deck	5.44
cabin on deck	3.38
engine & crew space	2.82
	.31
Registered Tonnage	5.69
Owner	John Paul, Newboro, contractor, Orlandor Lillie, Newboro, dentist (jointly); re-registered 25 May 1897 due to alterations
May 1897 registration:	
Length	52.2
Breadth	7.2
Depth	3.2
Length Engine Room	10.6
Engine	upright, high-pressure, Kelley & Beckett, Hamilton, n.d. cylinder 6 in.; stroke 6 in.; 9 h.p.
Subsequent Owners	William Spicer, Newboro, manufacturer, 2 May 1903
Disposition	underwater Newboro Lake; registry closed 2 November 1938

Juno steamer

No.	-
Port	Kingston
Builder	Duncan Sinclair, Portsmouth, 1841
No. of Decks	one
No. of Masts	one
Stern	square
Built	carvel
Length	87.1
Breadth	16.7
Depth	5.5
Tonnage	81 2201/3500
Owner	John Macpherson, Toronto

Juno steamer

No.	-
Port	Montreal
Built	Macpherson & Crane, Montreal, 1841
No. of Decks	one
No. of Masts	nil
Stern	square
Build	carvel
Length	87.5
Breadth	16.6
Depth	5.4
Length engine room	21
Tonnage	57 2870/3500
Owners	Macpherson & Crane

Subsequent Owners	sold to Robertson & Jones & Co 12 November 1853; Macpherson & Crane took mortgage on vessel as security for debt with power to sell

Kathleen steamer sc

No.	92390
Port of Registry	Kingston
Builder	Martin Clayton, Kingston, 1888
No. of Decks	three
No. of Masts	one
Stern	round
Build	carvel
Framework	wood and iron
Length	105.4
Breadth	26.4
Depth	7.8
Length Engine Room	28.6
Engines	low-pressure, triple expansion, Canadian Locomotive & Engine Co. Kingston, 1888 cylinders 10 in.; 16 in, 24 in.; stroke 16 in. 34 h.p.
Gross Tonnage	391.43
Registered Tonnage	212.0
Owner	William Bajus (or Bayers) Kingston mariner
Subsequent Owners	George A. Kirkpatrick, Kingston 25 January 1890; 10 March 1891 Kirkpatrick sold quarter interest in vessel to the following: William J. Sheppard, Waubaushene Joseph W. Hastman, Waubaushene Charles E. Stephens, Collingwood George H. Morden, Oakville registry transferred Collingwood 8 March 1892
Service	1890 weekly service Kingston-Ottawa-Montreal; return $15; large commodious staterooms and promenade deck

Khartoum steamer sc

No.	88573
Port of Registry	Kingston
Builder	Joseph Ward Pierce, Ernestown township, 1885
No. of Decks	one
No. of Masts	two
Stern	round

Build	carvel
Framework	wood
Length	78.0
Breadth	13.7
Depth	6.1
Length Engine Room	12.5
Engines	upright, high-pressure, D.M. McEwen & Son, Kingston, 1878; cylinder 9 in.; stroke 12 in.; 20 h.p.
Gross Tonnage	62.71
under deck	43.93
house on deck	18.78
Registered Tonnage	34.06
Owner & Master	Hugh Cope Rothwell, mariner, Kingston
Subsequent Owners	Charles Austin Morgan, Smiths Falls, and Sherman B. Earle, Smiths Falls, (joint owners), both transactions 16 April 1887; Earle acquired Morgan's share, making him sole owner, 7 October 1887; Ogle Carss, Smiths Falls, insurance agent, 10 January 1888; Charles Slately, Wolf Island, 8 May 1888

Kenirving steamer sc

No.	107745
Port of Registry	Kingston
Builder	Adam Foster, Smiths Falls, 1900
No. of Decks	one
No. of Masts	two
Stern	round
Build	carvel
Framework	wood
Length	104.4
Breadth	20.8
Depth	6.7
Length Engine Room	17.3
Engine	high-pressure, Thos. Johnston, Kemptville; cylinder 11 in.; stroke 12 in.; 25 h.p.
Gross Tonnage	145.40
under deck	119.24
cabin on deck	26.16
engine space	46.52
crew space	29.18
Registered Tonnage	69.70
Owner	Adam Foster, Smiths Falls
Subsequent Owner	Edward Smith, Storrington township, ship captain, 2 January 1901
Disposition	registry closed 31 October 1938; vessel under water at Bedford Mills 15 years

crew	5 (no lifeboat, 3 life-buoys, 6 life-belts)

Note: *Kenirving* a contraction of the names of Foster's two sons, Kenneth and Irving.

Kilbirnie steam yacht

No.	100046
Port of Registry	Brockville
Built	Alexandria Bay, N.Y.
Length	45.0
Breadth	7.0
Depth	3.7
Registered Tonnage	10
Owner	R.J. Brodie, Smiths Falls
Disposition	dismantled circa 1919-20

Kitty Friel steam tug sc

No.	-
Port of Registry	Kingston
Built	Battersea, Ontario, 1869
Length	91
Breadth	19
Depth	4
re-built	1873
Length	99
Breadth	19
Depth	6
Registered Tonnage	58
Disposition	burnt Rideau Canal, 18 August 1879

Lee steamer sc

No.	100049
Port of Registry	Brockville
Built	Kingston, 1897
Length	46.0
Breadth	9.3
Depth	4.1
Pass Capacity	40
Engine	1.4 n.h.p.
Gross Tonnage	8.73
under deck	8.73
engine room	1.45
passengers	.40
Registered Tonnage	7.28
Owner	Davis & Chapman, Smiths Falls

Lighter No. 1 derrick

No.	-
Builder	George Chaffey & Bros., Bedford Mills,
Length	1872
	57

Lighter No. 2 derrick

No.	-
Builder	George Chaffey & Bros., Kingston & Newboro, 1872
Length	66

Lily scow

No.	-
Port of Registry	Kingston
Builder	Samuel Knapp, Dog Lake, Storrington Township, 1869
No. of Decks	one
No. of Masts	one
Rigged	sloop, standing bowsprit
Stern	square
Build	carvel
Length	74.7
Breadth	16.4
Depth	4.1
Tonnage	46 (unspecified)
Owner	Samuel Knapp
Subsequent Owners	several but illegible
Disposition	registry closed 21 September 1876

Lily steamer

No.	33423
Port of Registry	Montreal
Builder	Augustin Cantin, Montreal, 1844
No. of Decks	one
No. of Masts	one
Length	91
Breadth	16.9
Depth	6.3
Length Engine Room	34
Tonnage	53 1591/3500
Owners	Branum Donovan & Co., Montreal
Subsequent Owners	Moss Kent Dickinson, Montreal, 15 June 1855; Richard Barnum, Montreal, 20 June 1855

Lily steamer sc

No.	71188
Port of Registry	Kingston
Builder	W.B. & S. Anglin, Kingston, 1873
Length	41.8
Breadth	9.3
Depth	4.3
Length Engine Room	21.5
Engines	high-pressure, D. McEwen & Son, Kingston, 1873; cylinder 11 in.; stroke 12 in.; 15 h.p.

Tonnage	16.01 gross 2.45 registered
Owners	W.B. & S. Anglin, lumber merchants, Kingston
Disposition	vessel broken up, registry closed 31 December 1901

Lion scow

No.	-
Port of Registry	Kingston
Builder	Samuel Knapp, Dog Lake, Storrington, Township, 1865
No. of Decks	one
No. of Masts	one
Rigged	sloop, standing bowsprit
Built	carvel
Length	73.9
Breadth	16.6
Depth	3.5
Tonnage	32 2845/3500
Owner	Michael [Mallun,] Storrington Township

Lively steamer

No.	-
Port of Registry	-
Built	Brockville
Registered Tonnage	4
Service	passenger, Rideau and St. Lawrence

Loretta government patrol boat

No.	122480
Port of Registry	Ottawa
Builder	Polson Iron Works, Toronto, 1907
No. of Decks	one
No. of Masts	nil
Stern	round
Build	composite
Head	plain
Framework	steel
Length	77.25
Breadth	17.0
Depth	7.75
Length Engine Room	22.5
Passenger Accomm.	4
Crew	6 (1 officer)
Engines	fore and aft compound, Polson Iron Works, 1907, cylinders 9 in. and 18 in., stroke 14 in., 13.5 n.h.p.

Gross Tonnage	75.49
under deck	48.82
deckhouses, wheel-house, texas	26.67
propelling power	24.15
space crew	4.15
forecastle	12.87
anchor & chain	1.60
water closets	2.03
Register Tonnage	30.69
Owner	Department of Railways and Canals
Subsequent Owners	Henry Alvin Van Allen and Maynard Boyce Marshall, Kemptville, merchants, 29 May 1959
Disposition	registry closed 16 September 1968
Additional Information:	
Funnel	one, 33 in. diameter, 15.0 ft. height
Lifeboat	one length 14 ft. breadth 5.15 ft. depth 2.2ft. 5 oars
Equipment	6 metallic fire buckets 3 axes 10 life jackets 3 life-buoys 250 lb. anchor, 5/8 in. chain 6 lanterns fog bell and steam whistle
Engines (additional)	
	cranks 2 diameter main journal 4 1/16 in. diameter crank pin 4 1/16 in. diameter steam pipe 2 1/2 in. W I steam stop valve on boiler 1 diameter piston rod 1 5/16 in. hand-pump for boiler 2, 7/16 in. by 6 in. single diameter feed water pipe 1 1/4 in. how feed water regulated injector and poney diameter and pitch of screw 4 ft. 9 in., 175 rev. boiler 1 Fitzgibbon 8.0 ft. length 5 ft. 5 in. width 7 ft. 11 in. height furnace 44 in. by 60 in., 0.392 in. plate 18.5 sq. ft. lap joint, single riveted diameter steam drum 22 in. vertical boiler Polson Iron Works, Toronto, 1907 maker of plates in shell of boiler - Carnegie Flange Steel

	safety valves twin spring 2 in. diameter number of steam gauges 2 number of water glass gauges 1 hydraulic test pressure 210 lb/sq in. working pressure allowed 140 lb. hydraulic test on boiler, Smiths Falls, 23 June 1952: tested to 180 lb/sq. in. working pressure 120 lb/sq. in.
further details	bower anchor 1,250 lb. chain 5/8 in. diameter bridge-engine room communications 2 sets bells 1 standard compass lifeboats two length 14 ft. breadth 5.25 ft. depth 2 ft. capacity 90 cu. ft.
Accommodation	varnished mahogany, oak doors luxury cabin for minister in green plush sister ship *Bessie Butler* built for Trent Canal service; built specially for Rideau service; burned only hard coal for sake of cleanliness
Disposition	decision to scrap in 1959

Loughboro scow

No.	-
Builder	John & William Chaffey, Bedford Mills, 1864
Length	100

Louise steamer p-w

No.	-
Port of Registry	-
Built	Montreal, n.d.
Framework	wood
Registered Tonnage	67
Service	passenger, Ottawa-Kingston

Maggie Bell steamer p-w

No.	71192
Port of Registry	Ottawa
Builder	Alexander Miller, Hull, 1873-4
No. of Decks	one
No. of Masts	nil
Stern	round

Build	carvel
Framework	tamarac
Length	133
Breadth	24.0
Depth	7.58
Engine Room	70
Engines	low-pressure, British made, 1854; cylinder 37 in., stroke 8 ft., 200 h.p.
Owner	Ottawa & Rideau Forwarding Co.
Subsequent Owners	Daniel Sutcliffe Eastwood, Ottawa, 8 May 1875; Union Bank of Lower Canada, 10 February 1876; James Gibb Ross, Quebec City, merchant, 30 September 1882;
Disposition	registry closed 20 November 1882; transferred to Quebec

The sheer size of the vessel makes it unlikely [impossible, max length for a Rideau Lock is 113 ft] she ever operated on the Rideau Canal, being but one foot short of the length of the locks.

Maggie May tug sc

No.	96948
Port of Registry	Kingston
Builder	James Jarrett, Washburn, Frontenac County, 1891
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	51.4
Breadth	13.2
Depth	5.4
Length Engine Room	20.3
Engine	vertical, high-pressure, Frank A. Gardner of Hamilton, 1873; cylinder 10 in., stroke 12 in., 20 h.p.
Gross Tonnage	29.03
Registered Tonnage	19.74
Owner	Samuel Ryder and Benjamin Smith, jointly, Storrington township
Subsequent Owners	Smith acquired Ryder's half share 1 September 1891; Robert J. Carson, Kingston, part interest, September 1891; George R. Hawkins, Seeley's Bay, merchant, 18 March 1896; John Randall, Seeley's Bay, 4 January 1899; Thomas Weir, Chatham township, Argenteuil county, 30 October 1901 Herve S. Parrot, Leclersville, Quebec, 15 October 1917

Disposition	registry closed, ship broken up 10 November 1920

Mansfield steamer

No.	-
Port of Registry	-
Built	Ottawa, 1889
Framework	wood
Registered Tonnage	103.14
Service	passenger, Ottawa and Rideau

Margaret

No.	-
Port of Registry	(probably Kingston)

Little is known of this vessel, other than she was one of two vessels fitted up by Robert Drummond to operate on the Rideau Canal in the spring of 1834, the other being the *Rideau*. In 1835 the *Margaret* was one of four boats operated by the Ottawa & Rideau Forwarding Co.

Marquis of Lorne yacht

No.	71173
Port of Registry	Kingston
Built	Kingston, 1874
No. of Decks	one
No. of Masts	two
Rigged	schooner
Stern	square
Build	carvel
Galleries	nil
Framework	wood
Length	54.6
Breadth	10 1
Depth	5.3
Length Engine Room	16.0
Engines	vertical, high-pressure, Charles McBride of Port Glasgow, Scotland; cylinder 11 in., stroke 12 in., 15 h.p.
Gross Tonnage	20.19
Registered Tonnage	10.59
Owner	James Fisher the Elder, Portsmouth, brewer; James Richardson, Kingston, grain merchant, 27 February 1878 (Fisher died intestate); Alexander Gunn, Kingston, merchant, 19 August 1878; John B. Carruthers, Kingston, gentleman, 19 December 1891; Thomas George Brigham, Ottawa, merchant, 29 April 1896;
Disposition	registry at Kingston closed May 1896; transferred to Ottawa

Mary Ann tug sc

No.	51681
Port of Registry	Montreal
Built	Sackett's Harbour, N.Y., 1856
Length	50.0
Breadth	15.2
Depth	4.9
Registered Tonnage	31
Owner	Henry Easton, Merrickville

Mary Bedford steam tug

No.	-
Builder	Benjamin Tett, Bedford Mills, 1875
Length	47

Mary Bedford unpowered barge

No.	92385
Port of Registry	Kingston
Builder	Joseph Mercier, Bedford Mills, 1888
No. of Decks	one
No. of Masts	one
Stern	round
Build	carvel
Framework	wood
Length	101.0
Breadth	17.5
Depth	4.6
Registered Tonnage	60.96
Owners	Benjamin and John Peck Tett, jointly, Bedford Mills
Disposition	supposed out of existence, registry closed 20 December 1937

Mary Louise sailing scow

No.	111769
Port of Registry	Kingston
Builder	Wesley Brooker, Portland, 1902
No. of Decks	one
No. of Masts	one
Stern	square
Rigged	sloop
Build	carvel
Framework	wood
Length	77.2
Breadth	18.6
Depth	4.2
Engine	2.13 h.p.
Owner	Wesley Brooker, Newboro
Subsequent Owners	John Brooker, Athens, 31 August 1905; Jehorida Coon, Morton, miller, 25 November 1908
Disposition	registry closed Kingston 14 April 1909, transferred

May Flower tug? sc

No.	72587
Port of Registry	Kingston
Builder	Thomas Adams, Kemptville, 1877
Framework	wood
Length	50.2
Breadth	9.3
Depth	4.0
Registered Tonnage	11
Owner	Thomas Adams, Kemptville
Subsequent Owners	Luke Depencies and David Eligh of Kemptville and Marlborough township respectively; James MacLaren, Buckingham; John and Frank Ross of Quebec City, August 1881
Disposition	vessel broken up, registry closed 25 March 1913

Mercury steamer sc

No.	-
Port of Registry	Kingston
Builder	Robert Robinson, Portsmouth, 1854
Length	85.8
Breadth	15.7
Depth	5.7
Length Engine Room	34
No. of Decks	one
No. of Masts	one
Stern	round
Build	carvel
Tonnage	34 (unspecified)
Owners	Macpherson & Crane, Kingston
Subsequent Owners	Moss Kent Dickinson, with Macpherson & Crane taking mortgage 15 July 1887

Meteor steamer sc

No.	-
Port of Registry	Kingston
Builder	Macpherson & Crane, Montreal, 1841
No. of Decks	one
Stern	round
Build	carvel
Length	85.7
Breadth	16.6
Depth	5.4
Length Engine Room	30.2
Registered Tonnage	26
Owners	Macpherson & Crane
Subsequent Owners	Peter Robertson, Bytown; John J. Jones, Montreal; Donald C. Thompson, Quebec City, 27 June 1853 constituted as Roberston Jones & Co.; Macpherson & Crane by way of mortgage 6 September 1853

Meteor steamer sc

No.	96709
Port of Registry	Ottawa
Builder	Alexander Miller, [Opemicdn] sic Opinicon, 1889
No. of Decks	two
Stern	round
Build	carvel
Head	sharp
Framework	steel
Length	105
Breadth	23.8
Depth	6.6
Length Engine Room	11
Engines	compound, Carrier & Taine of Levis, 1887; cylinders 12 in. and 26 in.; stroke 12 in., 100 h.p.
Registered Tonnage	115.68
Owner	Alexander Lumsden, Ottawa, forwarder
Disposition	dismantled, registry closed 20 August 1897

Miner barge

No.	-
Builder	John Chaffey, Bedford Mills, 1871
Length	102

Mineral barge

No.	-
Builder	John Chaffey, Bedford Mills, 1871
Length	102

Mink steamer tug sc

No.	-
Port of Registry	Kingston
Builder	George Chaffey & Bros., Bedford Mills, 1855
No. of Decks	one
Stern	round
Build	carvel
Length	44.7
Breadth	8.7
Depth	7.7
Length Engine Room	27
Tonnage	17 (unspecified)
Owners	George, William and John Chaffey, Brockville and Bedford Mills

Navarch fishery patrol boat sc

No.	126194
Port of Registry	Windsor, Ontario
Built	Boston, Mass.
Framework	wood
Length	51.8
Breadth	10.5
Depth	5.4
Engines	5 h.p.
Registered Tonnage	14
Owners	Dept. of Public Works; Dept. of Fisheries

Nellie steamer sc

No.	96901
Port of Registry	Kingston
Built	Kingston, 1882
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	39.6
Breadth	7.4
Depth	3.9
Length Engine Room	9.4
Engines	high-pressure, double, unknown maker and date, cylinder 4.5 in.; stroke 5 in.; 6 h.p.
Gross Tonnage	6.82
Registered Tonnage	3.33
Owner	Samuel Garrett, Smiths Falls
Subsequent Owners	Samuel M. Barnes, Smiths Falls, 10 April 1896; James Nelson Leeman, Smiths Falls, 1 March 1902
Disposition	ship broken up, registry closed 5 June 1913
Additional:	
Passengers	licensed for 25
Service	Kingston-Ottawa (1882)
Lifesaving Gear	1 lifeboat (capacity 8) 25 life-preservers
in 1906 listed as a private yacht	
Further Particulars from Inspection Certificate	
Gross Tonnage	6.82
Under deck tonn.	4.70
Houses on deck	2.12
Engine room	3.49
Registered Tonnage	3.33
Life-saving gear	1 lifeboat (8 persons) 25 life-preservers 6 fire buckets 1 axe 3 lanterns 1 lifebuoy

Engine	1.35 h.p.
Boiler	80 lb/sq. in. rating (1893) 78 lb/sq. in. rating (1905)

Newboro barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1863
Register Tons	110

Nile steam barge

No.	-
Port of Registry	Kingston
Builder	R. Davis, Battersea, 1870
No. of Decks	one
Stern	round
Length	90.1
Breadth	19.1
Depth	6.0
Length Engine Room	26.4
Engines	20 h.p.
Registered Tonnage	96
Owner	George Davidson and Michael Doran (Davidson & Doran)

Norman steamer sc

No.	80871
Port of Registry	Kingston
Builders	Fraser & George, Kingston
Built	Opinicon Lake, 1872
No. of Decks	one
No. of Masts	one
Rigged	sloop
Stern	round
Build	carvel
Framework	wood
Length	97.6
Breadth	23.7
Depth	7.1
Length Engine Room	23.0
Engines	horizontal, high pressure, Daniel McEwen of Kingston 1872; cylinder 12 in., stroke 14 in., 35 h.p.
Gross Tonnage	148.91
Registered Tonnage	96.74
Owners	Isabel Goodearl, 32 shares Robert McLeod, Kingston, 14 shares Jane Shanks, Portsmouth, 13 shares John Annet, Gananoque, 5 shares

Subsequent Owners	mortgage 17 September 1872 by Robert McLeod; David Wright Allison 7 February 1881; Deseronto Navigation Co., 10 March 1881; Hazelot Hicks, North Marysburgh township, Prince Edward county, 13 October 1882;
Disposition	vessel total loss by fire 30 November 1883 at Macdonald's Wharf, Prince Edward county, registry closed 29 December 1883

No 2 steam dredge

No.	90601
Port of Registry	Ottawa
Built	Thorold, Ontario, n.d.
No. of Decks	one
Stern	square
Build	carvel
Head	square
Framework	oak
Length	78.0
Breadth	26.6
Depth	6.0
Engines	horizontal, Pound Manufacturing Co., 1854, cylinder 18 in., stroke 16 in. 30 h.p.
Registered Tonnage	241.81
Owner	Archibald Stewart, Ottawa
Disposition	broken up, registry closed 29 October 1897

Oak barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1865.
Length	99

Olga steamer sc

No.	-
Port of Registry	Brockville
Builder	George Hutton, Brockville, 1896
No. of Decks	open ship
No. of Masts	nil
Rigged	nil
Stern	oval
Build	carvel
Framework	wood
Length	33.0
Breadth	8.5
Depth	9.0

Length Engine Room	8.3
Tonnage	5.28 gross 3.84 register
Owner	John Leckie, Brockville, contractor
Subsequent Owners	William Henry Comstock, Brockville, 19 November 1897
Disposition	supposed out of existence 7 August 1918

(questionable that operated on Rideau)

Olive steamer sc

No.	71084
Port of Registry	Brockville
Builder	William O'Mara, Kingston
Built	Smiths Falls, 1875
No. of Decks	two
Stern	round
Build	carvel
Framework	wood
Length	95
Breadth	18.5
Depth	6.4
Engines	high-pressure, non condensing, J. & B. Weir, Montreal (2nd. engine) 1901; Pound Manufacturing Co., Lockport, N.Y., 1875, (1st. engine)
Gross Tonnage	213.44
Registered Tonnage	123.70
Owners	Pitt William Strong, Brockville, produce dealer, 33 shares Adam Foster, Brockville, miller,31 shares
Subsequent Owners	Strong sold his share to Foster 28 February 1878; Ogle Carss, Smiths Falls, 8 April 1882; Samuel Nelson Perceval, Smiths Falls,32 shares 16 September 1885

Vessel re-measured & tonnage changed, certificate dated 4 May 1889

Length	90.0
Breadth	19.5
Depth	6.4
Engine Room	11.0
Gross Tonnage	278.6
Registered Tonnage	123.70
Subsequent Owners	Ogle Carss sold 32 shares to John Forgie, Kelty township, yeoman, 15 February 1887; Samuel Perceval sold 32 shares to Forgie same date Alexander Findlay, 32 shares Elmsley township, 1 March 1887;

	Michael Healey, Smiths Falls, 32 shares, 1 April 1888; Frank Clark, Smiths Falls, 32 shares, 17 April 1888; Jeremiah Washburn, Smiths Falls, 32 shares, 25 April 1888; Ogle Carss, Smiths Falls, 32 shares, 30 April 1888; Ellen Washburn, Smiths Falls, 32 shares, 6 October 1888; George Archibald Harris, Ottawa, 4 January 1890; registry transferred to Ottawa 8 March 1892; Ottawa Forwarding Co., 25 May 1892
Passengers	licensed for 20, 1885

Ontario scow

No.	-
Port of Registry	Kingston
Builder	John and Benjamin Friel
Built	Dog Lake, Storrington township, 1868
No. of Decks	one
No. of Masts	one
Rigged	sloop standing bowsprit
Stern	square
Build	carvel
Length	86
Breadth	17
Depth	5.7
Registered Tonnage	56
Owner	John and Benjamin Friel, Battersea, Storrington township

Ontario scow

No.	-
Port of Registry	Kingston
Builder	William A. Gorrell
Built	Bedford Mills, 1867
No. of Decks	one
Stern	round
Build	carvel
Length	103.2
Breadth	22.6
Depth	5.8
Tonnage	122
Owner	John Chaffey, Bedford Mills

Ontario steamer sc

No.	80875
Port of Registry	Kingston
Builder	Robert Davis
Built	Garden Island, 1881
Length	104.0
Breadth	22.6
Depth	5.8
Length Engine Room	27.0
Engine	vertical, high-pressure, Davidson Doran Co., Kingston, 1881; cylinder 11 in., stroke 12 in., 50 h.p.
Gross Tonnage	259.08
Registered Tonnage	160.34
Owner	Alexander Allan, Perth, hardware merchant
Subsequent Owners	John Sheridan, Toronto, cattle dealer, 23 October 1883; John Fleming, Toronto, pawnbroker, and James Sherman, Toronto, book-keeper (jointly), 43 shares, 30 April 1885
Disposition	burned in Toronto harbour 2 August 1885; registry closed 31 December 1885

Ontario steamer sc

No.	-
Port of Registry	Kingston
Builder	George H Trotter
Built	Buffalo, N.Y., 1881
Length	71.4
Breadth	17.3
Depth	6.8
Length Engine Room	22.0
Engines	upright, high-pressure, Night Sissman Co., Buffalo, N.Y., 1881; cylinder 16 in., stroke 20 in., 120 h.p.
Gross Tonnage	56.88
Registered Tonnage	29.99
Owners	William James Murphy, Morrisburg, 43 shares Matthew C. Gibson, Morrisburg, 21 shares
Subsequent Owners	William Anderson Allan, Ottawa, 27 June 1884
Disposition	vessel broken up and destroyed registry closed 21 May 1894

Ottawa steamer sc

No.	94628
Port of Registry	Ottawa
Builder	P.G. Watters
Built	Ottawa, 1888
No. of Decks	one
Stern	round
Head	sharp
Build	carvel
Framework	oak
Length	56.6
Breadth	13.6
Depth	5.8
Length Engine Room	9.3
Engines	high-pressure, upright, Sutton Bros., Buffalo, 1880; cylinder 13 in., stroke 16 in., 50 h.p.
Gross Tonnage	21.11
under-deck	18.67
closed-in space	2.44
propelling power	6.76
Registered Tonnage	14.35
Owner	Dept. of Public Works
Disposition	vessel broken up, registry closed 20 April 1939

Ottawan steamer sc

No.	116650
Port of Registry	Ottawa
Builder	J. & R. Weir, Montreal
Built	Ottawa, 1904
No. of Decks	two
No. of Masts	nil
Stern	fan
Head	sharp
Framework	steel
Length	108
Breadth	24
Depth	6.2
Length Engine Room	10
Engines	fore-and-aft compound, J. & R. Weir, 1904, cylinders 11 in. and 20 in., stroke 16 in., 17 n.h.p.
	boiler Fitzgibbon, steel, 130 lb. new engine, same maker, 1909
Gross Tonnage	310.98
under deck	116.22
closed space above tonnage deck	105.61
space between decks saloon	19.07
poop officers' space	26.13
forecastle rooms	28.57

roundhouse, pantry cookery	15.44
space propelling power	97.19
crew space	15.15
Registered Tonnage	157.07
Owner	Ottawa Forwarding Co.
Subsequent Owner	Ottawa Transportation Co., 18 February 1913
Disposition	registry closed 3 September 1940

last vessel on passenger service Rideau Canal, November 1935

Otter steamer p-w

No.	33485
Port of Registry	Montreal
Builder	Macpherson & Crane, Montreal, 1840
Stern	square
Build	carvel
Length	102.5
Breadth	23.5
Depth	7.5
Length Engine Room	52
Tonnage	55 3406/3500 (burthen)
Owner	Macpherson & Crane
Subsequent Owners	Robertson Jones & Co., 12 November 1853, with Macpherson & Crane holding mortgage; Macpherson & Crane, 19 September 1857; Donald Maclachlan, half-share, 14 October 1857
Disposition	vessel burned & sunk near Ottawa, 5 November 1870; registry closed 31 May 1871

Peerless steamer sc

No.	72562
Port of Registry	Kingston
Built	Hamilton, 1873
No. of Decks	one
No. of Masts	one
Stern	round
Build	carvel
Framework	wood
Length	60.0
Breadth	12.5
Depth	4.5
Registered Tonnage	14
Owner	Frederick Andrew Gardner

Subsequent Owners	Alexander McDougald, Brockville, August 1875; John McLeod Gill and Robert Gill, Brockville, September 1876; Thomas Moffat, Perth, May 1877; Samuel and Robert Ryder, Washburn, Frontenac county, January 1889
Disposition	rammed and sunk by *Olive* near Merrickville, October 1878

Perth

No.	-
Port of Registry	-
Builder	Macpherson & Crane, 1837
Length	102.5
Breadth	23.5
Depth	7.5
Length Engine Room	56.0
Registered Tonnage	55
Owners	Macpherson & Crane, forwarders
Subsequent Owners	Peter Robertson, Bytown, John J. Jones, Montreal and Donald C. Thomson, Quebec, 27 June, 1853; Macpherson & Crane, 6 September 1853; John Joseph Jones, Montreal and Donald C. Thomson, Quebec, 8 March 1858; Thomas Boucher (or Donohue), Ottawa, forwarder; Hugh Tierney, Ottawa, 8 September 1858; Thomas Donahue, 8 April 1859; vessel re-named *Hercules*

Phoenix tug

No.	-
Builder	Chaffey Bros., Bedford Mills, 1862
Length	71

Pier barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1865.
Length	102

Pioneer steamer

No.	-
Port of Registry	Montreal
Builder	Thomas Dissett (or Bissett), Prescott, 1841
Length	93.6
Breadth	13.6

Depth	6.9
Length Engine Room	25.4
Tonnage	52 2610/3500 (burthen)
Owners	Samuel Andres and Stephen R. Andres, Chambly
Subsequent Owners	Louis Voligny, St. Thomas parish, et al., 14 August 1848; many subsequent transactions

(doubtful vessel operated on Rideau)

Pioneer steamer p-w (possibly same vessel as previous entry, but there are discrepancies in date of construction, depth and ownership)

No.	-
Port of Registry	Montreal
Built	Prescott, 1861
Stern	round
No. of Decks	one
No. of Masts	nil
Build	carvel
Length	93.6
Breadth	13.6
Depth	6
Length Engine Room	30.7
Owner	Christopher Darling, Montreal, forwarder

Portland barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1863
Length	101

Portsmouth freight steamer & tug

No.	-
Port of Registry	-
Built	Kingston, n.d.
Framework	wood
Engines	10 h.p.
Registered Tonnage	96

Prince Albert steamer p-w

No.	-
Port	Montreal
Built	Montreal, 1843
No. of Decks	one
No. of Masts	nil
Stern	sharp
Length	75.4
Breadth	24.5

Depth	7.7
Length engine room	56.1
Tonnage	193 465/3500 (burthen)
Owner	William Workman, Montreal

Princess Alfred steam tug

No.	-
Builder	George Chaffey & Bros., Brockville 1867
Length	60

Princess Louise steamer sc

No.	-
Port of Registry	Kingston
Built	Wolf Island, 1879
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	75 altered length 94
Breadth	16.3 altered length 18.5
Depth	4.4 altered depth 4.9
Length Engine Room	25
Engines	upright, high-pressure, 30 h.p., 1879
Gross Tonnage	71.80 altered gross tonnage 114.88
Registered Tonnage	72.76 altered registered tonnage 72.76 (?)
Owner	Hugh Cope Rothwell, Kingston, mariner
Subsequent Owners	Ira Allen Breck, Kingston, 27 January 1893; Eden Abbott Johnson, L'Original, 26 April 1898
Disposition	vessel burned at St. John's, Quebec, registry closed 31 December 1906

Quebec barge

No.	-
Builder	John & William Chaffey, Bedford Mills, 1868
Register Tons	121

Quebec steam barge sc

No.	96916
Port of Registry	Kingston
Builder	Willian A. Gorrell
Built	Bedford Mills, 1867
No. of Decks	one
Stern	square
Build	carvel

Framework	wood
Length	110.2
Breadth	23.4
Depth	5.1
Length Engine Room	19.3
Engine	high-pressure, upright, J. King, Oswego, 1873; cylinder 14 in., stroke 14 in., 45 h.p.
Gross Tonnage	108.31
Registered Tonnage	60.08
Owners	John McKelvey and Samuel Birch, Kingston, merchants
Subsequent Owners	Adam Foster, Smiths Falls, dealer, 12 March 1894; James H. Hall and Peter Eligh, Ottawa, 15 March 1895; Hugh F. Cumming, Cornwall, 18 October 1898; James P. McMillan, Cornwall, steamer captain, half share; H. F. Cumming, Cornwall, 20 March 1905; Hial W. Brooks, William E. Beaton, and Murdoch K. Beaton, all of Ottawa, 2 March 1914; William E. Beaton, (9 shares) 27 April 1915; Hial W. Brooks, (4 shares) 5 May 1915; Percy Johnston, Gloucester township, (32 shares), 13 March 1917; registry transferred to Ottawa 6 February 1919

Queen of the Isles steamer sc

No.	83300
Port of Registry	Kingston
Built	Sodus, U.S.
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	45.0
Breadth	6.2
Depth	3.0
Engines	high-pressure, upright, cylinder 7 in., stroke 7.75 in., 10 h.p.
Tonnage	9.59 gross 6.52 register
Owner	Emily Davis, Mrs. John Hillyard Davis, Leeds township
Subsequent Owners	Henry S. Scadding, Orillia, bank manager, 16 April 1884 (22 shares)

	Christopher Robinson, Toronto, barrister, 16 April 1884 (21 shares)
	Francis W. Armstrong, Orillia, civil engineer, 16 April 1884 (21 shares)
Disposition	vessel broken up and engine removed, October 1886

(doubtful on Rideau)

Ranger tug sc

No.	92395
Port of Registry	Kingston
Builder	Robert Davis
Built	Kingston, 1888
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	46.5
Breadth	10.6
Depth	4.3
Length Engine Room	14.6
Engines	high-pressure, upright, Davidson Doran & Co., 1888; cylinder 8 in., stroke 8 in.; 25 h.p.
Gross Tonnage	13.83
Registered Tonnage	8.18
Owner	James Campsall, Kingston
Subsequent Owners	Samuel G. Stewart, South Crosby, 9 November 1889;
	Rathbun Co., Deseronto, 10 June 1893;
	registry transferred Deseronto 2 October 1893;
	damaged by fire Kingston 26 November 1889

Radell II motor ship, twin sc

No.	192751
Port of Registry	Kingston
Builder	Midland Boat Works
Built	Midland, Ontario, 1941
No. of Decks	one
No. of Masts	one
Stern	square
Build	carvel
Length	107.6
Breadth	18.3
Depth	7.4
Length Engine Room	17.9
Depth top deck to keel amidships	11

Engines	twin diesel, Gray Marine Motor Co., Detroit, 1943; cylinders 4.25 in. and 6 in., stroke 5 in.; 450 b.h.p.: 4 n.h.p.
Speed	14 k
Owner	Dieseland Marine Corp. Ltd.
Subsequent Owners	National Research Council, 9 December 1949; Dept. Energy, Mines and Resources 17 October 1969; Dept. of the Environment 2 December 1971

R Anglin tug

No.	-
Port of Registry	Kingston
Built	Kingston, 1869
Framework	wood
Length	97.3
Breadth	22.9
Depth	5.4
Tonnage	58
Owner	G. Chaffey, Kingston

Rideau barge

No.	-
Port of Registry	Kingston
Builder	William Power & Co., Kingston, 1873
Stern	round
Build	carvel
Length	105.6
Breadth	22.8
Depth	6.3
Tonnage	143 2180/3500 (burthen)
Owner	George Chaffey, Kingston, 28 shares William Chaffey, Kingston, 21 shares George Chaffey Jr., Kingston, 15 shares
Subsequent Owners	Delmo Dexter Calvin, 1 November 1873, Chaffey's holding mortgage; William H. Easton since 1876

Rideau (formerly ***Tay***) dredge

No.	141360
Port of Registry	Ottawa
Built	Buckingham, Quebec, 1913
No. of Decks	one
Stern	round
Build	carvel
Framework	wood

Length	72
Breadth	24.7
Depth	5
Length Engine Room	10
Gross Tonnage	191.97
under-deck	133.28
deckhouses above tonnage deck	58.59
crew space	55.02
Registered Tonnage	136.95
Owner	Dept. Railways and Canals
Subsequent Owners	Dept. of Transport 24 November 1939; Charles William Biscope, Manotick, 8 June 1966

Rideau dredge unpowered

No.	100932
Port of Registry	Ottawa
Builder	Beattie & Co., Welland
Built	Welland, Ontario, 1889
Length	70.8
Breadth	25.4
Depth	4.4
Gross Tonnage	136.63
under-deck	88.01
Spaces 'tween decks	48.62 8-man crew
Registered Tonnage	136.03
Owner	Dept. Railways and Canals
Disposition	broken up and out of commission, advice received 18 May 1922

Rideau sail

No.	illegible
Port of Registry	Ottawa
Built	William Lough, Jr., Ottawa, 1871
Length	91.0
Breadth	17.8
Depth	6.0
Tonnage	95 600/3500 register
Owner	John Grant, Montreal, gentleman
Disposition	dismantled, registry cancelled 3 December 1891

Rideau Belle steamer sc

No.	88566
Port of Registry	Kingston
Builder	Robert Davis, Kingston
Built	Kingston, 1885
No. of Decks	one
Stern	round

Build	carvel
Framework	wood
Length	68.6
Breadth	15.0
Depth	5.8
Length Engine Room	14.0
Passengers	licensed for 40, 1885 licensed for 50, 1892 licensed for 100, 1893
Engines	high-pressure, upright, Davidson Doran & Co., Kingston; cylinder 10.25 in., stroke 12 in.; 20 h.p.
Registered Tonnage	31.87
Owner	Robert Davis, Kingston
Subsequent Owners	William Bajus (?) , Kingston, Daniel Norman, Kingston, jointly (64 shares) 15 May 1885; Daniel Norman, (64 shares) 29 March 1888; Edward Fleming, South Crosby, (32 shares) and William Henry Fleming, 6 December 1893
Disposition	burnt Sand Lake, 12 March 1895 [11 March], registry closed 30 December 1895
Re-built 1886:	
Length	85
Breadth	15
Depth	6
Registered Tonnage	131
Disposition	fire west side Sand Lake, 11 November 1895 [March 11, 1895], loss $4,500

Rideau King (formerly ***James Swift***) steamer sc

No.	96920
Port of Registry	Kingston
Builder	Matthew R Davis
Built	Kingston, 1893
Length	107.0
Breadth	23.4
Depth	6.0
Length Engine Room	20.8
Passengers	licensed for 100 (1893) licensed for 150 (1895)
Engines	upright, compound, D. McEwen & Son, Kingston, 1887; cylinders 9 in. and 16 in., stroke 12 in.; 12 h.p.
Gross Tonnage	265.92
Registered Tonnage	197.23
Owner	Daniel Noonan, Kingston, mariner
Subsequent Owners	Rideau Lakes Navigation Co., 3 July 1901 re-named *Rideau King* 30 July 1901

Misc .	fire broke out 9 June 1901 aboard at Ottawa canal basin - one death, vessel partial loss circa $2,000
Disposition	notation in register 8 June 1938 — "vessel under water at Garden Is for a number of years."

Rideau Queen steamer sc

No.	107742
Port of Registry	Kingston
Builder	Matthew P. Davis
Built	Kingston, 1900
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	108.0
Breadth	24.3
Depth	6.9
Length Engine Room	26.0
Passengers	licensed on river 150 licensed on canal 300 (1904)
Engines	triple expansion, Davis Drydock Co., Kingston 1900; 3 cylinders 8.5 in., 12.75 in. and 21 in., stroke 14 in.; 25 h.p.
Gross Tonnage	350.75
under-deck	107.25
space between decks	127.73
roundhouse	6.64
saloon on deck	109.13
engine space	112.24
crew space	43.01
Registered Tonnage	195.50
Passenger Accomm.	rooms $1-$5, meals 50$, electricity, steam heat, steam fans
Owner	David Noonan, Chaffey's Locks
Subsequent Owners	Rideau Lakes Navigation Co., Kingston, 3 July 1901; Rob Girdwood Weddell, Trenton, contractor; Celestin Leboeuf, 26 September 1922; Arthur Lefebre, navigator, and Louis Phillipe Godbout, both of Valleyfield, Quebec, 10 March 1924; Valleyfield Transportation Co., 23 April 1924; Valleyfield Beauharnois Navigation Ltd., 1927
Disposition	registry closed 19 August 1937

Rose barge

No.	-
Port of	Kingston
Builder	John Carruthers, Kingston, 1869
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Length	103.9
Breadth	22.7
Depth	5.9
Length Engine Room	21.7
Tonnage	121 377/3500; re-measured 92.40 registered
Owner	George and William Chaffey

Rover barge

No.	-
Port of Registry	Kingston
Builder	Macpherson & Crane, Kingston, 1851
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Length	76
Breadth	14
Depth	6.8
Tonnage	74 (unspecified)
Owner	Macpherson & Crane
Subsequent Owners	Robertson Jone & Co., 27 June 1853; Macpherson & Crane, by way of mortgage, 6 September 1853

Rover steam barge sc

No.	77637
Port of Registry	Kingston
Builder	Robert Davis, Wolf Island, 1879
No. of Decks	one
Stern	round
Build	carvel
Frame	wood
Length	48.0
Breadth	13.0
Depth	3.6
Engines	high-pressure, upright, Black Bros., Brockville 1879; cylinder 5.5 in., stroke 5.5 in.; 6 h.p.
Owner	Thomas William Pyke, Wolf Island, mariner
Disposition	burnt, total loss, Wolf Island, 2 December 1888

(unlikely served on Rideau)

Ruby steamer p-w

No.	33451 [?]
Port of Registry	Montreal
Built	Montreal, 1846
Stern	round
Build	carvel
Length	91
Breadth	17.2
Depth	6.2
Length Engine Room	26
Tonnage	67 176/3500
Owner	Louis Volyng (?)
Subsequent Owner	George Smith, Montreal, forwarder, 13 February 1851

R R Foster unpowered scow

No.	151162
Port of Registry	Ottawa
Length	78
Breadth	18.5
Depth	5.1
Gross & Registered Tonnage	57.96
Owner	Dept. Railways and Canals
Subsequent Owners	Murdock Beaton, Ottawa, merchant, 9 April 1924; Richard Robert Foster, Ottawa, merchant, 9 April 1924
Disposition	vessel sank near Kettle Island, Ottawa River; registry closed 4 October 1948

St Louis steamer sc

No.	11260
Port of Registry	Montreal
Builder	Davis Dry Dock Co.
Built	Kingston, 1900
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	60.0
Breadth	14.0
Depth	4.0
Length Engine Room	12.5
Passengers	licensed for 175 on Rideau licensed for 75 on St. Lawrence
Engines	high-pressure, Davis Dry Dock Co., 1900; cylinder 8 in., stroke 8 in.; 2 .2 h.p.
Gross Tonnage	29.34, altered 1909 to 34.56

Registered Tonnage	19.90, altered 1909 to 23.50
Owner	St. Lawrence Yacht Co., Dorval, Quebec
Subsequent Owners	Peter Cavanaugh, Perth, engineer, 18 March 1909; John F. Sherman, Smiths Falls, blacksmith, 23 July 1920; Arthur Emile Simard, Quebec City, 1 February 1921
Disposition	vessel presumed out of existence 25 November 1946

Scotland schooner-rigged barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1863
Register tons	146

Shamrock steam barge

No.	-
Builder	John & William Chaffey, Bedford Mills, 1868
Register Tons	121

Shamrock barge

No.	-
Port of Registry	Montreal
Builder	P.G. Waters, Montreal, 1864
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Length	93.8
Breadth	15.6
Depth	5.5
Owner	Moss Kent Dickinson, Montreal
Subsequent Owner	Ottawa & Rideau Forwarding Co., 22 April 1867
Disposition	vessel sunk, registry closed 4 March 1875

Shamrock barge

No.	83073
Port of Registry	Ottawa
Built	Kingston, 1869
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Frame	wood
Length	108.0

Breadth	22.0
Depth	5.6
Tonnage	116.4 gross, 116.4 register
Owner	George A. Harris, Ottawa, forwarder
Subsequent Owner	Albert Vipond, Hudson, Quebec, 4 June 1895
Disposition	"broken up long ago", 7 March 1903

Shamrock scow barge

No.	-
Port of Registry	Kingston
Builder	John Carruthers, Kingston, 1869
No. of Decks	one
No. of Masts	nil
Stern	round
Build	carvel
Length	104.9
Breadth	22.5
Depth	5.8
Tonnage	121 393/3500 (burthen)
Owners	George and William Chaffey
Subsequent Owners	John Carruthers, Kingston, by way of mortgage, 7 May 1869; D. Dexter Calvin and Bora Allen Breck, Garden Island, by way of mortgage 16 July 1870; part interest acquired by George Chaffey the younger, 22 April 1871
Disposition	registry closed 4 June 1888

Shamrock scow

No.	-
Port of Registry	Kingston
Builder	Peter Mitchel, Kingston, 1867
Stern	square
Rigging	sloop, standing bowsprit
Build	carvel
Length	71.4
Breadth	17.9
Depth	4.2
Tonnage	34 1185/3500
Owner	Dominick Fallen, Kingston
Disposition	broken up, registry cancelled 13 May 1882

Shanly patrol boat

No.	107081
Port of	Ottawa
Builder	R.G. Waters
Built	Ottawa, 1890

No. of Decks	one
Stern	round
Head	sharp
Length	60.6
Breadth	15.3
Depth	6.7
Engines	upright, Parkinson of Ottawa, 1890; cylinder 12 in., stroke 12 in.; 25 h.p.
Gross Tonnage	40.45
under-deck	29.90
closed in spaces above tonnage deck	10.55
engine room	12.94
cabin	8.49
Registered Tonnage	19.02
Owner	Dept. Railways and Canals
Crew	6

Sunbeam steamer

No.	-
Builder	George Chaffey, Kingston, n.d

Swan steamer

No.	-
Port of Registry	Kingston
Builder	Chaffey Bros.
Built	Brockville, 1864
No. of Decks	one
Stern	round
Length	55.2
Breadth	11.3
Depth	7.6
Length Engine Room	28.4
Registered Tonnage	35
Owners	Benjamin Chaffey (21 shares) William Chaffey (21 shares) George Chaffey (22 shares)
Subsequent Owners	William Hartwell, Fredenburgh, Westport, 29 October 1867; Albert Nathaniel Guirney and John Newton Glidden, jointly, Kingston, 1 December 1868; Edward Griffen, Ottawa, 18 February 1871; registry transferred to Ottawa, 2 June 1883
Disposition	stranded and sunk near Kingston Mills due to error in judgement, no lives lost, "pilot under influence of liquor"

Tay steamer pw

No.	-
Built	Pike's Falls, Rideau Canal, 1836
Length	72
Breadth	20
Owner	Weatherhead and Capt Moorehouse

Thistle barge

No.	-
Builder	John & William Chaffey, Bedford Mills, 1869
Register Tons	118

Thomas McKay steamer p-w

Builder	Yarker, Valentine & Bennett
Length	105
Breadth	28.5
Depth	6.33
Passenger Accomm.	20 berth gentlemens cabin 12 berth ladies cabin promenade deck fore and aft
Misc .	vessel draws 2.5 ft. and 16 in. forward

Titania steamer sc

(not sure whether operated on Rideau or not)

No.	96900
Port of Registry	Kingston
Builder	R. Davis & Sons, Kingston
Built	Kingston, 1891
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	49.9
Breadth	9.1
Depth	4.3
Length Engine Room	9.5
Engine	fore and aft compound, R. Davis, Kingston, 1891; cylinders 5 in. and 9 in., stroke 7 in.; 12 h.p.
Gross Tonnage	16.83
Registered Tonnage	10.64
Owner	Robert Davis, shipbuilder, Kingston registry transferred Ottawa 30 May 1893

T J Wolfe freight steamer

No.	-
Built	Smiths Falls, 1914
Framework	wood
Service	Lake Ontario and Rideau Canal

Tropic steamer

No.	882313
Port of Registry	Brockville
Builder	William O'Mara
Built	Smiths Falls, 1885
No. of Decks	open ship
Stern	round
Build	carvel
Head	plain
Framework	wood
Length	40.5
Breadth	8.3
Depth	3.4
Length Engine Room	8.7
Engine	non-condensing, Kingston Locomotive Co., 1883; cylinder 5 in., stroke 5 in., 7 h.p.
Gross Tonnage	8.86
under deck	5.01
cabin	3.85
Registered Tonnage	7.28
Owner	Wi11iam O'Mara
Subsequent Owners	William A. Gray, Smiths Falls, physician, 17 October 1902; Gordon ( ), Smiths Falls, shipowner and John Gongra, Smiths Falls, shipowner, 5 May 1904; Harmon S. Toffy, Portland, manufacturer, 16 December 1904; James Wilson Stanton, Bastard township, manufacturer, 26 October 1909
Passengers	licensed for 35 in 1892
Disposition	presumed out of existence, 16 November 1946

Tube steam barge

No.	-
Builder	Chaffey Bros., Bedford Mills, 1864
Length	102

Victoria barge

No.	
Port of Registry	Kingston
Builder	Macpherson & Crane, Kingston, 1852

Stern	square
Build	carvel
Length	90.6
Breadth	14.8
Depth	6.1
Tonnage	81
Owner	Macpherson & Crane
Subsequent Owners	Robertson, Jones & Co., 27 June 1853; Macpherson & Crane by mortgage 6 September 1853 as security for £30.000

Victoria steamer sc

No.	107746
Port of Registry	Brockville
Built	Kingston, 1900
Length	72.6
Breadth	15.5
Depth	5.0
Passengers	licensed for 175 (1910-11)
Gross Tonnage	58.10
under deck	27.63
houses on deck	30.47
engine room	18.59
Registered Tonnage	39.51
Engines	9.36 n.h.p. steam pressure 110 lb.
Life-saving Equipment & Gear	2 lifeboats (capacity 22) 180 life-preservers 13 rafts 6 fire buckets 3 axes 6 lanterns 4 lifebuoys
Owners	Rockport Navigation Co., Rockport, Ontario, 1904; George A. Davis, Smiths Falls 1912

Wales propeller

No.	-
Builder	George Chaffey & Bros., Kingston & Bedford Mills, 1864.
Length	110

Wapiti steamer

No.	107734
Port of Registry	Kingston; later Rat Portage, 1904
Builder	Davis Dry Dock Co., Kingston, 1899
No. of Decks	one
Stern	round

Build	carvel
Frame	wood
Length	55.6
Breadth	9.7
Depth	4.2
Length Engine Room	14.0
Engines	triple-expansion, Davis Dry Dock Co., Kingston, 1899; cylinders 5 in., 8 in. and 13 in.; stroke 8 in.; 8 h.p.
Tonnage	18.11 gross, 12.32 registered
Owner	Henry Barber, Toronto, gentleman
Subsequent Owners	George Thomas Marks, Port Arthur, merchant, 29 June 1903; Charles Freeman Bunnel, Winnipeg, hotel-keeper
Disposition	registry transferred to Rat Portage, 8 September 1904

Water Lily steam barge

No.	-
Port of Registry	Kingston
Builder	J. William Ainslie
Built	Brewer's Mills, 1870
Length	92
Breadth	22
Depth	5.5
Length Engine Room	19
re-built	A.H Hepburn at Picton, Ontario, 1891
Length	100
Breadth	18.4
Engine Room	26
Engines	high-pressure, upright, Davidson & Doran, Kingston, 1870; cylinder 10.25 in., stroke 12 in.; 17 h.p.
Gross Tonnage	95.09
under deck	95.09
engine	29.16
forecastle	6.43
Registered Tonnage	35.59
Owner	Fraser & George, Kingston, forwarders
Subsequent Owners	Hebron Harris, Kemptville, trader 11 October 1874; J.B. Robinson, Thurlow, Ontario, c.1875-77
Disposition	Collision with *Magnet* in fog 20 July 1879, no loss of life, damages total $600 freight boat; unfit for service

Welshman (later *Glen Isle* 1911) steamer sc

No.	107789
Port of Registry	Ottawa
Builder	Napoleon Tessier
Built	Ottawa, 1900
No. of Decks	one
Stern	round
Build	carvel
Head	plain
Framework	wood
Length	105.0
Breadth	23.0
Depth	6.0
Length Engine Room	22.4
Engines	high-pressure, non-condensing, Black Co., Brockville 1897; cylinder 12 in., stroke 14 in.; boiler Fitzgibbon, steel, 95 lb., by Bannerman & Painers, Ottawa
Owner	Ottawa Forwarding Co., Ottawa
note:	name changed to *Glen Isle* 24 June 1911
Subsequent Owner	Rideau Canal Supply Co., Ottawa

Wenonah steamer sc

No.	103650
Port of Registry	Kingston
Builder	Hugh Harold, Lanark County
Built	Oliver's Ferry, 1899
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	37.0
Breadth	8.6
Depth	3.5
Length Engine Room	10.0
Engines	high-pressure, John Glass, Ogdensburg, N.Y.; cylinder 6 in., stroke 6 in.; 9 h.p.
Gross Tonnage	5.59
under deck	5.59
engine space	1.79
Registered Tonnage	3.80
Owner	William McLaren, Perth
Disposition	ship broken up, registry closed 30 December 1940

Western steamer

No.	-
Port of Registry	Montreal
Builder	Macpherson & Crane, Montreal, 1849

No. of Decks	one
No. of Masts	one
Stern	round
Build	carvel
Length	89.5
Breadth	17.3
Depth	7.6
Tonnage	100 1603/3500
Owner	Macpherson & Crane
Disposition	broken up, registry closed 7 March 1866

Westport

No.	71179
Port of Registry	Kingston
Builders	George Chaffey and Bros.
Built	Bedford Mills, 1862
No. of Decks	one
Stern	round
Build	carvel
Framework	wood
Length	102.9
Breadth	20.6
Depth	7.7
Length Engine Room	20.0
Engines	horizontal, Beauchemin Bros., Sorel, Quebec, 1874, 10 h.p.
Owner	Michael Scanlan, Montreal, merchant
Subsequent Owner	Isaac H. Arnold, Westport
Disposition	supposed out of existence, registry closed 10 December 1937

Witch of the Waves steamer sc

No.	71198
Port of Registry	Ottawa
Built	Kemptville, 1875
No. of Decks	one and awning
Stern	round
Build	carvel
Framework	tamarac
Length	39.8
Breadth	9.8
Depth	3.2
Length Engine Room	8.2
Engines	high-pressure, Hawkins F. Mortimer, 1876; cylinder 8 in., stroke 10 in.
Owner & Master	John Moore, Carleton Place
Subsequent Owner	William Beck, Carleton Place, 27 May 1876
Disposition	dismantled and registry closed 3 November 1897

Zinfandel steamer

No.	-
Builder	George Chaffey, Kingston, n.d

List of other Rideau Canal vessels

(the names of which are cited in lock records but for which no appropriate shipping register references were found)

Name	**Lock Record Date**
Aid	1843
Albatross	1913
Aldea	1858
Angus Lenahan	1847
Arlin	1865
Augusta	1848
Ausable	1905
Bee	1866
Benita	1866
Boadecea	1901
Britannia	1860
Buena Vista	1913
Champlain	1881
Charlotte	1843
Cherokee	1851
Chummy	1909
Corsair	1850
Dart	1843
Dolphin	1866
Edna D	1905
Ellen	1903
Empire	1849
Enterprise	1840
Experiment	1856
Express	1863
Firefly	1854
Forester	1863
Geisha	1905
Gleaner	1864
Glyph	1850
Grenville	1843
Hosnan or Homan	1867
Huse	1867
Jesha	1909
John MacTaggart	1847
John Milne	1899
John Stewart	1858
Josephine	1859
Lalaskra or Lalaspra	1903
Laura B	1907

Leeds	1854
Maltese	1866
Mary	1858
Mary C	1905
Minnie Bell	1899
Mohawk	1901
Ottawa	1859
Pilot	1843
Porcupine	1848
Propeller	1843
Rob Roy	1908
St David	1843
Sarah Bob	1858
Sorel	1865
Swallow	1848
Sygne	1901
Waffle	1914
Wallace	1867
Whitehall	1858
William Henny	1843
Winnifred	1905
Wonder	1858
World Kyne	1901

APPENDIX B

Explanatory Note

Although the terms "steam" and "sail" are not defined in the original sources, it is assumed that "steam" refers to powered vessels (including powered barges and scows as well as steamboats) and that "sail" refers to all unpowered craft. It is not known if the number of vessels (whether steam or sail, Canadian or U.S., or totals) refers to passages or individual lockages. For example, the figure 2146 (total number of vessels) for 1896 is assumed to mean that there were 2146 vessel passages (or, less likely, lockages) in 1896 - not that 2146 different vessels used the system in that year. The figures for vessel tonnage should be interpreted accordingly. For some years (1881 to 1904) two sets of differing figures are available. Where this occurs figures from the anomalous series of statistics are underlined. The asterisks (*) under the tolls columns refer to tolls that would have been collected had tolls not been abolished at the beginning of the 1903 navigation season.

Appendix B. Rideau Canal: Number of Vessels, Vessel Tonnage, Number of Passengers, Freight Tonnage, Tolls [1832]-1970[1]

Year	CANADIAN VESSELS Steam No.	Steam Tonnage	Sail No.	Sail Tonnage	Total No.	Total Tonnage	U.S. VESSELS Steam No.	Steam Tonnage	Sail No.	Sail Tonnage	Total No.	Total Tonnage	Total No. Vessels	Total Tonnage	Passengers No.	Freight Tons	Tolls	Increase or Decrease
1832-55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1856	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13,938.55	-
1857	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10,604.37	-
1858	-	-	-	-	-	-	-	-	-	-	-	-	-	180,678	-	152,411	11,172.20	-
1859	-	-	-	-	-	-	-	-	-	-	-	-	-	171,508	-	238,909	9,375.85	-
1860	-	-	-	-	-	-	-	-	-	-	-	-	-	171,400	-	-	107,43.90	-
1861	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	250.14	-
1862	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	543.51	-
1863	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	25.90	-
1864	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	304,127	7685.16	-
1865	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	306,872	-	-
1866	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	318,425	-	-
1867	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1868	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1869	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	169,774	1951	169,412	-	-
1971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1872	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1873	-	37,525	-	221,461	-	-	-	-	-	16,863	-	-	-	275,849	1526	351,501	7195.34	-
1874	-	39,549	-	140,176	-	-	-	12	-	8583	-	-	-	-	-	180,885	-	-
1875	-	49,447	-	129,421	-	-	-	12	-	6953	-	-	-	-	-	59,996	-	-
1876	-	32,197	-	125,124	-	-	-	104	-	6173	-	-	-	-	-	35,362	-	-
1877	-	-	-	158,375	-	-	-	-	-	-	-	-	-	-	-	127,173	-	-
1878	-	43,274	-	103,447	-	-	-	138	-	6445	-	-	-	-	-	108,269	-	-
1879	-	46,659	-	113,823	-	-	-	50	-	3276	-	-	-	-	-	108,623	-	-
1880	-	-	-	161,216	-	-	-	-	-	-	-	-	-	-	-	108,699	-	-
1881	-	-	-	163,103	-	-	-	-	-	-	-	-	-	-	3784	114,015	-	-
1882	-	-	-	180,174	2759	175,174	-	-	-	-	67	5000	2826	180,174	5069	99,527		
1883	1006	63,387	1325	87,564	2640 2331	167,316 150,951	28	182	68	7114	62 68	5614 7296	2702 2427	172,930 158,247	3057	91,307 92,136	5344	-1216
1884	689	38,446	1190	78,809	2119 1879	138,625 117,255	27	208	72	7358	105 99	7602 7566	2304 1978	146,277 124,821	1015	75,067 76,389	4062	-1282
1885	745	40,596	1039	69,527	1752 1784	110,642 110,123	24	172	102	10,198	88 126	6845 10,370	1840 1910	117,487 120,493	2181	86,453 87,944	4976	+94
1886	917	49,105	1225	81,401	1837 2142	114,764 130,506	42	320	114	10,826	183 156	15,679 11,146	2020 2298	130,433 144,652	2973	84,785 90,990	6318	+1312
1887	1099	53,359	1283	94,425	2269 2382	135,035 147,781	64	563	81	7810	109 145	6526 8373	2378 2527	illegible 156,157	2944	87,161 92,478	5556	-762
1888	1141	70,360	1388	96,106	2529	166,466	50	514	170	18,083	220	18,597	2749	185,063	4193	10,991 112,248	6627	+1071
1889	1114	62,377	1120	82,630	2234	145,007	75	714	183	18,703	258	19,417	2942	164,424	2910	110,057 113,126	7063	+436
1890	1151	62,150	965	72,734	2116	134,884	58	1057	64	4737	122	5794	2238	140,678	3921	84,076 113,574	6145	-918
1891	1299	78,137	945	69,965	2244	147,102	69	711	181	16,644	250	17,355	2994	164,457	5423	89,576 109,313	6303	+158
1892	1520	102,431	1039	87,077	2559	189,508	57	878	74	6070	131	6948	2690	196,456	7442	90,286 96,366	4987.52 5140	-1153

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Appendix B. (continued)

Year	CANADIAN VESSELS Steam No.	Steam Tonnage	Sail No.	Sail Tonnage	Total No.	Total Tonnage	U.S. VESSELS Steam No.	Steam Tonnage	Sail No.	Sail Tonnage	Total No.	Total Tonnage	Total No. Vessels	Total Tonnage	Passengers No.	Freight Tons	Tolls	Increase or Decrease
1893	1299	94,684	858	65,142	2157	160,426	73	956	176	14,533	249	15,489	2406	175,915	6119	101,409 104,234	5773	+623
1894	1422	107,414	876	637	3298	169,838	65	62,424	127	8768	192	9405	3490	179,213	5544	93,382 94,479	5836	+63
1895	1298	98,262	793	54,798	2091	153,060	81	2586	203	13,206	284	15,792	2375	168,852	5305	88,267 88,753	5679	-157
1896	1318	104,408	670	38,813	1988	143,221	64	1827	94	5842	158	7309	2146	150,530	3239	72,851 73,307	5011	-688
1897	1721	104,680	647	33,259	2368	138,939	47	646	138	11,838	185	12,484	2553	151,423	4908	77,143 77,276	6131	+1120
1898	1488	114,429	719	29,657	2207	144,080	41	692	119	8308	160	9000	2367	153,086	4830	54,846 54,946	4794	-1337
1899	1561	117,489	618	29,645	2179	147,134	58	899	231	12,749	289	13,648	2468	160,782	5510	69,363 69,905	5704	+910
1900	1590	141,065	761	37,391	2351	178,456	57	854	171	12,205	228	13,059	2579	191,514	7447	74,172 75,432	6079	+375
1901	1586	12,467	741	32,329	2327	157,096	49	877	138	6276	187	7153	2514	164,249	6199	56,376 56,376	4114	-1965
1902	1803	127,939	811	35,400	2614	163,339	78	1182	179	6048	257	7230	2871	170,569	9294	47,779 50,879	3831	-283
1903	2154	122,697	1519	37,508	3673	160,205	89	1355	204	8019	293	9374	3966	169,579	15,501	60,782 61,120	4804.98*	
1904	-	138,271	-	24,191	-	-	-	1106	-	6077	-	4042	-	169,645	17,253	54,528 55,120	-	-
1905	2890	149,342	1484	29,462	4374	178,804	141	1633	200	6122	341	7755	4715	186,559	24,394	59,864	-	-
1906	-	167,539	-	33,763	-	-	-	992	-	5235	-	-	-	207,539	27,917	82,159	-	-
1907	-	154,305	-	29,750	-	-	-	576	-	3365	-	-	6356	187,996	22,445	82,369	6472.37*	-
1908	-	143,546	-	42,472	-	-	-	622	-	3300	-	-	-	189,940	22,640	89,640	-	-
1909	-	122,113	-	32,154	-	-	-	13	-	2041	-	-	-	156,320	19,498	91,774	-	-
1910	2105	125,062	644	51,385	2749	176,447	2	18	64	6777	66	6795	2815	183,242	26,040	134,881	-	-
1911	2361	168,709	670	53,853	3031	222,562	1	34	30	3004	31	3038	3062	225,000	25,298	172,227	-	-
1912	2257	146,845	703	61,844	2960	208,689	-	-	9	887	9	887	2969	209,576	20,534	160,133	-	-
1913	2158	12,8587	613	72,311	2798	200,898	-	-	22	2088	22	2088	2820	202,986	19,653	171,233	-	-
1914	2208	133,426	392	43,478	2600	176,904	22	572	13	2039	35	2611	2635	179,575	19,730	151,739	-	-
1915	1817	-	253	-	2070	144,787	-	-	6	-	6	586	2076	145,373	18,664	120,781	-	-
1916	1512	-	160	-	1672	117,341	-	-	12	-	12	1214	1684	118,555	12,544	105,430	-	-
1917	1350	-	154	-	1504	105,666	-	-	16	-	16	1964	1520	107,630	11,552	84,549	-	-
1918	1031	-	125	-	1156	75,487	-	-	8	-	8	3316	1164	78,803	16,926	54,136	-	-
1919	1502	-	331	-	1833	122,576	-	-	2	-	2	192	1835	122,768	17,026	103,539	-	-
1920	1271	-	438	-	1709	118,751	7	-	2	-	9	1124	1718	119,875	14,785	97,839	-	-
1921	1227	-	214	-	1441	99,832	-	-	2	-	2	204	1143	100,036	11,484	95,012	-	-
1922	1421	-	472	-	1893	105,840	3	-	2	-	5	242	1898	106,082	6319	86,382	-	-
1923	1388	-	436	-	1824	104,279	7	-	5	-	12	821	1836	105,100	6299	81,299	-	-
1924	1158	-	250	-	1408	102,842	3	-	8	-	11	542	1419	103,334	3345	85,986	-	-
1925	1163	-	295	-	1458	103,503	26	-	12	-	38	1533	1496	105,636	4359	85,785	-	-
1926	-	-	-	-	1052	77,755	-	-	-	-	18	722	1070	78,477	2931	56,052	-	-
1927	-	-	-	-	1139	84,081	-	-	-	-	30	1525	1160	85,606	3803	57,951	-	-
1928	-	-	-	-	936	74,368	-	-	-	-	19	685	955	79,053	1441	51,999	-	-
1929	-	-	-	-	744	64,259	-	-	-	-	17	602	761	64,861	1115	45,901	-	-
1930	-	-	-	-	506	51,104	-	-	-	-	11	348	517	51,452	785	28,210	-	-

Appendix B. (Continued)

Year	CANADIAN VESSELS						U.S. VESSELS						Total No. Vessels	Total Tonnage	Passengers No.	Freight Tons	Tolls	Increase or Decrease
	Steam		Sail		Total		Steam		Sail		Total							
	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage	No.	Tonnage						
1931	-	-	-	-	505	45,843	-	-	-	-	6	130	511	45,973	793	27,521	-	-
1932	-	-	-	-	439	42,895	-	-	-	-	11	216	450	43,111	613	25,690	-	-
1933	-	-	-	-	531	45,208	-	-	-	-	9	122	540	45,330	978	21,868	-	-
1934	-	-	-	-	571	43,145	-	-	-	-	4	69	575	43,214	3361	21,846	-	-
1935	-	-	-	-	619	42,206	-	-	-	-	5	92	624	42,298	3249	20,426	-	-
1936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15,604	-	-
1937	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16,481	-	-
1938	-	-	-	-	-	-	-	-	-	-	-	-	-	4759	-	1623	-	-
1939	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2009	-	-
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	4815	-	1310	-	-
1941	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1727	-	-
1943	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1551	-	-
1944	-	-	-	-	-	-	-	-	-	-	-	-	-	6606	-	2714	-	-
1945	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	863	-	-
1946	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1439	-	-
1947	-	-	-	-	-	-	-	-	-	-	-	-	-	6091	-	1508	-	-
1948	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1323	-	-
1949	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1163	-	-
1950	-	-	-	-	-	-	-	-	-	-	-	-	-	4456	-	1215	-	-
1951	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1198	-	-
1952	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	921	-	-
1953	-	-	-	-	-	-	-	-	-	-	-	-	-	7521	-	1531	-	-
1954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1490	-	-
1955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	413	-	-
1956	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	399	-	-
1957	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5844	-	-
1958	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	-	-
1959	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	58	-	-
1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72	-	-
1961	-	-	-	-	-	-	-	-	-	-	-	-	-	2876	-	-	-	-
1962	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1964	-	-	-	-	-	-	-	-	-	-	-	-	-	600	-	-	-	-
1965	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1966	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1967	-	-	-	-	-	-	-	-	-	-	-	-	-	222	-	-	-	-
1968	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1969	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1970	-	-	-	-	-	-	-	-	-	-	-	-	-	944	-	-	-	-

APPENDIX C

Explanatory Note

The figures with asterisks (*) under the column "merchandise" (1888-93) include mineral products and manufactures.

Appendix C. Rideau Canal: Principal Articles of Freight Carried, 1888-1961[1]

YEAR	AGRICULTURE											FOREST						Total Freight Tonnage from App. B
	Flour	Wheat	Corn	Barley	Oats	Rye	All other Veg. Food	Farm Stock	Animal Prod.	Agric. Prod.	Farm Prod.	Forest Prod.	Lumber	Coal	Mineral Prod.	Manufactures	Merchandise	TOTAL	
1888	432	326	92	275	17	15	279	-	-	-	-	-	59780	9523	-	-	41559*	112248	112248
1889	366	311	52	270	13	23	210	-	-	-	-	-	59803	10356	-	-	41722*	113126	113126
1890	487	191	35	101	91	107	342	-	-	-	-	-	38651	15289	-	-	58280*	113574	113574
1891	690	290	22	373	124	170	437	-	-	-	-	-	38524	11391	-	-	51292*	109313	109313
1892	369	65	20	82	1551	81	463	-	-	-	-	-	29622	3625	-	-	60488*	96366	96366
1893	369	182	17	18	289	34	160	-	-	-	-	-	34487	13835	-	-	54843*	104234	104234
1893	-	-	-	-	-	-	-	29	522	1505	-	77725	-	-	-	4494	17134	101409	-
1894	-	-	-	-	-	-	-	9	556	2223	-	64633	-	-	-	3511	23547	94479	94479
1895	-	-	-	-	-	-	-	15	570	3232	-	55563	-	-	-	3031	26342	88753	88753
1896	-	-	-	-	-	-	-	21	502	2845	-	46102	-	-	-	3540	20297	73307	73307
1897	-	-	-	-	-	-	-	20	577	1620	-	47010	-	-	-	3450	24599	77276	77276
1898	-	-	-	-	-	-	-	19	782	2523	-	30238	-	-	-	2395	18989	54946	54946
1899	-	-	-	-	-	-	-	18	1567	2794	-	37189	-	-	-	2623	25714	69905	69905
1900	-	-	-	-	-	-	-	11	1257	2452	-	37925	-	-	-	4900	28887	75432	75432
1901	-	-	-	-	-	-	-	2	1390	2018	-	21771	-	-	-	2261	28925	56376	56376
1902	-	-	-	-	-	-	-	26	973	3650	-	27296	-	-	-	3005	15929	50879	50879
1903	-	-	-	-	-	-	-	19	2252	4308	-	29093	-	-	-	3600	21848	61120	61120
1904)																			55120
1905)																			59864
1906)																			82159
1907)					Figures Not Available														82369
1908)																			89640
1909)																			91774
1910)																			134881
1911	-	-	-	-	-	-	-	-	2684	6084	-	34350	-	-	14172	114937	-	172227	172227
1912	-	-	-	-	-	-	-	-	3151	3995	-	28642	-	-	105531	18814	-	160133	160133
1913	-	-	-	-	-	-	-	-	3458	3437	-	27331	-	-	121784	15213	-	171223	171223
1914	-	-	-	-	-	-	-	-	3010	2027	-	15041	-	-	118195	13466	-	151739	151739
1915	-	-	-	-	-	-	-	-	1690	1521	-	10211	-	-	77173	10186	-	120781	120781
1916	-	-	-	-	-	-	-	-	2583	523	-	9912	-	-	81658	10754	-	105430	105430
1917	-	-	-	-	-	-	-	-	1842	3225	-	11826	-	-	56847	10779	-	84549	84549
1918	-	-	-	-	-	-	-	-	-	-	3381	7378	-	-	34039	9408	-	54136	54136
1919	-	-	-	-	-	-	-	-	-	-	3574	13234	-	-	74547	12184	-	103539	103539
1920	-	-	-	-	-	-	-	-	-	-	3639	7922	-	-	69280	16996	-	97837	97837
1921	-	-	-	-	-	-	-	-	-	-	2455	4613	-	-	73747	14197	-	95012	95012
1922	-	-	-	-	-	-	-	-	-	-	2532	6225	-	-	58226	19399	-	86382	86382
1923	-	-	-	-	-	-	-	-	-	-	2689	6467	-	-	52873	19270	-	81299	81299
1924	-	-	-	-	-	-	-	-	-	-	2313	6024	-	-	61791	15858	-	85986	85986
1925	-	-	-	-	-	-	-	-	-	-	2212	8847	-	-	53033	21693	-	85785	85785
1926	-	-	-	-	-	-	-	-	1311	524	-	7816	-	-	25034	21637	-	56052	56052
1927	-	-	-	-	-	-	-	-	1510	544	-	9939	-	-	23426	22532	-	57951	57951
1928	-	-	-	-	-	-	-	-	1343	368	-	3785	-	-	21950	24553-	-	51999	51999
1929	-	-	-	-	-	-	-	-	1233	450	-	1275	-	-	16498	26495	-	45901	45901
1930	-	-	-	-	-	-	-	-	1288	608	-	832	-	-	552	25090	-	28210	28210
1931	-	-	-	-	-	-	-	-	901	360	-	914	-	-	133	25213	-	27521	27521
1932	-	-	-	-	-	-	-	-	440	309	-	587	-	-	1075	23279	-	25690	25690
1933	-	-	-	-	-	-	-	-	303	114	-	852	-	-	1512	19087	-	21868	21868
1934	-	-	-	-	-	-	-	-	233	111	-	1619	-	-	939	18944	-	21846	21846
1935	-	-	-	-	-	-	-	-	205	30	-	659	-	-	294	19238	-	20426	20426
1936	-	-	-	-	-	-	-	-	45	0	-	2245	-	-	7980	5334	-	15604	15604
1937	-	-	-	-	-	-	-	-	50	2	-	667	-	-	1645	5117	-	16481	16481
1938	-	-	-	-	-	-	-	-	0	0	-	989	-	-	601	33	-	1623	1623
1939	-	-	-	-	-	-	-	-	0	0	-	1486	-	-	355	168	-	2009	2009
1940	-	-	-	-	-	-	-	-	2	8	-	473	-	-	608	219	-	1310	1310
1941	-	-	-	-	-	-	-	-	0	0	-	324	-	-	922	152	-	1398	1398
1942	-	-	-	-	-	-	-	-	0	0	-	445	-	-	544	738	-	1727	1727
1943	-	-	-	-	-	-	-	-	0	0	-	269	-	-	1073	209	-	1551	1551
1944	-	-	-	-	-	-	-	-	0	0	-	268	-	-	728	1718	-	2714	2714
1945	-	-	-	-	-	-	-	-	0	0	-	170	-	-	569	124	-	863	863
1946	-	-	-	-	-	-	-	-	0	0	-	433	-	-	620	258	-	1439	1439
1947	-	-	-	-	-	-	-	-	0	0	-	253	-	-	997	258	-	1508	1508
1948	-	-	-	-	-	-	-	-	0	0	-	120	-	-	953	250	-	1323	1323
1949	-	-	-	-	-	-	-	-	0	0	-	157	-	-	927	79	-	1163	1163
1950	-	-	-	-	-	-	-	-	0	0	-	229	-	-	894	92	-	1215	1215
1951	-	-	-	-	-	-	-	-	0	0	-	273	-	-	730	195	-	1198	1198
1952	-	-	-	-	-	-	-	-	0	0	-	215	-	-	566	140	-	921	921
1953	-	-	-	-	-	-	-	-	0	0	-	339	-	-	1004	188	-	1531	1531
1954	-	-	-	-	-	-	-	-	0	0	-	74	-	-	1303	85	-	1462	-
1955	Figures not available																		
1956	-	-	-	-	-	-	-	-	0	0	-	112	-	-	198	89	-	399	-
1957	-	-	-	-	-	-	-	-	0	0	-	195	-	-	5610	39	-	5844	5844
1958	-	-	-	-	-	-	-	-	0	0	-	10	-	-	26	40	-	76	76
1959	-	-	-	-	-	-	-	-	0	0	-	55	-	-	0	3	-	58	58
1960	-	-	-	-	-	-	-	-	0	0	-	49	-	-	0	23	-	72	72
1961	-	-	-	-	-	-	-	-	0	0	-	0	-	-	0	0	-	0	0

APPENDIX D

RIDEAU CANAL: CLASSIFIED FREIGHT TONNAGE*[1]
1873-1921

Item	Year																	
	1873 -74	1878	1881	1883	1885 -86	1888 -89	1892	1894	1898	1901	1902	1904	1907	1910	1913	1916	1919	1921
Agric. implements	123	87	127	162	169	113	139	69	77	70	198	294	282	462	987	172	130	58
Animals	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2890	2122	1896	-
Animal products, other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1157
All other animals	-	-	-	-	-	-	-	-	-	-	-	-	-	1844	-	-	-	-
Apples	26	22	27	11	4	59	143	163	116	16	25	275	5	-	-	-	-	-
Ashes	75	62	65	64	28	31	15	5	-	2	1	-	-	-	-	-	-	-
Baggage	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bark	112	310	135	80	52	83	53	60	4	-	28	2	9	-	-	-	-	-
Barley	4	97	302	7	179	276	82	11	4	56	122	66	-	45	17	-	-	-
Beer	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bones	76	112	5	8	-	32	16	8	3	14	-	-	-	-	-	-	-	-
Bricks	538	404	273	142	22	453	94	173	164	397	493	199	838	-	-	-	-	-
Brimstone	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Buckwheat	-	-	-	-	-	-	-	-	110	-	7	5	-	-	-	1	5	-
Cattle	-	1	1	12	11	4	8	2	2	2	5	1	1	-	-	-	-	-
Cement	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cement, bricks	-	-	-	-	-	-	-	-	-	-	-	-	-	60392	337	305	863	-
Cement, bricks, lime	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cement, water-lime	-	67	186	130	120	146	202	626	663	611	660	885	1436	-	-	-	-	358
Clay, lime, sand	125	63	129	458	230	24	791	107	5581	8458	5790	5681	19165	-	-	-	-	-
Coal	3481	1750	3021	2033	9107	11976	3625	17426	10809	17679	4534	10383	9993	-	-	-	-	-
Coal, hard	-	-	-	-	-	-	-	-	-	-	-	-	-	9662	9630	6676	4175	2999
Coal, soft	-	-	-	-	-	-	-	-	-	-	-	-	-	3642	5154	239	351	55
Corn	153	87	475	18	26	62	20	80	93	64	22	15	729	316	119	9	-	3
Cotton	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Cotton, raw	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
Crockery	1	8	42	-	-	-	96	-	-	-	-	-	-	-	-	-	-	-
Dyestuffs	-	-	-	5	2	2	-	-	-	-	-	2	-	-	-	-	-	-
Dye wood	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Earthenware	10	11	-	48	41	20	-	89	34	5	15	76	41	-	-	-	-	-
Empty bbl.	46	9	32	27	44	20	102	42	17	20	96	47	101	-	-	-	-	-
Firewood (vessels)	82321	56553	51645	37390	23901	22676	36000	20865	5508	4107	11964	6391	5504	-	-	-	-	-
(rafts)	693	-	-	-	-	-	-	-	12	-	-	54	-	-	-	-	-	-
Fish	286	49	27	29	187	173	38	121	12	45	30	14	7	-	-	-	-	-
Flax	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Floats	21176	1120	4919	7169	2250	830	640	860	420	-	280	505	-	-	-	-	-	-
Flour	175	157	307	251	398	374	369	427	335	442	487	637	426	348	487	60	143	436
Fruit, vegetables	-	-	-	-	-	-	-	-	-	-	-	-	-	400	424	37	57	-
Furniture	44	24	41	56	37	48	41	32	28	26	61	78	94	-	-	-	-	-
Glass	-	-	20	19	29	13	32	26	47	44	58	106	249	-	-	-	-	-
Glass, window	-	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glassware	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gypsum	409	80	10	38	15	-	-	-	-	-	-	-	-	-	-	-	-	-
Hay	183	-	-	-	-	-	-	100	86	336	1209	574	1847	379	1026	152	816	327
Hay, pressed	-	-	286	6	1	316	165	-	-	-	-	-	-	-	-	-	-	-
Hides, etc	-	-	-	-	-	-	-	-	-	7	-1	2	-	-	-	-	-	-
Hides, Horns	-	-	-	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-
Hides, horns, hoofs	-	-	-	-	-	9	6	3	6	-	-	-	-	-	-	-	-	-
Hides, leather	-	-	-	-	-	-	-	-	-	-	-	-	-	4	32	196	17	1
Hides, skin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hides, skin etc	-	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hides, skin, hoofs	-	-	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hides, skin, hoofs, horns	76	-	-	2	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Hogs	-	-	4	2	-	-	1	-	-	-	-	1	-	-	-	-	-	-
Hop poles	1345	106	357	340	100	62	-	70	42	-	18	-	-	-	-	-	-	-
Horses	1	4	6	6	8	13	22	7	17	-	9	6	7	-	-	-	-	-
Household	-	-	-	-	-	-	-	-	-	-	-	-	-	260	320	31	75	127
Ice	-	-	-	-	-	-	-	-	40	-	-	-	1	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-	-	-	-	343	966	336	203	
Railway	3	46	11	12	12	1	10	-	-	6	5	6	20	-	-	-	-	-
Pig	625	184	286	358	51	321	243	266	6	2	27	50	31	-	-	-	-	-
Pig & bloom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97
Other	608	560	224	505	390	273	500	863	414	375	451	50	1578	-	-	-	-	-
Ore	7365	2791	5260	454	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron & Steel	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2043	544	1212	-
Iron, steel, & other	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1310
Kryolite, other ore	1264	-	4329	3146	718	1262	1466	920	20	38	-	28	384	-	-	-	-	-
Lard, lard oil	4	18	25	11	91	22	78	57	52	72	53	57	74	-	-	-	-	-
Livestock	-	-	-	-	-	-	-	-	-	-	-	-	-	13	28	1	17	4
Manilla	-	12	-	-	-	-	-	8	8	1	-	63	14	-	-	-	-	-
Marble	6	9	3	9	8	16	5	3	-	-	-	1	-	-	-	-	-	-

APPENDIX D (Continued)

Item	Year																	
	1873 -74	1878	1881	1883	1885 -86	1888 -89	1892	1894	1898	1901	1902	1904	1907	1910	1913	1916	1919	1921
Masts, spars, tel. poles (vessel)	-	-	-	40	-	519	54	300	-	-	83	30	-	-	-	-	-	-
Meal	143	240	23	76	89	42	60	2	28	100	61	30	110	-	-	-	-	-
Meats	-	29	3	16	19	3	12	31	-	3	4	1	45	-	-	-	-	-
Meats, dressed	-	-	-	-	-	-	-	-	-	-	-	-	-	22	80	9	60	1
Merchandise	-	-	-	-	-	-	-	-	-	-	-	-	-	8385	6239	7463	6658	-
Mill products	-	-	-	-	-	-	-	-	-	-	-	-	-	307	654	214	145	57
Molasses	8	55	4	21	19	95	57	130	112	62	125	225	212	-	-	-	-	-
Nails	6	104	91	120	218	211	244	180	94	78	107	207	530	-	-	-	-	-
Oats	47	13	32	345	118	3	1551	11	1393	458	541	927	1185	426	134	9	21	5
Oil	47	57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
in bbl.	-	-	183	167	108	150	339	208	125	142	163	260	601	-	-	-	-	-
Oil cake	-	1	-	6	4	6	3	2	1	1	2	24	-	-	-	-	-	-
Ore	-	-	-	-	-	-	-	-	-	-	-	-	-	243	960	50	-	-
Packing house products	-	-	-	-	-	-	-	-	-	-	-	-	-	233	392	251	329	214
Paint	-	-	1	3	2	5	12	15	23	20	24	63	106	-	-	-	-	-
Peas	27	171	251	49	32	11	54	19	3	11	-	-	1	1	7	37	3	24
Petroleum	-	-	-	-	-	-	-	-	-	-	-	-	-	912	1079	417	428	-
Petroleum, oils	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	400
Pitch, tar	94	170	85	46	71	13	2	32	19	32	17	59	59	-	-	-	-	-
Poles V	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poles R	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pork	54	95	44	12	122	92	221	266	96	48	111	125	106	-	-	-	-	-
Posts, fence rails(V	146 (?)	157	76 (?)	-	46 (?)	20	5	73 (?)	6 (?)	-	-	-	-	-	-	-	-	-
(R	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potatoes	50	11	200	18	47	101	206	21	57	-	12	8	10	18	110	1	57	144
Poultry, fish	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-
Poultry, game, fish	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29	2	2	-
Pulpwood	-	-	-	-	-	-	-	-	-	-	-	-	-	2049	6496	-	-	1072
Rags	2	27	7	-	6	17	49	12	16	-	45	64	108	-	-	-	-	-
Railway ties (V	9711	3054	9612	9055	3621	6689	5750	1150	1971	533	213 (?)	338	-	-	-	-	-	-
(R	-	1332	2036	85	-	-	534	-	343	-	-	-	-	-	-	-	-	-
Rosin	-	-	-	2	-	-	2	1	2	1	7	-	14	-	-	-	-	-
Rye	53	914	1949	1613	171	15	81	10	8	-	28	-	13	2	-	-	-	-
Salt	935	959	1326	775	1403	879	2052	1924	1259	1186	1121	1737	2431	-	1322	735	371	473
Salt, bbl staves	-	-	543	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sand	-	-	-	-	-	-	-	-	-	-	-	-	-	-	106040	-	-	-
Sand and stone	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74693	70021	-
Sand, etc	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	70693
Saw logs	9693	585	1820	2503	520	676	152	172	75	-	19	-	98	-	-	-	-	
Sawn lumber (V	13757	14061	8103	12500	39200	59390	29617	39843	21088	16936	14184	14561	22567	29472 (?)	19277 (?)	9504	11880 (?)	2070 (?)
(R	121	42	-	10	69	22	5	-	468	-	10	88	77	-	-	-	-	-
Seeds	-	3	5	3	8	35	6	10	12	1	72	37	3	-	-	-	-	-
Sheep	-	9	9	12	-	6	2	-	-	-	12	-	-	-	-	-	-	-
Shingles	702	233	102	24	66	44	111	292	161	155	177	285	168	110	126	6	28	6
Soda ash	-	-	6	-	-	25	2	12	3	-	12	-	2	-	-	-	-	-
Spirits, beer	43	55	37	54	16	122	77	124	64	65	206	371	655	-	-	-	-	-
Split posts, fence rails (V	-	-	-	58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(R	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Staves, bbl	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Staves & headings	2793	-	20	-	-	1	-	-	-	-	-	50	-	-	-	-	-	-
Steel	-	4	-	1	10	2	10	70	12	16	39	70	32	-	-	-	-	-
Stone	602	412	63	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stone, uncut	-	-	-	-	349	927	38	9	2	5	30	3	111	-	-	-	-	-
Stone, unwrought	-	-	-	-	-	-	-	566	-	188	23	2	-	-	-	-	-	-
Stone, wrought	-	-	1	2	3	1	3	-	-	-	-	-	4	-	-	-	-	-
Sugar	73	284	115	191	111	458	645	469	472	228	201	327	613	-	834	192	973	753
Sugar and Salt	-	-	-	-	-	-	-	-	-	-	-	-	-	3636	-	-	-	-
Tallow	23	-	8	4	1	1	-	5	-	2	-	8	-	-	-	-	-	-
Timber (R)	-	-	-	-	-	-	-	-	-	40	-	-	-	-	-	-	-	-
Timber, square (V	20	23	-	10	2	-	40	-	-	-	-	-	-	-	-	-	-	-
(R	1990	1420	1482	1220	682	220	377	320	60	-	220	-	1600	788 (?)	30 (?)	47 (?)	1240 (?)	955 (?)
Tin	-	3	22	11	12	10	14	23	6	3	1	10	-	-	-	-	-	-
Tobacco	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-
Tobacco, raw	-	-	1	-	-	1	1	-	4	-	9	59	3	-	-	-	-	-
Traverses	15122	7274	8889	6628	1674	261	105	628	80	-	100	260	-	-	-	-	-	-
Turpentine	-	-	-	5	5	-	-	1	-	-	1	-	-	-	-	-	-	-
Vinegar	20	13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wheat	1564	179	117	127	75	238	65	1346	264	465	1041	1801	957	642	459	3	-	82
White lead	-	-	1	13	13	7	6	23	11	23	25	104	106	-	-	-	-	-
Whiting	-	4	1	-	17	16	22	27	4	-	8	9	-	-	-	-	-	-
Wines, liquors, beer	-	-	-	-	-	-	-	-	-	-	-	-	-	697	1086	559	1271	702
Woodenware	9	45	21	11	9	7	7	3	-	32	-	-	38	-	-	-	-	-
Woods	-	-	-	-	-	-	-	-	-	-	-	-	-	7607	1402	355	86	348
Wool	12	24	18	9	3	5	14	1	-	-	2	1	1	1	7	2	6	-

* Figures in tonnage unless otherwise indicated; V - vessel; R - raft; ? - not known if vessel or raft.

APPENDIX E. RIDEAU CANAL VESSELS: BUILDERS

(DERIVED FROM APP. A)

Thomas Adams, Kemptville
David John Ainslie, Bishop Mills
J. William Ainslie, Brewer's Mills
William Ainslie, Kingston
W.B. & S. Anglin, Kingston
W.A. Baldwin, Ottawa
P.R. & B. Baupre, Portsmouth
Beattie & Co., Welland
Thomas Bissett, Prescott
John Bonner, Quebec
Wesley Brooker, Portland
Augustin Cantin, Montreal
John Carruthers, Kingston
George Chaffey, Portsmouth & Bedford Mills
John Chaffey, Bedford Mills
Martin Clayton, Kingston
Robert Davis Clayton, Clayton, N.Y.
Davis Dry Dock Co., Kingston
Matthew R. Davis, Kingston
Robert Davis, Kingston and Wolf Island
John Doran, Kingston
George Dickson, Dog Lake, Frontenac County
L.T. Easton, Merrickville
Fraser & George, Kingston
Lewis Francis, Kingston
William A. Gorrell, Bedford Mills
Hugh Harold, Oliver's Ferry
John Harris, Brockville
George Erastus Humphrey, Quebec
George Hutton, Brockville
James Jarrett, Seeley's Bay
Cornelius A. Jones, Kingston
Samuel Knopp, Dog Lake, Storrington Twp.
William Lough, Jr., Ottawa
Joseph Mercier, Bedford Mills
Alexander Miller, Ottawa and Hull
Midland Boat Works, Midland
Peter Mitchell, Kingston
Macpherson & Crane, Portsmouth and Montreal
John McQuaid, Kingston
William O'Mara, Smiths Falls
John Paul, Newboro
Joseph Ward Pierce, Ernestown Twp.
Polson Iron Works, Toronto

William Power & Co., Kingston
Rathbun Co., Deseronto
Robert Robinson, Kingston
William Robinson, Kingston
Henry Roney, Garden Island
Duncan Sinclair, Portsmouth
Chester Stewart, Opinicon L.
W. & G.H. Tate, Montreal
Napoleon Tessier, Ottawa
George H. Trotter, Buffalo
Peter G. Waters, Montreal
Yarker, Vanalstine & Bennett, Kingston

APPENDIX F. RIDEAU CANAL VESSELS: ENGINE WORKS

(DERIVED FROM APP. A)

Black & Co., Brockville and Belleville
Canadian Locomotive & Engine Co., Kingston
Carrier & Taine, Levis
Clute Bros., Schnectady, N.Y.
Davidson Doran & Co., Kingston
Davis Dry Dock Co., Kingston
John Dewey, Ottawa
Dority, Toronto
Beauchemin, Bros., Sorel
Frederick Andrew Gardner, Hamilton
E.E. Gilbert, Montreal
Gray Marine Motor Co., Detroit
John Glass, Ogdensburg
Hamilton Bros., Buffalo
Kelley - Beckett, Hamilton
John King & Co., Oswego
Alexander Martin, Ottawa
D.M. McEwan & Son, Kingston
H.W. Petrie, Toronto
Polson Iron Works, Toronto
Pound Mftg. Co., Lockport, N.Y.
Night, Sissman Co., Buffalo
Shipman Coal Oil Engine Co., Rochester
Sutton Bros., Buffalo
G.J. Trandy, Kingston
J. & O. Weir, Montreal
Vulcan Iron Works, Ottawa

APPENDIX G. *AGNES P*, ENGINES AND BOILER DETAILS

Boiler	Fitzgibbon type
	4.6 in. by 7 ft. 5 in. by 7 ft. 3 in.
	3/8-in. sides
	plates 7/16-in.
	tubes 2.5 in. by 5.5 in., 84 in number
	manufacturer P.J. Powers, Ottawa, 1912
	hydraulic test 225 lb/sq. in.
	safety valve adjustment 125 lb/sq. in.
	diameter and pitch of rivets in longitudinal joints 3/4-in. by 3-3/8-in. by 2-3/8-in.
Engine	cylinder 12-in. by 12-in.
	one crank
	piston stroke 12-in.
	diameter main journal 3-3/4-in.
	diameter crank pin 3-3/4-in.
	diameter steam pipe 3 in.
	diameter piston rod 1-3/4-in.
	diameter & pitch screw 4.0 ft. by 6.0 ft. 135 rev

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APPENDIX H. RIDEAU CANAL COMMERCIAL AND PLEASURE CRAFT, 1936-54

Year	Craft or Ships' Reports	Pleasure Craft	Total
1936	1,572	11,555	13,127
1939	1,513	12,791	14,304
1942	1,191	6,802	7,993
1945	975	10,752	11,727
1948	1,517	18,460	19,977
1950	1,537	17,087	18,624
1951	1,835	19,671	21,509
1954	1,646	23,847	25,493

(Department of Indian and Northern Affairs, National Historic Parks and Sites Branch, Department of Transport records, Canal Services, File 2254-1, Annual Reports 1950-51, p. 5 and 1954-55, p. 6).

Appendix I. Wharves and Warehouses: Kingston to Ottawa [1850-90]

Place	Wharves & Warehouses		Location	Dimensions	Source
Kingston	Counters	wharf	main harbour		PAC, Map, V1/440
1850	Garrats	wharf	main harbour		PAC, Map, V1/440
	Custom House	wharf	main harbour		PAC, Map, V1/440
	Fraser's	wharf	main harbour		PAC, Map, V1/440
	Scobell's	wharf	main harbour		PAC, Map, V1/440
	Commercial	wharf	main harbour		PAC, Map, V1/440
	Hooker & Henderson	wharf	main harbour		PAC, Map, V1/440
	Smith's	wharf	main harbour		PAC, Map, V1/440
	Quebec Co	wharf	main harbour		PAC, Map, V1/440
	Stranger's	wharf	main harbour		PAC, Map, V1/440
	Garrison	wharf	main harbour		PAC, Map, V1/440
	Old Foundry	wharf	main harbour		PAC, Map, V1/440
	City Brewery	wharf	main harbour		PAC, Map, V1/440
	Bower's	wharf	main harbour		PAC, Map, V1/440
	Rourk's	wharf	Cataraqui R		PAC, Map, V1/440
	Anglin's	wharf	Cataraqui R		PAC, Map, V1/440
	McCutcheon's	wharf	Cataraqui R		PAC, Map, V1/440
Kingston	Garrison	wharf	main harbour		PAC, V1/440 1865
1865	Flanagan's& Anglins	wharf	main harbour		PAC, V1/440 1865
	Frazer's	wharf	main harbour		PAC, V1/440 1865
	Berry	wharf	main harbour		PAC, V1/440 1865
	Gildersleeve's	wharf	main harbour		PAC, V1/440 1865
	Atlantic	wharf	main harbour		PAC, V1/440 1865
	Commercial	wharf	main harbour		PAC, V1/440 1865
	Scobell's	wharf	main harbour		PAC, V1/440 1865
	Baker	wharf	main harbour		PAC, V1/440 1865
	St Lawrence	wharf	main harbour		PAC, V1/440 1865
	Grand Trunk RR	wharf	main harbour		PAC, Map, V1/440 1865
	Wolf Is. Ferry	wharf	main harbour		PAC, Map, V1/440 1865
	United States	wharf	main harbour		PAC, Map, V1/440 1865
	Ontario	wharf	main harbour		PAC, Map, V1/440 1865
	A H Henderson	wharf	main harbour		PAC, Map, V1/440 1865
	Marine Railway	wharf	main harbour		PAC, Map, V1/440 1865
	Bell	wharf	main harbour		PAC, Map, V1/440 1865
	Davidson & Doran	wharf	main harbour		PAC, Map, V1/440 1865
	City Brewery	wharf	main harbour		PAC, Map, V1/440 1865
	Cameron's	wharf	main harbour		PAC, Map, V1/440 1865
	Rourke's	wharf	Cataraqui River		PAC, Map, V1/440 1865
	Anglin's	wharf	Cataraqui River		PAC, Map, V1/440 1865
Kingston	Breck & Booth,	wharfinger	foot of West St.		Kingston Business Directory 1891-92
1891-92	Calvin & Co	wharfinger	Ontario & Clarence St.		Kingston Business Directory 1891-92
	A Gunn & Co	wharfinger	Ontario St.		Kingston Business Directory 1891-92
	Richardson & Sons	wharfinger	foot Princess St.		Kingston Business Directory 1891-92
	Swift James & Co	wharfinger	foot Johnston St.		Kingston Business Directory 1891-2
Kingston Mills [1860]	4 wharves		above upper lock		PAC, Map V1/410 Rideau Canal [1860]
Upper Brewer's	1 wharf		300 ft. north lockhouse		PAC, Map V1/410 Rideau Canal [1860]
Chaffey's	1 wharf		600-700 ft. from lock		PAC, Map V1/410 Rideau Canal [1860]
Isthmus	Tetts	wharf	on canal		
	2 piers		where canal enters Mud Lake [Newboro L]		
	2 wharves		shore Mud Lake near canal entrance		PAC, Map V1/410 Rideau Canal [1860]
Narrows	piers extending either end lock				PAC, Map VI/410 Rideau Canal [1860]
Smiths Falls	Clark's wharf & storehouse				
1863	Shaw's	wharf			PAC, Map VI/420 Lanark&Renfrew 1863
1901	Queen's	wharf	Coal Depot		Harold Foster Papers
Old Slys [1860]	1 wharf				PAC, Map VI/410 Rideau Canal 1860
Kars 1857	wharf			100 ft. x 50 ft.	PAC, Map F/440 Kars 1857
1857	1831 wharf		James Lindsay for wood		Ottawa Citizen, 7 Sept 1974
Black Rapids	2 wharves one side lock, 1 wharf other side lock				PAC, Map VI/410 Rideau Canal 1860
Ottawa	John Heney's office & shed		wood constr.		
1890	C T Bate & Co warehouses		2 " "	35 ft. x 35 ft., 55 ft. x 20 ft. on canal	PAC, May HI/440 Ottawa 1890
			1 stone "	100 ft. x 120 ft., 50 ft. from canal	PAC, Map HI/440 Ottawa 1890
	Montreal & Ottawa Forwarding		1 stone warehouse	50 ft. x 60 ft.	PAC, Map HI/440 Ottawa 1890
			1 wood "	35 ft. x 65 ft.	PAC, Map HI/440 Ottawa 1890
	Govt storehouses		1 wood	70 ft. x 20 ft.	PAC, Map HI/440 Ottawa 1890
			1 "	25 ft. x 25 ft. irreg. config.	PAC, Map HI/440 Ottawa 1890
	F C Clemow		coal shed, wood	150 ft. x 70 ft.	PAC, Map HI/440 Ottawa 1890
	Govt coal sheds		1 wood	140 ft. x 40 ft.	PAC, Map HI/440 Ottawa 1890
	Butterworth's coal shed		1 wood	66 ft. x 99 ft.	PAC, Map HI/440 Ottawa 1890
	Canadian Granite Co		1 " warehouse	50 ft. x 125 ft.	PAC, Map HI/440 Ottawa 1890
	Geo Harris coal shed		1 "	50 ft. x 100 ft.	PAC, Map HI/440 Ottawa 1890
	Geo Harris office & warehouse		1 "	25 ft. x 50 ft.	PAC, Map HI/440 Ottawa 1890
	H Brennan's storehouse		1 "	25 ft. x 75 ft.	PAC, Map HI/440 Ottawa 1890
	H Brennan's coal oil house		1 "	20 ft. x 35 ft.	PAC, Map HI/440 Ottawa 1890
	Harris's shed		1 "	15 ft. x 85 ft.	PAC, Map HI/440 Ottawa 1890
	Jno. Robert's shed		1 "	15 ft. x 30 ft.	PAC, Map HI/440 Ottawa 1890
	Geo May's & Co shed		1 "	35 ft. x 100 ft. irreg. config.	PAC, Map HI/440 Ottawa 1890
	Military stores		stone	90 ft. x 90 ft.	PAC, Map HI/440 Ottawa 1890

ENDNOTES

Opening of the Rideau Canal

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2 Canadian Courant (Montreal), 6 June 1832, p. 3.
3 World Ship Society (Toronto Branch), Preliminary List Canadian Merchant Steamships 1809-1930 (Toronto: World Ship Society, 1962) (hereafter cited as Preliminary List), p. 58.
4 Cobourg Star, 18 July 1832.

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2 Ibid. , p. 15.
3 James Croil, Steam Navigation and Its Relation to the Commerce of Canada and the United States (Toronto: William Briggs, 1898), p. 30.
4 W.A. Baker and Tre Tryckare, ed., The Engine Powered Vessel (New York: Grosset & Dunlap, 1965), p. 11.
5 Ibid., pp. 10-15, 77.
6 On the Rideau single expansion engines predominated until the 1880s.
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11 Louis C. Hunter, op. cit., p. 177.
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13 W.A. Baker and Tre Tryckare, op. cit., p. 45.
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20 James Croil, op. cit., p. 360.

Evolution of the Steamboat on Inland Waters

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2 R.A. Fletcher, op. cit., p. 24.
3 Ibid., p.25.
4 Ibid., p.59.
5 W.A. Baker and Tre Tryckare, op. cit., p. 14.
6 R.A. Fletcher, op. cit., pp. 62-63.
7 W.A. Baker and Tre Tryckare, op. cit., p. 14.
8 Ibid., p.15.
9 R.A. Fletcher, op. cit., p. 67.
10 Ibid., p.72.
11 Ibid., p.35.
12 Basil Greenhill and Ann Giffard, op. cit., pp. 34-35.
13 Louis C. Hunter, op. cit., pp. 62-63.
14 Ing Jaromir Kozak, Ships: A Concise Guide in Colour (London & New York: Hamlyn, 1973), pp. 32-34.
15 R.A. Fletcher, op. cit., pp. 45, 48, 50, 51.
16 Harry Sinclair Drago, Canal Days in America: The History and Romance of Old Towpaths and Waterways (New York: Clarkson N. Potter, 1972), pp. 275-76.
17 Ibid.
18 Ibid., p. 277.
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20 L.T.C. Rolt, Navigable Waterways (London: Longmans Green & Co., 1969), p.158.
21 Ibid., pp. 153-54.
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23 Ibid., p. 163.

The Rideau Steamboat and Barge

1 James Croil, op. cit., p. 50.
2 M.J. Patton, "Shipping and Canals," Canada and its Provinces, Adam Shortt and Arthur G. Doughty, eds. (Toronto: Glasgow Brook & Co., 1914), Vol. 10, pp. 494-95.
3 D.D. Calvin, A Saga of the St. Lawrence: Timber and Shipping Through Three Generations (Toronto: Ryerson Press, 1945), pp. 115-16.
4 George Shortt, "The Ottawa River," Canadian Geographical Journal, Vol. II, No. 2 (Feb. 1931), p. 122.
5 M.J. Patton, op. cit., pp. 496-97, 499-500.
6 Ibid., p. 543.
7 Ibid., pp. 536-37, 540-41.
8 Lock records were kept by lockmasters at each lock station. Contents varied widely; some name the vessels locked through and others do not. Cargoes are described but tonnages are not given.
9 Thomas C. Reefer, The Canals of Canada (Montreal: Gazette Printing, 1894), p. 4.
10 Bytown Gazette, 9 July 1840, p. 2.

11 PAC, RG42 Al, Shipping Register (hereafter cited as PAC, Shipping Register), Vol. 205 (reel C.1211), pp. 501-8.
12 Ibid., Shipping Register, Vol. 176 (C.2465), p. 22.
13 Canada. Bureau of Agriculture and Statistics, Patents of Canada from 1824-1849 (Toronto: Lovell & Gibson, 1860), No. 161.
14 Ibid., No. 166.
15 The paddle-wheel survived however in some regions of the Great Lakes; specifically on Lake Ontario during the 1930s in the Toronto-Kingston and Toronto-Queenston service.
16 Tonnage is a vexed subject; today there are five methods of computing tonnage used for various types of vessel, but we are concerned with two only - gross tonnage and register tonnage. Derivation of the word "ton" is from the wine unit "tun," a unit of space rather than of weight - with the exception of deadweight tonnage. The original formula for determining tonnage was the product of the length of the keel, the breadth of the vessel and its depth, a formula said to approximate a ship's wine- carrying capacity in "tuns." The British Merchant Shipping Act 1854 defined a formula still basically in use, although modified from time to time. Gross tonnage may be termed the overall internal capacity of a ship, and net tonnage this figure less the volume of the engine room, crews quarters, etc. (W.A. Baker and Tre Tryckare, op. cit., p. 138)
17 Canada. Legislative Assembly. Journals of the House of Assembly 1854-55, Appendix P.P.P.
18 V.A. George, "The Rideau Corridor 1832-98," unpublished thesis, Queen's University, 1972, p. 147.
19 Ibid., p. 203.
20 Preliminary List.
21 PAC, Shipping Register, Vol. 205, (C.1211), pp. 419, 426.
22 Ibid., Vol. 206, p. 143.
23 Presumably the screw propeller was preferred on the Rideau to the paddle-wheel because the wash was less damaging to the locks. Why the high-pressure engine gained preference on the Rideau whereas the low-pressure remained in general favour on the eastern waterways of the United States can only be because the high-pressure was smaller, more compact, hence allowing more cargo and passenger space, no doubt an important factor with steamers as restricted in size as those on the Rideau Canal.
24 PAC, Shipping Register, Vol. 236 (C.2471), p. 4.
25 Canada. Revenue Canada. Customs and Excise, Ottawa, (hereafter Customs & Excise, Ottawa.) Shipping Register 1886-93, p. 71.
26 Preliminary List, p. 52.
27 PAC, Shipping Register, Vol. 36 (C.2471), p. 46.

28 Ibid., Vol. 233 (C.2473), p. 186.
29 Ibid., p. 30.
30 Ibid., p. 41.
31 Ibid., p. 125.
32 Canada. Sessional Papers, 1894, No. 11A, Steamboat Inspection, p. 56.
33 PAC, Shipping Register, Vol. 223, p. 9.
34 Ibid., Vol. 207 (C.1212), pp. 292-97.
35 Ibid., pp. 364-70.
36 Preliminary List, p. 26.
37 PAC, RG43, B4a, Department of Railways and Canals, Vol. 209, p. 95.
38 Customs & Excise, Shipping Register 1886-93, p. 5.
39 PAC, Shipping Register, Vol. 233, p. 143.
40 Ontario Archives. William Hamilton Merritt Papers, package 11, item 38, letter Hilliard to Merritt, 1 Nov 1841.
41 Canada. Sessional Papers, 1878, No. 1, Supplement No. 4, Marine & Fisheries 1877, List of Vessels.
42 PAC, Shipping Register, Vol. 206 (C.1211), pp. 432, 440.
43 Ibid., pp. 913-22.
44 Record & Times (Brockville), 4 Feb. 1933.
45 Canada. Sessional Papers 1878, No. 1, Supplement No. 4, List of Vessels, p. 105.
46 Queen's University Archives. Tett Papers, case 18.
47 Ibid., Transfer Case 7, Legal Documents, 1878-9; Transfer Case 1, Correspondence 1877-9.
48 Ibid., Transfer Case 16, notes on Rideau Canal.
49 Preliminary List Canadian Merchant Steamships, op. cit., p. 38.
50 Canada. Sessional Papers 1870, No. 11, Appendix H, No. 2, Statement number of steam vessels added to the Dominion year ended 31st Dec. 1869, p. 230.
51 British Whig (Kingston), 22 Aug. 1879, p. 3.
52 PAC, RG12, Department of Transport, Register of Wrecks Inland Waters 1870-1918, Vol. 1007, p. 22.
53 PAC, Shipping Register, Vol. 233 (C.2473), p. 61.
54 Tett Papers, Transfer Case 18, additional material file.
55 Ibid., Transfer Case 16, notes.
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Kingston Tue	9:00	A.M.	Bytown Fri	9:00	A.M.
Kingston Mills	10:30		Long Island	1:00	P.M.
Upper Brewer's	2:30	P.M.	Becketts Ldg.	5:00	
Jones Falls	4:30		Burritt's	6:30	
Isthmus	8:30		Merrickville	9:00	
Oliver's Ferry	11:30		Smiths Falls	1:00	A.M.
Smiths Falls	3:30	A.M.	Oliver's Ferry	5:00	
Merrickville	7:30		Isthmus	9:00	
Burritt's	10:00		Jones Falls	1:00	P.M.
Beckett's Landing	11:30		Upper Brewers	6:00	
Long Island	3:30	P.M.	Kingston Mills	7:00	
Bytown	7:30		Kingston	8:30	

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£20-19-0	
19-4-0	
26-18-10	
22-7-2	
24-10-10	
15-19-4	
20-14-7	
13-19-6	
21-11-4	
16-16-9	
13-9-11	
13-13-11	
20-3-2	Total: 250-18-4

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283 TRENT WATERWAY PASSENGER STEAMERS:

Vessels Inspected: 1891:	Passenger Capacity:	Type of Vessel	Number of Decks: (Full-length)	Gross Tonnage:	Register Tonnage:	Length
"Crandella"	400	Paddle	Two	266.00	.	112'
"Esturion"	325	"	"	118.36	74.57	96'
'Golden-Eye"	171	"	"	287.00	.	96'
'Golden City"	175	Screw	"	68.02	62.15	60'
'Beaubocage"	150	Paddle	"	129.00	104.70	92'
'Sunbeam"	200	Screw &				
		Paddle	"	104.92	91.35	77'
"Alice-Ethel"	175	Paddle	"	71.75	45.15	83'
"Beaver"	75	Screw	One	25.05	17.03	60'
"Daisy"	60	"	None	7.20	4.90	50'
"Mary Louise"	40	"	None	10.00	6.80	43'
"Dawn"	40	"	One	20.20	15.90	48'
"Zetta Bruce"	25	"	None	8.75	4.27	36'
"Water-Witch"	20	"	One	9.20	3.40	40'
"Pearl"	16	"	None	7.70	5.30	30'
"Maple Leaf"	70	"	One	26.00	18.33	59'
TOTAL	1,942					
1910:						
"Islay"	237	Screw	Two	175.00		116'
"Geneva"	215	"	"	92.00	58.00	90'
"Lakefield"	39	"	None			70'
"Glympse"	34	"	"			40'
"Water Lily"	140	Screw	Two	53.93	36.68	80'
"Monarch"	180	"	One	73.30	49.85	84'
"Rainbow"	210	"	"	56.17	38.20	90'
"Majestic"	75	"	"	67.73	52.99	76'
"Empress"	224	"	Two	84.48	57.48	93'
"Stoney Lake"	272	"	Two	155.82	109.07	92'
"Manita"	144	"	One	34.10	23.19	66'
"Calumet"	20	"	"	21.87	14.88	54'
"Kawartha"	25	"	"	16.69	11.36	46'
"Cora"	40	"	"	22.61	15.76	53'
"Otonabee"	444	"	Two	136.44	87.43	111'
"Sovereign"	40	"	One	44.92	36.95	66'
TOTAL	2,339					
Scows:	250					
"Keene"	250					

Richard Tatley, Streetsville, Ont., notes.

284 Muskoka Lakes steamers

vessel	built:scrapped	dimensions	gross tons
Sagamo	1906 1969	152'x 29' x 7.4'	744
Medora	1893 1942	142 x 25 1/2 x5 1/2	377
Cherokee	1909 1961	120 x 23 x 4.2	328
Nipissing I	1871 1886	110 x 17 x 4	148
Nippissing II	1887 1925	123 x 21 x 4	275
Segwun	1925	123 x 21 x 4 1/2	275
Kenozha	1883 1918	120 x 18 x 3 1/2	225
Muskoka	1880 1912	97 x 18 x 4	197
Wenonah	1866 1886	87 x 16 x 6	179
Islander	1890 1956	100 x 17 x 3	165
Florence Main	1905 1907	80 x ? x ?	79
Ahmic	1896 1951	80 x 15 x 3	77
Oriole	1886 1927	75 x 14 1/2 x 3	75
Rosseau	1880 1913	70 x 11 1/2 x 4	53
Mildred	1905 1955	70 x 10 x 2	39
Lake Joe	1881 1896	52 x ? x ?	28
Simcoe	1865 1880	-	26
Waubamic	1869 1878	-	7

Harry E. Scott, Tales of Muskoka Steamboats (Bracebridge: Herald Gazette Press, 1969), p. 45.

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2 Ottawa Evening Journal, 11 June 1904, p. 3.
3 Public Works records, Vol. 187, docket 27497, 28 Dec. 1872.
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Appendix A

1 PAC, RG42, Al, Shipping Registers; Ottawa and Kingston. Department of National Revenue. Customs and Excise Branch, Shipping Registers; Canada. Parliament, "List of Vessels," in Sessional Papers (Ottawa, various years); ibid., "Steamship Inspection Reports," in Sessional Papers (Ottawa, various years); Ottawa. Ministry of Transport. Aids and Waterways Branch, Records; Queen's University Archives, Tett Papers; Preliminary List of Canadian Merchant Steamships

1809-1930 (Toronto: World Ship Society, 1962); Pers. Com. Neil A. Patterson, Kingston. The foregoing identifies the major sources used to compile this appendix. Copies of the research notes on which the appendix is based have been retained in the Research Division, and documentation for individual vessels can be furnished on request.

Appendix B

1 Judith Tulloch, The Rideau Canal, 1832-1914, Manuscript Report Series No. 177 (Ottawa: Parks Canada, 1975), pp. 252-254; William Kingsford, The Canadian Canals (Toronto: Rollos and Adam, 1865), pp. 123-127; Canada. Department of Agriculture. General Statistical Office, Statistical Abstract and Record of Canada 1886, 1887 (Ottawa: Queen's Printer, 1886, 1887); ibid., The Statistical Year Book of Canada, 1889-1904, (Ottawa: Queen's or. King's Printer, 1889-1904); ibid., Census and Statistics Office [after 1917, Dominion Bureau of Statistics], The Canada Year Book, 1915-1971 (Ottawa: King's or Queen's Printer, 1915-1971).

Appendix C

1 Canada. Department of Agriculture. General Statistical Office, Statistical Abstract and Record of Canada 1886-1887 (Ottawa: Queen's Printer, 1886, 1887); ibid., The Statistical Year Book of Canada, 1889-1904 (Ottawa: Queen's or King's Printer, 1889-1904); ibid., Census and Statistics Office [after 1917, Dominion Bureau of Statistics], The Canada Year Book, 1915-1971 (Ottawa: King's or Queen's Printer, 1915-1971).

Appendix D

1 Canada. Department of Inland Revenue, Annual Reports for the years 1874, 1878, 1882 and 1884, Supplement No. 1, "Canal Statistics"; Canada. Parliament, Sessional Papers, No. 8, 1887, Appendix A, Canals; ibid., No. 19, 1893, Appendix A, No. (A) 15; ibid., No. 10, 1896, 1899, 1902, Appendix A, No. 9; ibid., No. 20, 1904, 1906, Appendix A, No. 9; ibid., No. 20A, 1909, Appendix A, No. 9; ibid.; 1911, 1914, 1917, Table 7; ibid., 1920, Table 5; ibid., 1922, Table xxvi.

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The Shipping Registers among the holdings of the Public Archives, as well as the few volumes retained by Customs and Excise, Revenue Canada, constitute the prime source for the registration, building, dimensions and engines for individual steamers. Although the registers record the names of owners, both original and subsequent, they do not cite the route or service in which a particular vessel was engaged. In addition, the earlier registers record much less detail than the latter. Unless one recognizes a particular owner or line of forwarders as operating on a specific route, this information cannot be deduced from the pages of the Shipping Registers. A number of the earlier volumes have also been burned or destroyed.

Likewise the route or service cannot be determined from the Steamboat Inspection Reports, printed in the Sessional Papers. Interesting details on the inspection of individual vessels may be derived, but the reports were compiled on a regional basis, inclusive of several routes or services.

A further source recording the basic facts on individual vessels, although in less detail than is generally the case in the Shipping Registers, is List of Shipping, published annually by the Department of Marine and its successor, the Ministry of Transport. The trade or route in which a particular vessel served is not given.

The Lock Records arranged chronologically and occupying some 33 feet of linear shelf space in the Public Archives, are hand-written, some only semi-legible, recording the names of vessels passing a particular lock station, with notations on types of cargo. There is little consistency in these records, although as V.A. George has demonstrated in his thesis, much can be deduced as to amplitude and type of traffic at a particular time and place from a systematic use of these voluminous records. Any sort of comprehensive statistics are available only from 1873.

War Office 44, In-Letters Board of Ordnance, contain several volumes relating to the Rideau, pertaining to the canal's construction and operation prior to being transferred to Provincial authority. Comprehensive statistics on the Rideau trade there are not, but a considerable body of correspondence on the operation and maintenance of the canal, the toll structure, and such routine make it a mandatory source for any researcher on the Rideau up to the time of transfer of the waterway from imperial to Canadian jurisdiction. Since WO 44 is not indexed, with only a volume listing, it requires slow painstaking research.

Department of Marine Records, correspondence and records of the Canal Branch, contain information of a similar nature since the transfer from Ordnance.

The Canada Yearbook and its predecessors constitute the the best source for detailed and comprehensive statistics on all canals, including the Rideau. Unfortunately compilations change for various commodities at intervals, so that even these records are somewhat deficient in continuity.

Complete coverage of all the newspapers appearing in the bibliography would have been utterly impossible within the time available. Selective scanning of various newspapers in the National Library produced some valuable information, but news items on Rideau shipping are scattered. The Porter index available on request at Upper Canada Village is an invaluable aid, to which the writer is indebted. Newspapers do contain scattered if helpful information on forwarders.

The Statutes of Canada were used to describe the growing corpus of marine regulations pertaining to navigation on minor inland waters, of which the Rideau Canal is a part.

Finally the Tett Papers in the Queen's University Archives are useful for material relating to the Tett's forwarding trade.

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