

HAYDEN L. V. ANDERSON

PENOBSCOT WATERWAYS
CANALS AND WATERWAY IMPROVEMENTS
ON THE PENOBSCOT RIVER, 1816-1921

Lying wholly in Maine, the Penobscot River holds one-fourth of the state within its great basin. Measuring about 160 miles in length and 115 miles at its greatest width, the basin once included over two million acres of timberlands with more than sixteen hundred streams and nearly five hundred lakes and ponds.¹ By 1816, when Moses Greenleaf published his map and statistics of the District of Maine, the Penobscot region was described as being very sparsely settled, and as an area that suffered bitterly cold winters that severely hindered communications and the "transportation of commodities to market."² Rainfall, however, was adequate for farming, and it appeared that most crops grown in the northeastern states, with the exception of Indian corn, could be grown there. The preeminent resource of the region, however, was not its soil but its timber. Producing 100 million feet by 1840, the Penobscot basin led all other areas of the state at a time when Maine supplied 75 percent of all the white pine lumber exported from the United States.³

The potentially invaluable aspect of the region was its central unifying element, the great river whose far-flung branches closely approached the waters of the Kennebec on the west, the St. John on the north, and the lakes drained by the St. Croix on the east. These facts, "together with the excellence of its navigation into the heart of the state and its easy susceptibility of extensive improvement," Greenleaf said, "render this river by far the most important in the state."⁴

By 1815 the area had relatively few roads and some of those were only rudimentary. The post road from Boston to Eastport circled Penobscot Bay through Belfast, Bucksport, and Blue Hill. Other roads included three from the Penobscot to the Kennebec, and three leading from Bangor north to what is now Piscataquis County. To the east a road came up from Castine to Old Town, and another went northeast from the latter town to Sysladobsis lakes to Grand Lake, and then on to Houlton. Another road went from Bucksport to Cherryfield and Eastport.⁵ One can only imagine the hardships of driving cattle and sheep to market on foot to Houlton and to the lumbercamps and settlements on the upper St. John.⁶

Greenleaf noted that at the beginning of the century few people understood the character and value of Maine's extensive wilderness interior, and he resolved to secure the facts needed to reconcile the views of those who saw that wilderness "as a barren, frozen region unfit for the support of man," with those who saw it "as rich beyond all parts of New England."⁷ Although such facts were not easily obtained, Greenleaf doggedly sought and compiled them for the remainder of his life. Handicapped by the lack of professional surveys and a reliable map, he made his own. In 1816 he published the results of his labors in *A Statistical View of the District of Maine*, a work in which he projected possible developments and set forth pertinent statistics on soils, crops, population, commerce, manufacturers, land grants, and the resources of the district. For its time, this was a unique compendium.

A study of the map of Maine quickly leads to an appreciation of the topography which suggested breath-taking developments in trade and travel to Greenleaf. Observing that the district was "intersected in every direction with . . . rivers so extensively and variously approaching and interlocking with each other, and with so

many . . . points of communication between their waters," he concluded that it was only a matter of time until trade between the "remotest hinterland and the seaports, as well as among all other sections of the state" might be increased by better transport.⁸ He was especially eager to see the Penobscot linked with other rivers in an extensive network serving the people of eastern and northern Maine. If they could be tied to the Bangor port, their commerce would be prevented from going to St. John river markets where it would be subject to the whim and regulation of a foreign nation.⁹ By establishing better communications with the seaports within the district, Greenleaf saw that the vast, vacant territory of Maine could be transformed into a settled and prosperous region. He undertook to suggest practicable routes and means.

His suggestions, bold but apparently feasible, were in two parts. One involved an eastern connection between the Schoodic (Syladobsis) lakes and Bangor, and the other a union of the Penobscot by way of Moosehead Lake with the southwestern branches of the St. John. Greenleaf saw the best route to the latter river as leading from Bangor through Kenduskeag Stream to Pushaw Pond, Dead Stream, the Piscataquis River and Sebec Lake; from thence to Moosehead by way of Chain of Ponds and Wilson Pond. The total distance was about seventy-five miles, and required not more than twelve miles of canals. Some thirty miles up Moosehead the route entered the west branch of the Penobscot by canal, then passed through Chesuncook and Umbazookscus lakes and another short canal to Chamberlain Lake, and then on into the Allagash and down the St. John. This route of nearly three hundred miles required only fifteen miles of canals to make it completely navigable by boat, Greenleaf maintained.¹⁰ As to the eastern extension, the mapmaker observed that the eastern branches of the Penobscot, the Passadumkeag and

the Mattawamkeag, required only a few miles of canals and towpaths to open navigation almost to their sources. The additional canalling of the short distance between the Passadumkeag and the Schoodic lakes would provide water communication for a good part of Penobscot and Washington counties.¹¹

It was not until 1836 and 1838 that two men surveyed the parts of the river covered by Greenleaf's suggestions. William Anson, a civil engineer, made the first survey under the auspices of Maine's Board of Internal Improvements. The board's primary concern was that of securing reliable information about the St. Croix River system and the cost of adapting parts of it for the passage of large canalboats. Another part of Anson's assignment was to investigate the feasibility and cost of linking the St. Croix and the Penobscot. His study confirmed the proximity of the Passadumkeag's sources with the west branch of the St. Croix, and bolstered Greenleaf's opinion that the cost of uniting the two rivers would be a small price to pay for "the almost incalculable benefit to these unsettled parts of the state."¹²

On the second survey, Ezekiel Holmes ascended the Penobscot as far as Lake Matagamon on the east branch and reported on the changes needed to make the river navigable. Although he concluded that the creation of a slack-water navigation was more feasible than canalling from Bangor to the lakes, he saw such navigation as forbiddingly difficult. Boating was good to Niatou (Medway), but a great deal of construction would be required above that point: dams and locks at Ledge Falls, Rocky Rips, and Stair Falls, and inclined planes with boat railways at the portages around Grindstone and Whetstone falls. The most formidable obstruction, however, was a two mile run of rapids called the Grand Falls. Circumventing these would require a dam below and

another inclined plane alongside. Notwithstanding all of this, Holmes concluded that it was both important and feasible to improve the river. In recommending an engineering survey, he expressed astonishment that “this noble stream . . . has hitherto been totally neglected.”¹³

Several of Maine’s early governors — Parris, Lincoln, Smith, and Fairfield among them — peered into the future and saw visions of a state benefited by the development of its waterways. In 1826 Governor Parris told the incoming legislature that the possibility of rendering “some of our large rivers boatable” far above tidewater should be weighed. In support of such surveys he said, “There is already a continuous chain of water communication, with the exception of two miles, from Bangor up the Penobscot through the interior in a northerly direction to the waters of the St. John through which boats have been repeatedly conducted.”¹⁴ Enoch Lincoln evidenced his concern for boating in the Penobscot basin in 1827 by noting that the rivers of the basin “presenting boatable waters many hundred miles in length [could easily be] connected with the St. Croix, the St. John and the St. Lawrence. . . .”¹⁵ Returning to this subject in 1831, Governor Samuel E. Smith noted that many of the state’s rivers could be made navigable nearly to their sources at a reasonable cost, and that roads and canals would promote settlement and increase the value of the public lands.¹⁶ In 1839, apparently not having read Dr. Holmes’s report on the Penobscot, Governor Fairfield substantially repeated Samuel E. Smith’s advice about opening the interior by clearing streams and cutting canals.¹⁷

Despite the dreams of Greenleaf and the governors, only one extensive canal was built along the Penobscot. The Stillwater Canal and three other actual improvements were the creations of a thoroughly practical breed, the lumbermen. Recognizing the river as a natural corridor

into their wilderness timberlands, men like David Pingree, Rufus Dwinel, and Samuel Veazie, adapted parts of the river to accommodate their need to hurry the annual harvest of logs downstream to the voracious sawmills of Bangor and neighboring towns.

Besides the Stillwater Canal, the lumbermen built short canals and locks to ease the passage of the Piscataquis Falls and the Eastern River. In mid-century the Telos, the most remarkable arrangement of canal and locks, added nearly three hundred square miles to the vast Penobscot watershed. It was also in mid-century that the main river was finally cleared and locked to permit boating above Old Town, but by a new kind of craft — the river steamboat. Moses Greenleaf, by then twenty years at rest in the Williamsburg cemetery, was at least partially vindicated when the boats began the regular navigation of a stretch of the great river.

THE EASTERN RIVER LOCK AND SLUICE COMPANY

In 1816, following up a proposal made originally in 1794,¹⁸ the Massachusetts General Court incorporated John Swazey and others as the Eastern Lock and Sluice Company to build a sluice and locks, with necessary dams, from the outlet of Great Pond to below the falls at the head of tide in the town of Orland, on the Eastern River, a channel of the Penobscot east of Vernona Island.¹⁹ In 1821 the proprietors claimed that because of disputed land and water privilege titles and inability to agree on damages, work had been delayed. Having expended more than \$6,000 in erecting dams and in making other improvements, they asked for a five year extension of their charter.²⁰

Sixty men from Bucksport and Orland sent three remonstrances to the legislature. Declaring that the petitioners had had enough time to complete the project,

they charged the cost figure of \$6,000 was “utterly false,” and that John Lee, the owner of the disputed titles had offered repeatedly to sell at a fair price. Lee asked that the petition be rejected,²¹ but despite these vigorous protests, the legislature extended the charter in accordance with its usual practice.²²

As evidenced by a public law of 1835 regulating fishways, the company acquired the dam and built its lock and sluice.²³ Twenty years later the company was still in business locking boats and lumber from Great Pond. John Swazey was president and the company was capitalized at \$60,000.²⁴

THE STILLWATER CANAL

The Penobscot River divides at Old Town to form Indian, Orson, and Marsh islands. Its western channel, the Stillwater, rejoins the main river in Orono. Near its upper end, the Stillwater receives Pushaw Stream, an outlet of Pushaw Pond, and below this junction there are falls on the Stillwater and others at Stillwater Village. The Penobscot is reunited downstream at Ayer’s Island where a dam was built around 1800 to power the mills at the basin.

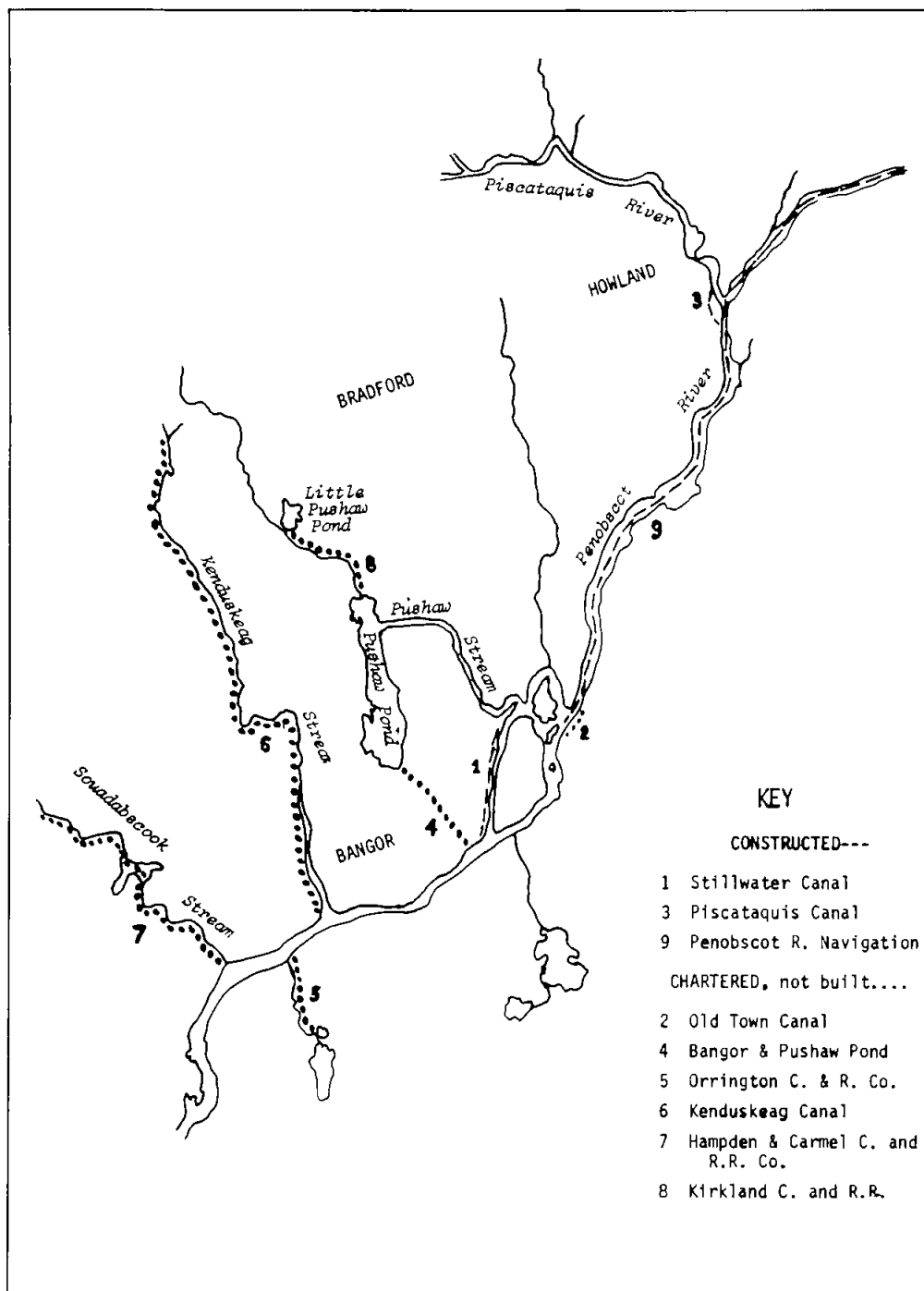
John Bennoch and others had built dams and sawmills on the upper falls of the Stillwater by the early 1820s. Because much of the market for their lumber was at Boston and beyond, the lumber had to be taken to Bangor for loading on schooners. Bennoch and the other owners were forced to the expense of carting the lumber overland by oxen to the basin rather than rafting it directly to Bangor. Otherwise, the rafts would be torn apart by the lower falls and the basin dam. To improve this situation, they requested a charter to build a canal on the Stillwater involving two dams with locks. One dam was to be below the mouth of Pushaw Stream, and the other near Jami-

son's Falls. The canal was to run from Bennoch's mills to the main river at the basin, thus enabling the men to move their logs to the mills at low water when they had formerly lodged on the rocks until the spring freshet, and to raft their lumber directly to Bangor instead of first transporting it to the basin where the rafts had formerly been built.²⁵

Since changes in a waterway often had unpredictable results, John Roberts and neighboring mill owners on that part of the Penobscot running parallel to the Stillwater feared that the canal might take water away from the Penobscot and require them, especially in the summer months, to shut down their mills at the Old Town falls. These owners did not object to the canal provided its proprietors were "perfectly and completely restricted" from taking water from the Penobscot above the mouth of Pushaw Stream.²⁶

The bill passed the legislature in February, 1828, after the Committee on Turnpikes, Bridges and Canals prepared a new draft reading "at or below" the mouth of the Pushaw instead of "at or near." The act of incorporation for the Stillwater Canal Company authorized the construction of a canal beginning at or below the mouth of Pushaw Stream, down the Stillwater to John Bennoch's mills, thence to the basin on the west side of Ayer's Island in Orono, and then to the Penobscot River, a distance of approximately seven miles.

In a petition to the legislature in 1831 asking for a clarification of the toll structure and for a time extension, the company revealed that no one would buy its stock. Prospective buyers feared that tolls based on mileage would prove unprofitable.²⁷ The legislature granted an additional four years for construction, but did not resolve the toll problem until 1834 when it based the rate upon the number of locks passed. For mill logs passing the upper



Penobscot Canals and Improvements

lock the toll was set at six cents, and at four cents for every thousand board feet passing each of the other locks. Sawed lumber in rafts, or otherwise, was charged at the rate of three cents per thousand feet, hewn timber at one and one-half cents a ton, and all other goods in boats or on rafts, four cents a ton for each lock.²⁸ The act of 1834 also extended the completion time for an additional three years.

Requesting yet more time in 1837, the company reported considerable progress by affirming that construction was nearly completed and that two-thirds of the canal was in operation. A lock and dam, however, were needed at Pushaw Stream, a project described as being “a pretty heavy job being nearly all ledge.”²⁹ The presence of more ledge than expected had more than doubled the estimated cost of the completed portion of the canal. Ledge, combined with a critical shortage of money, thus prevented the completion that season.³⁰ The two year extension proved insufficient to complete the canal because of “high water and other unavoidable obstacles.” By 1839 the whole project was finished as far as the lock at Pushaw Falls, and the excavation for that was nearly finished.³¹ After another three year extension Pushaw Falls was locked.³² In 1852, however, there were still improvements or additions to make, for, in that year, a final extension of three years was granted.³³ Thus, it can be seen that the Stillwater was not easily born.

In operation, rafts of logs came down the Penobscot or Pushaw Stream, then by way of Pushaw Falls lock and the Stillwater River to Bennoch’s and other mills. Long lumber from these mills, after being made into lock-sized rafts and top loaded with boards, clapboards, and shingles, went down the canal to the basin near Ayer’s Island and was then floated to Bangor to be put aboard the lumber schooners.

Since the Canal Bank in Portland had played a vital role in financing the Cumberland and Oxford Canal, a contemporary of the Stillwater, one could easily jump to the conclusion that Orono's Stillwater Canal Bank, chartered in 1835, was similarly involved in the affairs of its namesake. Notwithstanding the fact that three of the fifteen incorporators were also proprietors of the Stillwater Canal, the bank's charter petition had asked only that 1 percent of the bank's capital be so appropriated. Even that tenuous link, however, was left out of the actual charter.³⁴

Whether the bank made loans to the canal is not clear even now. Everett Stackpole wrote in 1900: "The Stillwater Canal Bank was always in poor shape. In October, 1835, its loan was nearly all to stockholders, \$43,000 of it to one firm who were owners of three fifths of the capital."³⁵ Since the bank was capitalized at \$50,000, this firm (not named, but perhaps the canal company) must have held \$30,000 of bank stock. Regardless of who had the loan, the bank was one of five in Maine unable to resist the blandishments of out-of-state speculators who, presumably, undertook to circulate a large amount of the bank's notes in New York and the west. The notes were to be kept going "without the need of specie."³⁶ Without any real capital, the bank finally failed in 1841.³⁷ Instead of having provided the canal with sturdy financial support, the bank seems to have exploited the canal company's reputation to secure a charter.

The Bangor and Piscataquis Railroad was completed from Bangor to Orono and Old Town in 1836, but because the railroad cars were too short the road did not capture the canal's timber traffic as expected. The logs continued going to market by water until the 1870s, thus making the canal perhaps the only one in Maine able to compete successfully with a railroad. By 1879, however, the European and North American Railway reached

Bangor to Vanceboro. Running through Orono, the road had a branch to Stillwater and provided flat cars long enough to take the logs and timber. The new service was faster and possibly cheaper than that provided by the canal. For a time the Stillwater Company tried to meet this new competition by increasing the toll on sawed lumber from three to four cents a thousand board feet per lock, but when that measure failed to help matters, the canal was forced out of business after a useful career of about thirty-five years.

THE PISCATAQUIS CANAL

In 1828 the legislature authorized William R. Miller to lock around the falls at the confluence of the Piscataquis and Penobscot rivers. Miller and his associates, incorporated as the Proprietors of the Piscataquis Canal, were empowered “to make a canal with locks and piers, for the passage of boats, rafts and lumber to and from the Piscataquis River, commencing at a place not exceeding one hundred feet above the dam at the mouth of the river, and extending down past the falls or rapids to the Penobscot River. . .” The act set tolls at thirty-five cents a thousand feet board measure, and at fourteen cents a ton. Pine lumber was charged at the rate of fifty cents a ton on loaded boats.³⁸

Ten years later, when Dr. Ezekiel Holmes ascended the Penobscot River on his Aroostook survey, he reported on the lock at the mouth of the Piscataquis. He observed that the structure, “erected by the enterprise of Mr. Miller if I mistake not,” provided a safe and easy passage of boats and rafts at the falls which were once so difficult to navigate.³⁹

THE TELOS CANAL

When virgin white pine was being cut and driven down the Penobscot to the Bangor mills in the late 1830s, timber

cruisers began bringing back stories of magnificent pine forests around the lakes that drained northward through the Allagash River. Eager to exploit this untapped source, Bangor lumbermen looked for a more direct route south to a seaport than the long, circuitous route down Champlain, Eagle, and Churchill lakes through the Allagash to the St. John, and thence down that river to Fredericton and St. John on the Bay of Fundy.⁴⁰

A more direct route was found at Telos Lake, the headwater of the Allagash, which emptied into Chamberlain Lake. Just east of Telos lay Webster Lake whose elevation was considerably lower than that of Telos. According to geologists, a ravine existed which, in antediluvian times, had connected the two lakes. Writing in *Appalachia* in 1953, Myron H. Avery entertained no doubt that the "small barrier between the two ponds was a glacial deposit, and Telos and Chamberlain may well have originally drained into the East Branch until this glacial barrier forced the waters in the other direction."⁴¹

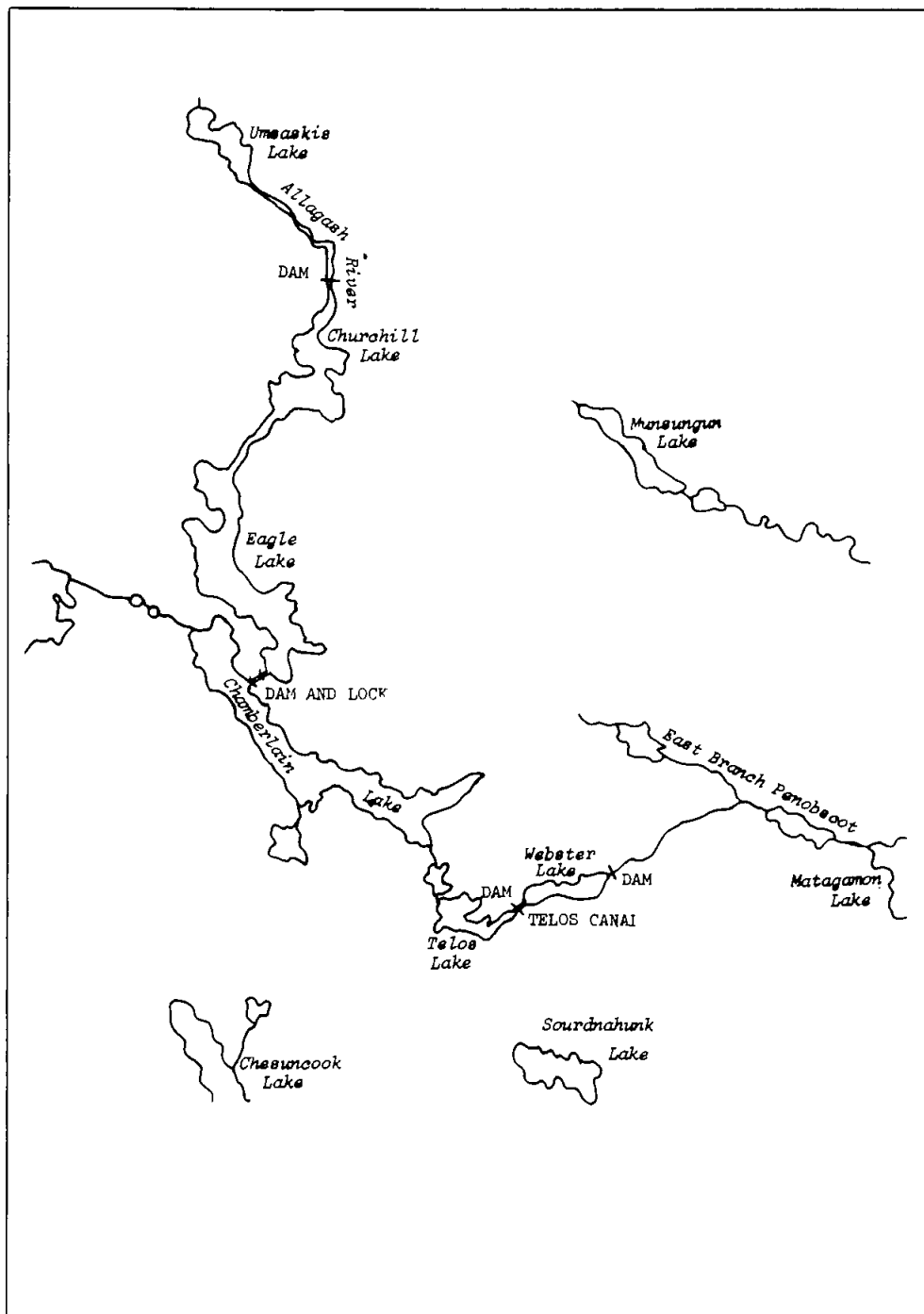
To exploit the discovery, Hastings Strickland and Amos Roberts, both Bangor lumbermen, bought Township 6 Range 11 from the state for \$35,000 in 1840, thus acquiring half of Webster Lake and most of Telos Lake, with the ravine for siting a canal between them, together with the Chamberlain thoroughfare, and a part of that lake as well.

Prior to the purchase Strickland and his associates unsuccessfully petitioned the legislature for the right to build a dam at Chamberlain Lake, cut a canal between Telos and Webster lakes, and to charge tolls of fifty cents a thousand for pine, and half as much for spruce. The new works were not to hinder logs in their "natural course down the Allagash."⁴² An accompanying survey reported that timber on nine townships might be brought into the Penobscot River via the canal which was to be about three hundred rods long.⁴³

In 1841, with the permission of the land agents, Strickland and his associates erected a dam at Chamberlain, and began digging the canal.⁴⁴ The effect was to divert water from Chamberlain Lake and all its watershed to the Penobscot. By the means of four dams strategically located at the foot of Chamberlain Lake, at the Telos end of the canal, on the thoroughfare between Chamberlain and Churchill lakes, and on the Allagash below the outlet of Churchill Lake, logs could be floated forty miles or so from Churchill Lake to the east branch of the Penobscot.⁴⁵ In describing the operation of the canal, Philip T. Coolidge, author of *History of the Maine Woods*, noted: "The two dams below Chamberlain made a lock. By raising the water in Churchill Lake logs could be floated into that lock; then by closing the lower dam in the Chamberlain Stream and opening the upper one the logs could be continued on their way to Telos."⁴⁶ This diversion added a watershed of nearly three hundred square miles to the Penobscot.

Before the system was put into operation, Amos Roberts, by then the sole owner of Township 6 Range 11, offered to sell his township to David Pingree because of apprehension about collecting tolls and the legality of the canal monopoly. By then well launched upon a program of buying and logging off Maine timberlands, Pingree already owned six Allagash townships and had built the third version of the Chamberlain dam which worked "admirably." Although Pingree was the logical buyer, he haggled over the price so long that Roberts finally gave up and sold to Rufus Dwinel, a leading lumber operator of Bangor.⁴⁷

Upon acquiring control of the canal and dam complex, Dwinel originally set the toll at fifty cents per thousand board feet, but later reduced it to thirty-four cents. Still, Pingree and other lumbermen protested. Pingree, es-



Telos Canal System

pecially, felt aggrieved because his dam on Chamberlain Stream was an essential part of the system. In an effort to negotiate, Pingree offered to accept arbitration by three good, disinterested men who would, among other things, fix his share of the tolls based upon the use of his dam.⁴⁸ When efforts to arbitrate failed, Pingree and his supporters appealed to the legislature. Before the question was resolved, however, Dwinel's opponents threatened, and then tried, to put their logs through without paying the toll. Having thus declared the Telos War, they soon found multiple booms obstructing the cut, defended by a gang of men which Dwinel had recruited in Bangor. All were formidably armed with sheath knives. The trespassers had no choice; they paid and put their drives through. No blood was shed; no scalps were taken.

The matter officially came before the legislature in 1846. On the petition of William H. Smith, the nominal leader of Dwinel's opponents, the Committee on Interior Waters heard lengthy evidence supporting the construction of a sluiceway from Telos Lake to Webster Pond.⁴⁹ (It should be noted that up to this time, no one had received such authorization from the legislature). After listening to Dwinel's opposition to the transfer of his property (i.e., the Telos cut) to others, and to Smith's rebuttal,⁵⁰ the legislature resolved the dispute by passing companion acts on August 7, 1846. One act incorporated Rufus and Calvin Dwinel as the Telos Canal Company. The company was charged with the responsibility of maintaining the canal and dams in good repair and with permitting the logs and lumber to pass down Chamberlain Lake to the sluiceway without hindrance. In exchange, the company could collect a toll of twenty cents a thousand feet board measure.⁵¹ The other act, to become effective if Dwinel failed to agree to the terms of his act by October 1, chartered the Pingree faction as the

Lake Telos and Webster Pond Dam and Sluiceway Company. This company was to operate the canal and dams toll free.⁵² When Dwinel capitulated, the "war" was over.

In 1847, for \$15,000, Dwinel deeded his equity and rights to the Telos Canal Company which continued to operate until 1921. Operations were generally sufficiently profitable to permit dividend payments on the one hundred shares of stock. By 1904 the East Branch Improvement Company, an arm of Great Northern Paper Company, had acquired a controlling interest in Telos stock, and on March 21, 1921, the Telos Canal Company held its last meeting and sold the remainder of its stock to the East Branch Improvement Company.⁵³

The Telos has been called the "most famous of all the canals inspired by the lumber industry."⁵⁴ Having the qualities of a minor epic, its story narrates an engineering feat involving the construction of a long lock, a major change in the topography of two great rivers, a landmark case in the continuing struggle between private monopoly and the public interest, and a bruising confrontation between powerful lumbermen.

THE PENOBSCOT RIVER NAVIGATION COMPANY

William and Daniel Moor, Jr. of Waterville launched the town's first steamboat in 1842. Putting it in successful operation on the Kennebec's Waterville-Gardiner run, they later added other steamers. Looking for new rivers to conquer with their shallow draft, wood-burning stern-wheelers, in 1846 they explored the channel of the Penobscot above Old Town which was already connected to Bangor by the Bangor and Piscataquis Railroad. After deciding that the Penobscot could be made navigable for their kind of steamboats, the Moors petitioned for authority to make the necessary improvements in the river, and for exclusive rights to operate steamboats

thereon. Seven supporting petitions with 231 signatures argued that the improvements would promote settlement of the upper river, enhance land values, relieve the towns of Old Town and Mattawamkeag from onerous highway taxes, and secure the business of supplying lumbering operations on the Penobscot and other branches of the St. John for the Penobscot, rather than permitting it to go to the latter river.⁵⁵

The charter gave the Moors seven years to improve navigation on the river between Old Town and Five Island Rips above Winn by deepening the channel, removing bars and rocks, and by building dams, locks, abutments, and breakwaters. The right to build either a canal and lock or a railroad around the falls was included in the charter. Provided the improvements did not obstruct the running of logs, rafts, or lumber, the proprietors were given sole rights to steam navigation for a period of twenty years. Other types of boats could operate over the route upon payment of reasonable tolls which were to be fixed by the legislature after the improvements were completed.⁵⁶

General Wyman B. S. Moor, a brother of William and Daniel, became the chief owner and manager of the company. Its first steamboat, *Governor Neptune*, named for the tribal leader of the Penobscots, was launched in May, 1847, and made the run from Old Town to Piscataquis Falls piloted by David Bryant of Lincoln.⁵⁷ The *Mattanawcook* and the *Sam Houston* were added to the little fleet in 1848 and 1849, respectively. Their travel was eased by the removal of ledge and rocks at Mohawk Rips above the falls. The canal and lock around Piscataquis Falls, however, was not completed until about 1854. In the meantime a horse railroad took passengers and freight around the falls. Once the improvements were completed, the steamers kept a daily schedule with the trains at Old

Town.⁵⁸ When Ezekiel Holmes embarked on an upriver survey with the state geologist in 1861, he complained that low water had caused the steamers to be “hailed up.” Consequently, it took the survey team three days to go up river by bateau whereas the same trip could have been made in a single day by steamer.⁵⁹

Moor’s monopoly proved sufficiently profitable to attract the attention of General Samuel Veazie of Bangor who, in 1849, built the *Governor Dana*, a longer and more powerful steamboat than those owned by the Moors. When he put this into the competition, the Moors promptly filed suit for infringement of their charter rights. When the courts decided against Veazie, he had his boat disassembled and shipped around Cape Horn to San Francisco where it was reassembled and run on the Sacramento River during the gold rush.⁶⁰

The company changed hands in 1857. The new owners were William H. Smith who has already been mentioned in regard to the Telos Canal, General Joseph Smith, and others. After adding the steamers *William N. Ray*, *John A. Peters*, and *Aroostook* to the fleet, the Smiths sold out to the European and North American Railway in 1867. The railway kept the steamboats in operation until its trains went into service in 1869, charging a fare of two dollars between Old Town and Lincoln, and a freight rate of \$4.50 per ton.⁶¹

Company agents included H. M. Hartwell of Old Town and Captain Cyrus Fay of Winn. Sam Jameson, Curtis Breatham, Isaac Haynes, Frank Lawton, and Orin Blethen were among the river pilots. William N. Ray, builder and pilot of the steamer by the same name, earned two dollars a day and board when the boat was tied up, and \$2.50 a day when she was running. After the steamers went out of business as scheduled carriers of people and freight, some were used to transport hemlock bark to the tannery of

Henry Poor and Son at Winn. Being seven hundred feet long with 364 vats, the tannery was the second largest in the world until its destruction by fire in 1892.⁶²

PENOBSCOT WATERWAYS: AN ASSESSMENT

The various improvements on the Penobscot River generally served to facilitate the movement of logs through the eastern wilderness, and the Penobscot River Navigation Company provided steamboat travel from Old Town to Mattawamkeag until superceded by rail service in 1867. Doubtlessly, the Eastern River lock and sluice, the Stillwater Canal, and the Piscataquis Canal were also used by boats. The considerable number of improvement schemes, many of which were never acted upon, testify to the determination of those who relied upon the river for transportation to adapt and improve it. The legislature chartered fifteen companies to build canals, and authorized the Penobscot Lumbering Association to do likewise. The five completed projects continued in operation for years, and the Telos had the distinction of being virtually the only canal in Maine to pay dividends.

It is obvious, however, that the improvements to the Penobscot waterway fell far short of the hopes of Greenleaf, Holmes, and the governors. Aside from farming, the significant occupations in the state — lumbering, fishing, shipping and shipbuilding — all relied on water transportation. Although the population consequently concentrated around the harbors and navigable rivers, the efforts to improve the Penobscot, one of the state's three major rivers, achieved only meager results.⁶³

What had happened? Why was waterway development not pursued more vigorously? Actually, there are several reasons. In the first place, engineering surveys revealed that two of the schemes were less practicable and more

costly than cursory examination had shown. In 1816 even Moses Greenleaf had realized that the benefits of improving inland navigation from Bangor to the St. John River might not justify the expense, although the possibilities surely merited study. When Dr. Ezekiel Holmes detailed the substantial difficulties of making the Penobscot navigable in 1838, he reported that the necessary improvements were feasible. Since he was usually practical in his advice to others, it is important to remember that he recommended the building of good roads over the portages, durable shelters, and strategically placed handcarts if nothing more could be done.⁶⁴ Climate was also an obstacle. Cold winters kept the rivers and lakes frozen about one-third of the year, and the spring freshets, while essential to log driving, not only prevented boat traffic but also washed away dams, locks, and embankments as well. The lack of money was a third and particularly frustrating problem. There was never sufficient capital in the 1830s to undertake a project large enough to arouse public enthusiasm,⁶⁵ and even before that time, Maine men were reluctant to invest their savings in such high-risk ventures as canals. Finally, there was the competition from highways and railroads. Although the early governors gave lip service to waterway development, they kept their feet on solid and familiar ground by urging the construction of roads. Governor Albion Keith Parris, for example, told the legislature in 1826 that there was need for improving the road from Penobscot to Houlton Plantation, and for building a road from the east branch of the St. John at Fish River for "the great accommodation it would afford our people residing in the territory watered by the St. John above grand falls."⁶⁶ The legislature responded with both a resolve and the funds required to improve that part of the Houlton Road leading through the public lands, and to survey, lay out, and mark a road to the mouth of the Fish River.⁶⁷

In the mid-1840s, after recovering from the depression of 1837, the people of Maine were sufficiently impressed by the urgings of John A. Poor, the state's most prominent railroad promoter, to seriously consider the possibilities of rail travel. The result was a cautious but growing acceptance of the innovation, marked, for the first time, by financial support from the cities and towns to be served by the proposed railroads.⁶⁸

— NOTES —

¹ Walter Wells, *The Water-Power of Maine* (Augusta: Sprague, Owen and Hall, 1869), pp. 105-6; Richard G. Woods, *A History of Lumbering in Maine, 1820-1861* (Orono: University of Maine Press, 1935), p. 14 (hereafter cited as Woods, *History of Lumbering*).

² Moses Greenleaf, *A Survey of the State of Maine* (Portland: Shirley and Hyde, 1829), p. 86 (hereafter cited as Greenleaf, *Survey*).

³ Woods, *History of Lumbering*, pp. 33-36, *passim*.

⁴ Greenleaf, *Survey*, p. 76.

⁵ H. Walter Leavitt, *Some Interesting Phases in the Development of Transportation in Maine* (Orono: University of Maine Press, 1940), pp. 12-24.

⁶ Greenleaf, *Survey*, pp. 214-15.

⁷ Moses Greenleaf, *A Statistical View of the District of Maine* (Boston: Cummings and Hilliard, 1816), p. iii (hereafter cited as Greenleaf, *Statistical View*).

⁸ Greenleaf, *Survey*, p. 84.

⁹ Greenleaf, *Statistical View*, p. 131.

¹⁰ *Ibid.*, pp. 133-35, *passim*.

¹¹ *Ibid.*, p. 132.

¹² William Anson, *Report of an Exploration and Survey of the Two Branches of the River St. Croix and Adjacent Lakes* (N.p., n.d.), pp. 15-19 in *Maine Railroads*, a collection of bound pamphlets forwarded to the legislature by A. R. Nichols, Secretary of the Board of Internal Improvements, February, 1837, Maine State Library.

¹³ Ezekiel Holmes, *Report of an Exploration and Survey of the Territory on the Aroostook River* (Augusta: Smith and Robinson, Printers, 1839), (hereafter cited as Holmes, *Report*).

¹⁴ Albion Keith Parris, *Message to the Legislature*, 1826 (Augusta: Smith and Robinson, 1826).

¹⁵ Enoch Lincoln, *Message to the Legislature*, 1827 (Augusta: Smith and Robinson, 1828).

¹⁶ Samuel E. Smith, *Message to the Legislature*, 1831 (Augusta: Smith and Robinson, 1832).

¹⁷ John Fairfield, *Message to the Legislature*, 1839 (Augusta: Smith and Robinson, 1839).

¹⁸ *Resolves of Massachusetts*, 1794, ch. 114.

¹⁹ *Acts and Resolves of Massachusetts*, 1816, ch. 101, ch. 123.

²⁰ Legislative Docket, 1821, ch. 114, petition of the proprietors, Maine State Archives, Augusta.

²¹ *Ibid.*, remonstrances of James Smith *et al.* and John Harriman *et al.*; map by Jacob Sherbourne.

²² *Private Acts of Maine*, 1821, ch. 52.

²³ *Public Laws of Maine*, 1835, ch. 194, sec. 9. The "upper small gates" were the pads or sluice gates in the upper main gates.

²⁴ George Adams, comp., *Maine Register*, 1855 (Portland: A. Shirley and J. Todd, 1856), p. 248.

²⁵ Legislative Docket, 1828, ch. 33, petition of John Bennoch *et al.*

²⁶ *Ibid.*, remonstrances of John Roberts *et al.*

²⁷ *Private Acts of Maine*, 1828, ch. 514; Legislative Docket, 1831, ch. 79, petition of the proprietors.

²⁸ *Private and Special Laws of Maine*, 1834, ch. 440 (hereafter cited as *P. and S. L.*).

²⁹ Legislative Docket, 1837, ch. 741, petition of John Bennoch *et al.*

³⁰ *Ibid.*

³¹ Legislative Docket, 1839, ch. 49, petition of the canal company.

³² *P. and S. L.*, 1839, ch. 526.

³³ *Acts and Resolves of Maine*, 1852, ch. 598.

³⁴ Legislative Docket, 1835, ch. 123; *P. and S. L.* 1835, ch. 598.

³⁵ Everett B. Stackpole, "State Banking in Maine," *Sound Currency* 8 (May 1900): 82-3.

³⁶ *Ibid.*, pp. 79-80.

³⁷ *Ibid.*, p. 84; Walter W. Chadbourne in *A History of Banking in Maine, 1799-1930* (Orono: University of Maine Press, 1936), p. 68, said that a major consolation during the Panic of 1837 and the years immediately following was the fact that of the \$2,000,000 of lost banking capital in Maine, the loss had "fallen mostly on the stockholders, not more than \$175,000 having fallen on the innocent billholders."

³⁸ *Private Acts of Maine*, 1828, ch. 552.

³⁹ Holmes, *Report*, p. 7.

⁴⁰ M. H. Avery, "The Telos Cut, *Appalachia* 22 (June 1937): 381 (hereafter cited as Avery, "Telos Cut.")

⁴¹ *Ibid.*, p. 384.

⁴² Rejected bill for a Lake Telos to Penobscot (Webster) Lake canal; petitions of Hastings and Strickland *et al.* and George P. Steward *et al.*, 1840, in the so-called legislative graveyard, Maine State Archives, Augusta.

⁴³ *Ibid.*, report of Eben Steward.

⁴⁴ Avery, "Telos Cut," pp. 385-89. The reason for digging the Telos Cut, as told by John S. Springer in *Forest Life and Forest Trees* (New York: Harper and Brothers, 1851) in a tale first perpetuated by Henry D. Thoreau in *The Maine Woods* (Boston: Houghton Mifflin Co., 1892), and, indeed, by most others down to Lew Dietz in *The Allagash* (New York: Holt, Rinehart, Winston, 1968), was the unfair treatment meted out to Maine loggers on Allagash headwaters by New Brunswick officials. By the terms of the Webster-Asburton Treaty of 1842, New Brunswick had to "accept logs on an equal basis from either side of the International Boundary." The province levied a duty on *all* timber passing down the St. John but made it up to its own lumbermen by lowering stumpage fees on crown lands. "The result was," Thoreau wrote, "that the Yankees made the St. John run the other way, or down the Penobscot, so that the Province lost both its duty and its water, while the Yankees, being greatly enriched, had reason to thank it for the suggestion." Avery noted that that explanation was quite at variance with the history, and pointed out that the cut was actually made two years before the boundary treaty. The impelling motive was economic, not political; it was the saving of time and money on a greatly shortened drive to the lumber center of the United States. Avery, "Telos Cut," p. 382; Thoreau, *Maine Woods*, pp. 335-36.

⁴⁵ Philip T. Coolidge, *History of the Maine Woods* (Bangor: Furbish Roberts Printing Company, 1963), p. 55 (hereafter cited as Coolidge, *Maine Woods*).

⁴⁶ *Ibid.*, p. 56.

⁴⁷ David Pingree to Rufus Dwinel, April 20, 1846, quoted in Avery, "Telos Cut," p. 382.

⁴⁸ Pingree to Dwinel, quoted in *Acts and Resolves of Maine*, 1846, ch. 361.

⁴⁹ Legislative Docket, 1846, ch. 119.

⁵⁰ Israel Washburn, Jr., "The Evidence Before the Committee on Interior Waters, on Petition of William H. Smith, Daniel M. Howard and Others for Leave to Build a Sluiceway from Telos to Webster Pond," (n.d.), Maine State Library, Augusta; Rufus Dwinel, "Appeal . . . to the Legislature," (1846?), and William H. Smith, "Answer to the Appeal of Rufus Dwinel," (1846?), certified typewritten copies in the Maine State Library.

⁵¹ *Acts and Resolves of Maine*, 1846, ch. 386.

⁵² *Ibid.*, ch. 387.

⁵³ Coolidge, *Maine Woods*, p. 56.

⁵⁴ Wood, *History of Lumbering*, p. 121.

⁵⁵ Legislative Docket, 1846, ch. 87, petition of William and Daniel Moor, Jr.; seven supporting petitions.

⁵⁶ *Acts and Resolves of Maine*, 1846, ch. 361.

⁵⁷ Marion Reed Kimball, "Steamboating on the Upper Penobscot," *Down East* 20 (April 1974): 58-59 (hereafter cited as Kimball, "Steamboating"); G. H. Haynes, "Roads on the Penobscot Above Bangor," *Bangor Historical Magazine* 5 (October & November 1889): 78.

⁵⁸ Kimball, "Steamboating," p. 59.

⁵⁹ *The History of Penobscot County, Maine* (Cleveland: Williams, Chase and Co., 1882), p. 17.

⁶⁰ F. S. Davenport, *Some Pioneers of Moosehead* (Bangor: Furbish Printing Co., 1922-23), p. 50.

⁶¹ Kimball, "Steamboating," p. 77.

⁶² *Ibid.*, pp. 58, 77, 78.

⁶³ Edward E. Chase, *Maine Railroads* (Portland: By the Author, 1926), p. 9 (hereafter cited as Chase, *Maine Railroads*).

⁶⁴ Holmes, *Report*, p. 16.

⁶⁵ Chase, *Maine Railroads*, p. 9.

⁶⁶ Albion Keith Parris, *Message to the Legislature*, 1826.

⁶⁷ *Acts and Resolves of Maine*, 1826, chs. 19 and 36.

⁶⁸ *P. and S. L.*, 1850, ch. 379. This law authorized cities on the route of the Kennebec and Portland Railroad to lend their credit to the road.

Hayden L. V. Anderson was born in Fryeburg, Maine, on March 18, 1905, and was educated in the public schools of Windham. He graduated from Boston University in 1930, and subsequently did graduate work at Bates College and Harvard University. A life-long educator, Mr. Anderson retired from the Maine Department of Education in 1968, and then served on the board of trustees of the University of Maine. In recognition of his contributions to education, the University of Maine at Farmington awarded him an honorary doctorate in 1972. Mr. Anderson died at Augusta on August 1, 1978, after suffering a brief illness.

This paper was presented before a meeting of the Maine Academic Historians (now the Organization of Maine Historians) at the Augusta Civic Center on April 1, 1978. It reflects the author's long-time fascination with Maine canals and waterways.