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"THE VEXED QUESTION OF SAWDUST": RIVER

POLLUTION IN NINETEENTH CENTURY

NEW BRUNSWICK

The lament over the polluted rivers of New Brunswick did not begin with our century. In a time when industrial chemicals and urban wastes foul our waters, it is nostalgic to imagine that things were very different before the coming of modern society. But the assault on the rivers and streams of New Brunswick is as old as the province itself, for the economic existence of the area was historically linked with the timber trade, and the timber trade was necessarily linked with running water. In the days before effective land transportation, rivers provided the only means of carrying great quantities of heavy logs to the sawmills and harbours. Beginning on the floods that started the "river drive" in the spring, the journey of lumber from provincial hinterlands to the timber markets of the North Atlantic progressed along a water route from rivers to mill ponds, and finally to the sea itself. Along the way was left the debris of the "drive" and the sawmill: sunken logs, bark, slabs, edgings, mill rubbish, and sawdust. Just as the moving water effectively carried the floating timber over long distances, it carried this debris as well, spreading it over entire river systems and into the harbours and bays on the seacoast. During the spring and summer months, the mills on every river and creek in New Brunswick droned with activity, releasing clouds of sawdust into the streams and dumping scraps and wastes that drove off the fish, endangered navigation, and littered vast stretches along the riverbanks and the Fundy shore.

Through most of the nineteenth century, government officials carried on a continuing struggle to clear the waterways and save the fishstocks. With

alternating kicks and caresses, they moved the millowners to dispose of their edgings and wastes. But sawdust was a more difficult problem. Of all the refuse of the sawmills, sawdust was the most troublesome to destroy. It was also the most dangerous to living things. Much like the toxic chemicals of today, sawdust was the stuff of death. Where it collected, the process of nature stopped. Writing in 1889, a Department of Fisheries official described the potential of the substance to spread its lethal effects through the levels of marine life:

The ruinous effects of this sawdust scourge when deposited in the waters of the country are still greater than when cast upon the land. Its floatability at first gives it more widespread areas in which to work out its blasting influences, even passing down in some instances till it reaches the estuaries of streams and the small inlets and bays along the coasts of the sea and shores of lakes. Here it likewise kills the sources which give life and food for the smaller races of insects and other marine animals. . . . Settling here and there in its course down the streams, it forms a compact mass of pollution all along the bottoms and margins of the rivers and inlets, filling up the crevices on the gravel beds, and among stones, where aquatic life is invariably produced and fed. It becomes a fixed, imperishable foreign matter, and adheres to the beds of streams and other waters, and forms a long, continuous mantle of death. . . .¹

The following pages present a case study of sawdust pollution in Alma Parish of Albert County, an area of darkest New Brunswick that has received little attention from modern historians. Perhaps this neglect results from the fact that, for the most part, the community that once existed there has itself come to an end. For in 1948, most of the region was expropriated to form Fundy National Park, and government bulldozers began the work of removing the traces of man from the area. In reality, however, they were completing a process which had begun long before. For Alma Parish was already a region of exhausted resources, shrunken population, and encroaching forests, an area that had been returning to wilderness since the closing decades of the last century. The bulldozers thus removed what a long period of economic decline had left behind. In the end Alma Parish had nothing left to sell except its scenery.

The beginning was very different. The things which today give Fundy Park its awe and beauty were the same things that made the first settlements in the area so difficult: the rugged hills, rocky terrain, rapid streams, and plunging waterfalls. It was a region particularly unsuited to farming, but for a time its forests and fishlife appeared inexhaustible. Protected from the ravages

of fire damage by the damp air off the Bay of Fundy, towering stands of timber had grown uninterrupted for generations, and in the streams, salmon and trout were plentiful. As far back as written records take us, what is now the Alma River was called the Salmon River—and with good reason. "The River had an abundance of salmon sporting in its sparkling waters", an Albert County pioneer recalled from one early visit in 1836, "and we used to catch all the fish we wanted in weirs and nets . . .".² Out on the sea, the hard rock formations on the bottom that provided clear water up to Point Wolfe at the centre of the Parish shoreline turned thereafter into soft sandstone, resulting in the murky waters that attracted vast schools of shad toward their feeding grounds on the flats at the head of the bay. From a point just east of Cape Enragé, and stretching almost to the mouth of the Petitcodiac River, lay what was considered one of the best shad fisheries in the world.

In its early development, the economy of Alma Parish was in many ways a microcosm of the economy of New Brunswick itself. It was an economy of fish and timber, but where the provincial economy began to develop at least the rudiments of secondary industry during the nineteenth century, the economy of Alma Parish remained singularly concentrated on the exploitation of its two basic materials. Unfortunately, it was soon discovered that lumbering and fishing were not easily compatible, and that the vigorous exploitation of one resource would have its effects in the decline of the other. For the saw-mills once located at the mouths of the Salmon and Point Wolfe Rivers developed during the nineteenth century into two of the largest timber operations on the Fundy coast; but timber meant sawdust, and in the end the mills became the major source of water pollution, not only of the river mouths themselves, but of the teeming shad fisheries at the head of the bay. What follows is the history of sawdust and fish in Alma Parish.

In 1850, the provincial government commissioned Moses H. Perley, a sometime government official and naturalist, to undertake a study of the fisheries of New Brunswick. Traveling up the Fundy coast from Saint John, he discovered an "iron-bound shore", with few harbours and open spaces for fishing. Near Salmon River, however, at a spot known locally as Cannon Town Beach, Perley found the brush weirs of "the first regular shad fishery" on the coast. The weirs were worked as a cooperative enterprise, with fourteen local settlers taking an annual share of about eight barrels of shad. Out on the bay, the catch was abundant. Between July and August, the white sails of fishing boats could be seen clustered along the shad-infested stretch between the Petitcodiac and Grindstone Island. The waters indeed seemed

procreant, but Perley was not optimistic. The catch of herring, he noted, was already falling away, and if precautions were not taken, the shad, he feared, would go the same way. The real crisis, however, was in the salmon streams along the shore.

All along the Fundy coast, Perley found sawmill dams blockading the rivers and preventing the passage of salmon toward their spawning grounds in the headwaters. Great quantities of sawdust were being dumped into streams, and mill rubbish clogged the river mouths and harbours. The rivers of Alma Parish were no exception. At Point Wolfe a lofty mill dam sealed tight the Point Wolfe River, and the salmon lay dormant in the pool below. It was essential, Perley observed, that the lumbermen learn to share the river with the fish. "The supply of logs decreases annually and after a time will cease altogether", he wrote of the busy lumber operation above the dam, "but if the salmon are preserved they will prove a source of wealth long after the sawmills are worn and useless".

At Salmon River, the mill dam was located at the head of the tide, and salmon were able to leap over into the pond above—but with little avail. "It was stated", Perley remarked after conversations with local residents, "that nearly all the salmon which passed were speared almost immediately after in the shallows above the mill pond".³ The scenes he witnessed at Point Wolfe and Salmon River were repeated everywhere on his journey. In concluding his report, Perley gave bleak warnings of the effects of uncontrolled lumbering operations on the province's stock of salmon:

The closing of the various rivers flowing into the Bay, and their tributaries, by mill dams; the injuries arising from sawdust and mill rubbish being cast into rivers and harbours; and the wholesale destruction of salmon on their spawning bed far up the rivers, have been pointed out in this report. They are all evils that require an immediate check.

When, ten years later, another official toured some of the fisheries of the province, he found that Perley's warnings had gone unheeded, and that his forebodings of the decline of Atlantic salmon were proving accurate. "There is no doubt", the official wrote, "that the salmon are decreasing at a very rapid, and rapidly increasing rate". The problems of sawdust, dams, and mill refuse must be confronted at once, he urged, for further delay could make the existing trends irreversible: "every year adds tenfold to the difficulty of the task".⁴

New Brunswick, however, was timber country, and matters became

worse before they got better. The lumber industry in the province was developing toward its peak in the late nineteenth century, and an estimated 500,000,000 board feet of lumber was moving each year through the sawmills or toward the seaports for export. Within the industry, as the virgin stands of timber fell away, there developed an inner direction toward larger operations and more aggressive enterprise, and the lumber barons of Alma Parish felt the urge as much as the others.

The mill at Point Wolfe passed through a succession of owners during the nineteenth century, but the growth of its operations remained constant. In 1831 twenty men were employed on the site; by 1874 the number of workers had increased to forty-eight, to sixty in 1889, and to over a hundred at the turn of the century. The output of lumber kept pace, increasing from 750,000 board feet in 1832 to an annual average of six million feet in 1889. In that year the businessman George Judson Vaughan purchased the mill, the fifth proprietor to control the operation since its beginning in 1825. Vaughan sustained the pace of his predecessors, turning out a million feet per month during the sawing season, and keeping three lumber schooners employed between Point Wolfe and Saint John—as well as two others making runs to the American markets.⁵ More timber, of course, meant more sawdust; but it also meant more cost. Having achieved an output of six million feet a year, the mill, it appears from the scattered statistics available, was operating at the peak of its capacity, and it seems evident that the rule of diminishing returns was already beginning to take hold at Point Wolfe. Lumbering there was an increasingly expensive and venturesome business, and Vaughan would prove particularly resistant to regulations that inhibited the pace of his operations, or forced him into profitless investments in filtering devices or sawdust burners. His ambition was rather to expand his mill, hasten his workers, speed his cutting, and—in a very literal sense—let the chips fall where they may.

Developments at Point Wolfe were repeated at Salmon River—and on a larger scale. The mill at Point Wolfe had led the advance of the lumbering industry in the area, but in the 1870s the weight of timber output began to shift toward the larger river up the shore. In 1872, an American interest directed by the Talbot family of Machias, Maine, built a new sawmill on the riverbank a quarter-mile up from the bay. Such was the beginning of the Alma Lumber and Shipbuilding Company, an aggressive firm that sent cutting crews throughout the whole region drained by the Salmon River. Within a few years the firm was averaging over eight million feet of lumber a year, and kept one hundred eighty lumberjacks employed in the woods.⁶

Talbot's mill was to Alma what Vaughan's operation was to Point Wolfe. Both villages were company towns in the classic sense of that term, with the two mills employing the bulk of the work force, and providing the means of economic livelihood for the whole region. When the mills boomed, the villages surged with life and energy; when business went slack or the pace of production was slowed, men loitered without work, credit accounts weighed heavy at the company store, and the public mood turned sober. It all gave weight to the warnings of the millowners that government regulations on water pollution would mean economic ruin for themselves and unemployment for their workers. And it all made things more difficult in the matter that the Minister of Fisheries called "the vexed question of sawdust".

Government officials at Ottawa, however, had already committed themselves to the struggle for clean rivers—although the proper legislation was some time in coming. The earliest regulations had problems in legal language, with non-navigable streams (such as those in Alma Parish) escaping the jurisdiction of the statutes; and a subsequent act in 1873 (36 Vic, cap. 65) included a provision permitting individual millowners to receive specific exemption from the law if "it can be shown to the satisfaction of the Governor in Council that the public interest would not be injuriously affected thereby". In 1886, however, the government enacted legislation (49 Vic, cap. 36) which, though it continued the policy of exemptions, was recognized immediately as being decisive:

No owner or tenant of any sawmill, or any workman therein or other person shall throw or cause to be thrown, or suffer or permit to be thrown, any sawdust, edgings, slabs, bark or rubbish of any description whatsoever, into any river, stream or other water any part of which is navigable, or which flows into any navigable water. . . .

With the words, "or which flows into any navigable water", the new act took command over the entire water system of Canada. "I defy anyone", a member of parliament protested, "to find a river in this country which does not flow into navigable water, and by the very words of this clause you take possession of the rivers of this country, and you assume power to legislate upon them".⁷

If debate became heated on the question of jurisdiction, however, little was heard in opposition to the need for legislation. Somewhat as today, no one spoke in favor of pollution; men merely spoke against it in different ways. For some, the legislation was too little and too late; for others it was

too much too soon. But while a minority cried ruin on both sides of the question, the majority refused to make a choice between timber and fish. Because of its paramount position in the Canadian economy, the timber industry, it was recognized, must necessarily be permitted to dominate the rivers of the nation, but lumbermen, Parliament decreed, must make sufficient accommodation with the fishing interests: the country needed both sawmills and fish.

Writing responsible legislation was one thing; enforcing it was another. In New Brunswick the new act suddenly called to account the sawmills located on the small streams entering into the Bay of Fundy, and in 1888 the Department of Fisheries determined to enforce the law in Alma Parish. It made little progress. The next spring, on April 27, 1889, Talbot's mill received an exemption from the act, permitting it to dump sawdust but enforcing the ban on rubbish; and the following year, on May 29, 1890, a similar exemption was authorized for George Vaughan's mill at Point Wolfe.⁸

The authorities at Ottawa, however, were not finished yet. In his report to Parliament in 1890, the Minister of Fisheries warned the lumbermen of the Dominion that the government had to balance the immediate interests of the mill owners against the long-term interests of fishing and navigation: the momentary power of one industry could not be permitted to compromise the future of another. His government, the Minister insisted, was not asking the owners to choose between profits and the public interest; rather it asked for modest investments in anti-pollution equipment that would profit the larger interests of lumbering and the public alike. Continued abuses, he warned, would in the end arouse the populace against politicians and lumbermen alike, forcing the government to take coercive action against the timber industry.⁹

In far away Alma Parish, however, the populace was concerned with more lively subjects than sawdust. During the last decade of the nineteenth century, when the conflict between the Minister of Fisheries and the local lumber barons reached its peak, the regional newspapers were absorbed in the feuds of the Temperance movement and the war on Demon Rum. It was not that men were unaware of the fact that sawdust was working its deadly ways in the waters of the region. "The principal cause of the decline in fishing is the immense quantities of sawdust that have been put into the streams", *The Maple Leaf* stated clearly on May 2, 1889, "and it is to be hoped that the law bearing on this evil will be rigorously enforced". It was rather that the populace of the lumbering villages could not connect the condition

of their rivers with the immediate concerns of their own lives and occupations. Thus the Minister's prophecies of public wrath proved empty, and federal officials were left to carry the battle themselves. All the documents that have come down to us from the period indicate that the struggles over river pollution in Alma Parish were fought out over the heads of the public. Expressed in other terms, they were fought on a level at which the lumbermen could bring to bear all their financial influence and political connections.

In 1894, after long debate, the government began to remove the exemptions granted under the Act of 1886. Even before the blow fell on Alma Parish, however, tensions began to mount in the region. During the "log drive" in the spring, Frederick O. Talbot was accused of attempting to bribe a federal Fisheries Inspector, H. S. Miles, who reported receiving fifty dollars in a sealed envelope from Talbot's own hand.¹⁰ Although the matter was dropped after Talbot assured the government that he intended the gift only as a "token of good will", the episode marked the beginning of a series of incidents in the remote area that would find their way to the desk of the Minister of Fisheries at Ottawa. The next one was not long in coming. On July 17, 1894, Inspector Miles received notification that the exemptions granted to both Talbot and Vaughan had been revoked. Talbot was "very much broken up", Miles informed his Minister on July 28; but by this time Talbot and Vaughan had informed acquaintances of their own, and political pressures began to weigh upon the authorities in Ottawa.

"I don't think the Government, which I have supported since the first, at the sacrifice of time and money, would tempt to injure me in this way did it fully realize the magnitude of the injury involved", Vaughan wrote to his Member of Parliament, Dr. R. C. Weldon, on July 20, 1894. And several days later, he outlined his protests—and his political connections—more fully to Inspector Miles:

I received notice from the Ministry of Marine and Fisheries that I would have to take care of the sawdust by not letting it go into the water. I then immediately went to St. John and saw Mr. E. McLeod and Mr. Hazen, the members of St. John county, and they wrote to the Minister of Marine and Fisheries on my behalf and also to the Minister of Finance. And I also wrote to Doctor Weldon, and he replies that he has made out a strong case for me—setting forth how the mill was situated near the Bay and what a great loss it would be to me to shut down with the amount of logs I have on hand to cut, and that the lumber would be almost useless before I could erect a furnace to burn the sawdust and if I was stopped in my work it would ruin me and keep a large lot of men out of employment and would end in bankruptcy for me.¹¹

Written appeals from all the parties mentioned found their way to the Minister of Fisheries, Charles Hibbert Tupper, and it seems likely that the Minister's Conservative colleague Dr. Weldon added some private pleas of his own: and with good cause. "I know", Vaughan's lawyer wrote to the Minister, "that . . . the withdrawal of the permission to dump sawdust will seriously injure Mr. Vaughan's prosecuting his work and I fear will imperil Mr. Weldon's election as it was largely owing to Mr. Vaughan's support that he was elected on the last occasion".¹²

On July 26, Tupper informed the lawyer of his reply: "I have looked carefully into this matter", the Minister wrote, "and I am glad to be able to inform you that as Mr. Vaughan has engaged to put up a sawdust burner for next season, I have decided not to enforce the Act respecting the depositing of sawdust in the river in question until 1st May next". On August 7, Inspector Miles received word that the same privilege had been extended to the Talbot mill at Alma, but the message insisted again that the act would be consistently enforced as of the following May, when the government intended to remove all exemptions from the Sawdust Act. But the government had been brought to the knee once more, and the millowners found it easier the next time. The struggles of the summer of 1894 were not repeated the following year, and on May 6, 1896, one year after the deadline established by the Ministry, Inspector Miles admitted that "the sawdust regulation is not strictly enforced".¹³

Each year gained by the lumbermen, however, was one more lost for the fishing interests. The dam at Point Wolfe continued to obstruct the migration of salmon, and although a fishway had been constructed at Salmon River, sawdust drove the fish from the stream. "The fishways have been kept open and in repair", the local fisheries warden reported in 1889, "but it is doubtful if any salmon ever go through them".¹⁴ Out on the Bay of Fundy, the years of delay took their toll as well. The catch of shad began to fail in the 1880s, and by the end of the decade it was apparent that the fish were rapidly deserting the head of the bay. In 1889, fishermen from Albert County landed twenty-five barrels of shad, compared to thirty barrels in 1888—but 3,900 barrels had been taken in 1885!¹⁵ Accusations concerning overfishing and the injurious effect of brush weirs were circulated widely, but the Ministry of Fisheries placed the blame on sawdust pollution, and considered the mills at Point Wolfe and Salmon River to be especially responsible. "The two mills are so situated that their refuse is particularly injurious", a Ministry official wrote in 1894; "The shad ascending from the St. John River after spawning meet the floating refuse and offensive deposits immediately and appear to

be deterred from further migration to their once favorite feeding grounds".¹⁶ When the annual report on the once thriving fisheries of Albert County was forwarded to Ottawa in 1897, the text consisted of one sentence: "The fisheries of this county since the failure of the shad . . . are not important".¹⁷

The next year, in 1898, the government decided to try again. The mill at Salmon River had changed hands two years earlier, in July, 1896, when a firm headed by S. H. White of Sussex purchased the operation—but unfortunately for Ottawa, White proved as obstinate as Talbot. When a local official informed him that the Sawdust Act would be enforced, White dispatched a letter to the Minister of Fisheries, who was now the Liberal Sir Louis K. Davies, that revealed all the spirit and swagger of the nineteenth-century timber barons:

We have been informed by the fish warden of our town that after the first of May we will be required to take care of our own sawdust, which hitherto has been put in the water. This is a matter that our attention was called to some two years ago, but was not enforced and we trust it is not the intention to be enforced now, as in our locality it is beyond all question unpracticable to do so. The fishing industry is nothing and can be made nothing, as the streams are very small, not navigable, and very rapid, there not being, or ever has been, any fishing industry in the vicinity, and to have this law enforced on the bayshore especially on the New Brunswick side would mean the shutting down of all the mills on the shore and an expense to each of from two to five thousand dollars. . . . The cost of such repairs to one mill would amount to more than all the fish on the shore for the last five years . . . as no doubt you are well aware this is the lumbering district of the southern part of New Brunswick. We trust that it is not intended to carry out this law in our vicinity, as it is beyond the shadow of a doubt that the lumber business and the fishing business are not at all in comparison.

A ministry official jotted a note on White's letter, informing Davies that the abuses at the Alma mill had caused widespread complaints, and assured the Minister that "it is untrue that these mills in most cases could not destroy their sawdust".¹⁸ But White's argument had both logic and power: Alma Parish *was* a lumber district, and the lumbermen had a way of turning their economic influence into political advantage. When, for instance, a group of Westmorland County fishermen petitioned Davies in 1900 "to protect as much as possible what little remains of the once famous shad-fisheries of the Bay of Fundy", they specifically condemned White's exemption from the Sawdust Act: "While we think no exemptions should be made", their lawyer wrote on their behalf, "we specially complain of sawmills in Albert County at

Salmon River where the deposited sawdust may be seen at low tide mixed with mud covering large extent of grounds".¹⁹ Davies' reply to the lawyer, however, who happened to be a fellow Liberal, reveals the Ministry's fear of another confrontation with the lumber kings, especially in an election year. "I made a vain attempt a year ago", he wrote on January 22, 1900, "to put the law in force to prevent sawdust being dumped into the streams, but there was nearly a revolution on the part of the millowners and their friends, and I would submit to you for your consideration whether just now it would be desirable to incur the enmity of all the millowners by adopting the suggestions contained in the petition".

Thus through the years at the turn of the century the Ministry vacillated between the quarreling sides, taking up the anguished cries of the fishing interest at one moment, and yielding to the pressures from the lumbermen at the next. "It appears difficult to decide what is the best course to pursue", a Fisheries Inspector admitted in 1898, "where the fishing interests are so small and the lumber so large . . .".²⁰ In 1894 the Ministry had stated unequivocally that "the irritating effect of sawdust on the gills of shad has been scientifically proved"; but in 1900 the question was declared to be "under study", and officials parried the complaints of fishermen with appeals for patience and understanding:

With respect to the escape of sawdust and mill rubbish into the rivers and bays of Albert County, I beg to say that as some experiments have been in progress under the superintendence of a qualified expert in order to decide beyond question the precise effect of floating sawdust and mill refuse on fish-life, the Department proposes to await the completion of the report on this subject before authorizing further action. The amount of harm done to fish-life has been much disputed.²¹

Some fishermen, however, had reached the end of patience and understanding. Their story is perhaps best reflected in the letters of one M. C. Anderson, a lone New Horton fisherman who had fished the bay for over thirty years. He remembered when it was once full of shad and herring, but in a series of crudely-written protests to the Ministry of Fisheries at the turn of the century, he told of his growing despair over the fouled waters and the empty fish barrels. "Instead of getting herring in the morning", he complained, "I have seen the nets full of mill trash that took till noon to pick out".²² His letters are a mixture of protest and pleading, the reproaches of a little man against powerful interests and unconcerned authorities. With them, in the Public Archives at Ottawa, are filed other grievances and remonstrances

against the abuses of the millowners. But particularly relevant is the case of Leonard Martin of Alma, who fished a weir on the shore at a spot still known as Cannon Town Beach, i.e., the same weir that Moses Perley described a half-century earlier as "the first regular shad fishery" on the coast.

The Cannon Town weir, we have observed, was once a considerable enterprise, yielding around one hundred and twelve barrels of shad a year in the middle of the nineteenth century. Thereafter, however, it went the way of all fishing ventures in the region. A report in 1874 reveals that only sixty barrels had been taken that season.²³ And Martin's catch as well had been declining year by year. In 1908, a Fisheries Inspector investigating protests about sawdust pollution from White's mill reported that the weir—which he identified as the only fishing activity in the area—was earning about two hundred dollars per year. "Against the \$200 worth of fish caught in the weir", he remarked, "the output of lumber in the same district . . . returns . . . \$200,000".²⁴ Two years later, in 1910, Leonard Martin brought the history of the Cannon Town Weir to an end. "I have been fishing a weir here", he wrote to the Ministry of Fisheries on May 23, 1910, "but had to abandon it this year on account of the refuse that is dumped in the stream".

Thus ends the story of fishing and sawdust in Alma Parish. It must be admitted that it is a story of lumbermen without conscience, government officials without courage, and a population without concern. Certainly it was not knowledge or adequate legislation that was lacking; what was lacking was a higher sense of community, and a common recognition that even subordinate economic interests had a right in the environment of the region. Fishing, it is true, had always been a subordinate activity in the area, where the primacy of lumbering was established from the beginning. By the turn of the twentieth century, however, the sawmills had driven out even the most rudimentary fishing operations. Fish and timber were once equally abundant, but the exploitation of one natural resource drove out the other. In the history of the area, therefore, fishing can be considered as a missed opportunity, an activity incompatible with the unbridled growth of large lumber enterprises.

Having failed to find the balance between lumbering and fishing, the region in the end would have neither one. In 1893, a local newspaper observed that, with the forests of the area growing thin, an economic transformation was about to begin in Albert County. "As the lumber becomes exhausted", it explained, "farming will claim more attention. This our farmers are beginning to realize, and how to best utilize the extensive and valuable marshes as well as the well-watered uplands to the best interests of the present and

future is the question to which they are giving attention".²⁵ The county, it appeared, would fall back upon its fertile land. But Alma Parish, we have already observed, had little fertile land to fall back upon. Its economy was concentrated upon its forests, and even before the turn of the new century, the area began to decline along with its timber.

NOTES

1. "Annual Report of the Department of Fisheries, 1889", *Sessional Papers*, vol. xxiii, no. 12, 1890, section 17, p. 17.
2. See the reminiscences of J. S. Dodge in *The Maple Leaf* (old weekly newspaper published at Albert, New Brunswick), July 2, 1891.
3. Perley, *Reports on the Sea and River Fisheries of New Brunswick* (Fredericton, 1852), p. 142. For the full text of Perley's findings in Alma Parish, see pp. 139-142.
4. "Report on the Salmon Fisheries in Certain Rivers of New Brunswick: 1862", *Journal of the Legislative Assembly of New Brunswick*, 1863, Appendix 10, pp. 1-19.
5. For the changing statistics on production at Point Wolfe, compare the figures in *Statement of Saw Mills and Mill Property in the Province of New Brunswick, 1831* (Saint John, 1831), p. 129, with the following sources: *Saint John Daily Telegraph*, September 3, 1874, *Our Dominion: St. John, Prominent Places and People* (Toronto, 1887), p. 79, and *The Maple Leaf*, October 19 and 30, 1893.
6. "Business done by the Alma Lumber and Shipbuilding Company" in the records of the Ministry of Marine and Fisheries, Public Archives of Canada: RG 23, Access 67/24, TR 66, no. 993, 1-3.
7. Guillaume Amyot, *Parliamentary Debates* (Commons), 1886, Vol. II, p. 956.
8. See the information contained in the folders marked "Sawdust from Alma Lumber and S. B. Co's. Mills on the Salmon River" (RG 23, access 67-24, TR 66, no. 993) and "Enforcement of Saw-dust Act, Point Wolfe River, Geo. J. Vaughan's Mill" Ministry of Marine and Fisheries at the Public Archives of Canada. The information here on the sawdust problem in Alma Parish is drawn largely from the correspondence contained in these folders.
9. "Annual Report of the Department of Fisheries, 1889", *Sessional Papers*, vol. xxiii, no. 12, 1890, section 17, pp. 33-34.
10. See Miles' letter of September 10, 1894, to the Minister of Fisheries, in "Enforcement of Saw-dust Act, Point Wolfe River . . .", no. 1642
11. See Vaughan's letter of July 26, 1894, in "Enforcement of Saw-dust Act, Point Wolfe River . . .", no. 1642-24.
12. See the letter of J. Gordon Forbes of Saint John, dated July 20, 1894, in "Enforcement of Saw-dust Act, Point Wolfe River . . .", no. 1642-16.

13. Letter of May 6, 1896, "Enforcement of Saw-dust Act, Point Wolfe River . . .", no. 1642-52.
14. *The Maple Leaf*, May 2, 1889.
15. "Annual Report of the Department of Fisheries, 1889, *Sessional Papers*, vol. xxiii, no. 12, 1890, section 17, p. 129.
16. See the letter of Edward E. Prince, July 4, 1894, in "Enforcement of Saw-dust Act, Point Wolfe River . . .", no. 1642-20.
17. "Annual Report of the Department of Fisheries, 1897", *Sessional Papers*, vol. xxxii, no. 9, 1898, section 11a, p. 1113.
18. See White's letter of May 2, 1898, in "Sawdust from Alma Lumber and S. B. Co.'s Mills on Salmon River", no. 993-35.
19. See the petition of forty-one Acadian fishermen to Davies, in the folder cited above, no. 993-41.
20. Letter of R. A. Chapman, May 21, 1898, "Sawdust from Alma Lumber and S. B. Co.'s Mills on the Salmon River", no. 993-37.
21. Compare the letters of the Acting Deputy Minister of Fisheries dated July 12, 1894 (PAC, RG 23, access 67/24, RT 90, no. 1580-3), and October 2, 1900 TR 66, no. 993-44).
22. Letter of November 26, 1900, in the folder last mentioned, no. 993-60.
23. *The Daily Telegraph* (Saint John), September 3, 1874.
24. Letter of R. A. Chapman, July 11, 1908, in "Sawdust from Alma Lumber and S. B. Co.'s Mills on the Salmon River", no. 993-76.
25. *The Maple Leaf*, December 21, 1893.