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## A History of Oysters in Maine (1600s-1970s)

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# A History of Oysters in Maine (1600s-1970s)

This is a history of oyster abundance in Maine, and the subsequent decline of oyster abundance. It is a history of oystering, oyster fisheries, and oyster commerce in Maine. It is a history of the transplanting of oysters to Maine, and experiments with oysters in Maine, and of oyster culture in Maine. This history takes place from the 1600s to the 1970s.

## 17<sup>th</sup> Century {}{}{}{}{}

In early days, oysters were to be found in lavish abundance along all the Atlantic coast, though Ingersoll says it was at least a small number of oysters on the Gulf of Maine coast.<sup>86, 87</sup> Champlain wrote that in 1604, "All the harbors, bays, and coasts from Chouacoet (Saco) are filled with every variety of fish. . . There are also many shellfish of various sorts, principally oysters."<sup>161, \*24</sup> In 1614 Captain John Smith voyaged to the Massachusetts and Maine coasts and described the wildlife which included “. . . Pearch, Eels, Crabs, Lobsters, Muskles, Wilkes, Oysters, and diverse others &c. . . . for want of use, still increase, & decrease with little diminution, whereby they growe to that abundance.<sup>107</sup>

After the dissolution of the [Popham Colony](#) in 1608, a small remnant of the settlers were thought to have made their way to the Sheepscot Meadows, whose waters were prolific with the means of subsistence in magnificent oyster beds and shoals of fish.<sup>108</sup> The ancient Sheepscot settlement found in its oyster-beds a source of constant profit, both by consumption and sale.<sup>87</sup>

Down in Massachusetts in 1634 William Wood spoke of great oyster banks in the Charles and Misticke River that obstructed shipping, and barred out the bigger ships.<sup>87</sup> The commissioners of King Charles II reported back to him in 1665 that there were a great store of fish and oysters, crabs and lobsters, in Casco Bay.<sup>162</sup>

## 18<sup>th</sup> Century {}{}{}{}{}

In the 18<sup>th</sup> century Charlevoix wrote, “Oysters are very Plenty in Winter on the Coasts of [Acadia](#), and the Manner of fishing for them is something singular.<sup>163</sup> They make a Hole in the Ice, and they thrust in two Poles together in such a Manner, that they have the Effect of a Pair of Pincers, and they seldom draw them up without an Oyster.”

Ingersoll suggested the oyster-beds in the Sheepscot and George rivers may have been planted by Native Americans who carried over full-grown oysters from the Damariscotta River.<sup>87</sup> An early attempt at oyster planting or oyster-culture occurred in 1711 at Plymouth Harbor, projected by a company of thirty-one persons.<sup>87</sup> Oysters were procured and deposited in a certain place, deemed the most eligible, with the hope that they might thus be propagated, but it was ascertained by the experiment that the flats were left dry too long for their habit, which requires that they be covered in water at all times.<sup>87</sup>

Cyrus Eaton mentions that when people came to settle Warren in 1736, they were chiefly dependent at first on General Samuel Waldo (whom they bought their land from) for supplies of food.<sup>109</sup> The settlers hunted and fished, and clams and oysters were abundant in the St. George River and the Oyster River. In 1753 General Waldo went to London and issued printed circulars inviting emigrants to settle on his lands in the new world. The circulars described the trees, the soil, what can be grown, and the abundance of fish, oysters, lobsters, etc. in the waters.<sup>109</sup>

Since the earliest recorded visits to the Maine coast, the oyster shell heaps at the head of the Damariscotta River have aroused imaginations and curiosities; they have been studied by numerous archaeologists.<sup>80</sup> Castner wrote that there are abundant evidences that oysters grew and thrived in the river at great distances from the shell deposits.<sup>82</sup> One place of considerable extent was Oyster Creek. This small creek leads from the great bay to the farming lands beyond and is some two miles from the deposits. Another small inlet at the head of the bay was known as “Little Oyster Creek.” There were many oysters found there also. It seemed very evident to Castner that

oysters grew over quite an area of the river bottom, yet all the deposit of shells is within an area of one quarter of a mile at the bend of the river.

Tradition asserts that sloops used once to get loads of oysters in the isolated oyster beds of Maine, like those then at Thomaston and Damariscotta, and sell them in the neighboring colonies.<sup>22</sup> In early times oysters abounded in the lower part of Warren in both the St. George and Oyster rivers, and vessels from Portsmouth and other places used to come and carry off whole cargoes of them.<sup>111</sup> At a later date older residents would recall there were plenty of oysters at Salt Bay on the Damariscotta during the latter half of the 18<sup>th</sup> century.<sup>87</sup> Ingersoll related that it was told that in the late 18<sup>th</sup> century smacks used to come from Boston and load up with oysters from the Sheepscot River, though he was inclined to doubt the veracity of the tale.<sup>87</sup>

In 1742 an act was passed by the Province of Massachusetts prohibiting person(s) “to turn or drive any neat cattle, or horse-kind, or sheep, to or upon the islands or beach lying westerly of Billingsgate Bay and south of Griffin's Island (so called) in the town of Eastham.”<sup>112</sup> It stated, “Whereas many persons frequently drive numbers of neat cattle, horse-kind and sheep to feed upon the beach and islands adjoining to Billingsgate Bay, whereby the ground is much broken and damnified, and the sand blown into the bay, to the great dara[m]asce not only of private persons in their employment of getting oysters, but also to the publick, by filling up said bay . . . ”<sup>112</sup>

In 1765 Massachusetts passed a law titled >> AN ACT TO PREVENT THE DESTRUCTION OF OYSTERS IN THE SEVERAL BAYS AND RIVERS HEREAFTER MENTIONED, WITHIN THIS PROVINCE.<sup>113</sup> It began thus, “Whereas it hath been the practice for some years past for persons to come, with their vessels and boats, into the rivers and bays lying either in the towns of Wellfleet, Freetown, Swanzey, Dartmouth, Barnstable, Yarmouth, and in other of the bays, ports and rivers in this province, then and there to rake the oyster-beds, carry away from thence large quantities of oysters, by means whereof said beds are almost destroyed, to the great prejudice both of the English and Indian inhabitants living in or near to the towns aforesaid ; for remedy whereof,--“ prohibiting any persons to sweep any oyster-beds without leave from the selectmen, with a proviso allowing inhabitants to take oysters for their own eating.<sup>113</sup> An addition to the act was passed in 1772 because many persons at Billingsgate Bay principally in the district of Wellfleet made it a constant practice to take, rake, and sweep the oyster-beds at unreasonable times, for sake of gain, by carrying oysters to Boston and other ports, in hot weather, - in which season the oysters so taken are not so wholesome, but it more especially prevents their growth by taking them in the time of their spawning - so that valuable branch of business of taking oysters in the bay aforementioned is in great danger of being spoiled, and the oyster-beds totally ruined, prohibiting the taking of oysters between May 2 and Sept. 20, with the proviso that inhabitants could take oysters to eat, fresh, in their own families during the aforementioned time period.<sup>113,\*21</sup> It was also said that in 1775 a mortality from an unknown cause carried off most of the oysters at Wellfleet.<sup>87</sup>

“An ACT to prevent the Destruction of Oysters and other shell Fish in this Commonwealth” was passed in Massachusetts in 1796, especially to prevent the destruction of oyster-beds by strangers and by those who encroach too far on such common property.<sup>115</sup> It also protected and restricted the harvest of other shell fish, listing the towns in which that section of the Act would operate. Twenty-two towns in eight counties of Massachusetts proper were listed to regulate the taking of other shell fish. Nine towns in two District of Maine counties were also listed to regulate the taking of other shell fish.<sup>115</sup> The Maine towns were: Wells and Arundell in the county of York; and Portland, Falmouth, North-Yarmouth, Harpswell, Freeport, Scarborough, and Cape Elizabeth in the county of Cumberland.\*<sup>17</sup>

The 1796 law allowed the selectmen of any town wherein Oyster-beds lie to issue permits for the taking of oysters.<sup>115</sup> After the passage of the 1796 law Eaton reports that fewer vessels came to the St. George and Oyster Rivers to take oysters.<sup>111</sup> He writes that oysters were already on the decline, either from saw dust washed down from the mills, as some suppose, or from some other causes not ascertained; and oysters had then become so scarce that few took the trouble to search for them.



Figure 1: Fishing for oysters with a rake. (Wikimedia Commons). (Source: University of British Columbia Library)

## 19<sup>th</sup> Century {}{}{}{}

In 1804, according to the treasurer's book, the town of Warren first began to derive a small revenue from the oyster fishery.<sup>111</sup> Small sums from the oyster fishery were occasionally paid into the town treasury up until 1813.\*<sup>16</sup>

### OF OYSTER PLANTING

The New England oyster beds were so mercilessly raked over by the early nineteenth century that New England schooners began harvesting spats (seed oysters) from Long Island Sound and, later, the Chesapeake, for transplanting in their home waters.<sup>147</sup>

The Times of Richmond, Va. defined oyster planting as farming, describing the difference between planting potatoes and planting oysters being potatoes grow on land above the water and oysters grow on land under the water.<sup>42</sup> An 1884 Maryland Oyster Commission report defined oyster planting as the placing of small or "seed" oysters upon bottoms which are favorable to their growth.<sup>85</sup> In an 1897 article in Lippincott Magazine a Calvin Dill Wilson defined oyster-planting as the placing of seed-oysters upon bottoms favorable for their growth, while he defined oyster-farming as the rearing of oysters from the egg.<sup>86</sup>

By planting, the numbers of oysters is not increased, but the conditions are made favorable for a larger number to reach maturity; for under natural conditions the young oysters fasten themselves so close together and in such great numbers that the growth of one involves the crowding out and destruction of hundreds of others, which might have been saved by scattering them over unoccupied ground.<sup>86</sup> Brooks said planting oysters added very greatly to the value of oysters, as they grew more rapidly and are of better quality when thus scattered than they are upon the natural beds.<sup>83</sup>

Oysters had been planted in York Bay, in New Jersey, since 1810. Chesapeake oysters were taken to New York and New Jersey as far back as 1825.<sup>86</sup> The transplanting of "native seed" oysters began everywhere as soon as the natural supply of marketable oysters diminished, and at some points constituted a very large industry.<sup>22</sup> Transplanting seed oysters from one area to another where they then continue to grow to marketable size was also referred to as "bedding."<sup>149</sup>

Certainly the terminology regarding oyster planting, farming, and bedding may have been used interchangeably and confusingly.

September 15, 1804, documentarian extraordinaire [William Bentley](#) wrote in his diary, "Mr. Whitman, Revd., with me from Wellfleet, Cape Cod . . . He reckons the population of Wellfleet at 1300 souls.\*<sup>18</sup> All the Oystermen in all the seaports from Massachusetts to Maine are from this town.<sup>120</sup> They succeed well in the trade. They give 1-16 D. for a tub of Oysters [at New York] containing 2 Bushels, & lay them on the beds at Billigate or Wellfleet. They are paid for their trouble in the increase of their oysters one fifth in weight & measure, in one winter. He thinks the beds might be restored, & says it is often talked about, but habit of easy supply without rivalship forbids the experiment.<sup>120</sup> Necessity hereafter will probably teach them better. . . " William Bentley's library was second only to the library of Thomas Jefferson [Yeah for Libraries!].<sup>175</sup>

In 1821 the new State of Maine passed its own Act for the preservation of certain Fish.<sup>116</sup> It prohibited the taking of oysters all year round, and it prohibited the destruction of oyster-beds, with the exception that a majority of the Selectmen in a town where an oyster-bed lies can issue permits to take oysters from their beds at such times, and at such quantities, and for such uses as they think reasonable. Also, any inhabitant of the town, without such permit, could take Oysters from their beds for the use of his or her family, from the first day of September to the first day of June.<sup>116</sup>

**NEW OYSTER ESTABLISHMENT.**

**J. McDONALD,**

**H**AS removed to the bottom of *Plumb Street* next door to *Barber Johnson's*, where he intends to keep constantly for sale,

**OYSTERS,**

Fresh from the Shell, fried, made into Soup, stewed and curry—Oyster Pies, &c. &c.

*Boots and Shoes polished,*

and every attention paid to the accommodation of those who may please to favor him with their company, and every favor gratefully acknowledged.

Portland, Dec. 17.

Figure 2: An 1822 advertisement in the Portland Gazette.<sup>164</sup>

A Dec. 16, 1828 Eastern Argus advertisement announces that Thomas Hanna has a supply of New York Oysters at his new shop on Market St. in Portland. The ad states, "Constant attendance given from 8 o'clock in the morning to 10 in the evening, and every favor gratefully acknowledged."<sup>117</sup> A Feb., 1829 ad in the same paper announces William Coolidge has received a supply of Virginia Oysters (These are superior Oysters), and they are for sale at the New Market House on Fore Street and at his store near the head of Titcomb's Wharf.<sup>118</sup>

In 1830 the editor of the Portland Advertiser wrote, "... Not an oyster is now found short of New York. And

provided oysters were numerous in the vicinity, what cause has reared up this huge pile of shells? These questions are answered by the old settlers, who say that Damariscotta Bay was once full of oysters, and that not many years ago a few were taken in the upper part of the bay . . ."<sup>119</sup>

**Southern Pine Lumber.**

**O**NE and a quarter inch Flooring Boards—Three inch Plank, and a few sticks Timber.

For sale by **WILLIAM WOODBURY,**  
July, 24. at Railway Wharf.

**New York Transplanted Oysters and Quags.**

**J**UST arrived by schooner *TABITHA* from Wellfleet. Families in the city or country supplied wholesale or retail at head of Central wharf, or at Oyster Shop under Whittier's Tavern.

august 12. \*

Figure 3: An advertisement in the Portland Daily Advertiser, August 21, 1835 for transplanted New York Oysters and Quags from Wellfleet.<sup>165</sup>

## **Fresh New York Oysters.**

**J**UST received at the *Old Stand* under Whittier's Hotel, a prime lot of New York OYSTERS fresh from the beds. Families can be supplied every day from the beds. \* No. 23,

Figure 4: A December 15, 1835 ad in the Portland Advertiser declaring families can be supplied oysters every day from the beds.<sup>166</sup>

## **OYSTERS! OYSTERS!!**

**T**HE subscriber has just received per sch. Jane, a new lot of Oysters. These oysters have not been frozen. and are confidently recommended as first rate. Customers are invited to call while they are fresh, and not wait till they have grown old.

Keepers of Hotels, and. private families will be supplied at their houses. cooked or otherwise  
jan 21 *City Oyster Room, Main-st.*

Figure 5: A Jan. 22, 1836 ad in the Daily Commercial Advertiser of Bangor notifying the public the subscriber has just received a new lot of oysters, and they have not been frozen.<sup>167</sup>



## **LION**

**Refreshment and Oyster Rooms,  
JOSEPH C. BUTLER**

**H**AVING taken the stand formerly occupied by John Brown, at the sign of the Big Lantern, has fitted it up in first rate order, and will constantly keep OYSTERS served up in the best manner. Also a variety of other refreshments. Meals furnished at any hour in the day.— Dinners 20 cents. Cuts 6½ and 12½ cents. Oysters furnished to families in quantities, in any style desired.  
Hallowell, Oct. 7, 1847. 4tf

Figure 6: A November 13, 1847 ad in the Maine Cultivator and Hallowell Gazette for the LION Refreshment and Oyster Rooms in Hallowell declaring they will constantly keep OYSTERS served in the best manner, and that meals will be furnished any hour of the day.<sup>168</sup>

At a later date older residents of the district of the George River would tell that oysters were still plentiful up until 1836, believing their extinction was due to the sawdust coming down from the lumber-mills, and bought in by the eddying tide.<sup>87</sup>

It was noted that in the 1840s a great quantity of young oysters were found collected in the branches of a tree which had tumbled over into the Damariscotta river near the lower end of Salt Bay.<sup>87</sup> And it was noted around this time that only

occasional oysters could be found at Oyster Creek and Salt Bay on the Damariscotta. A Captain Samuel Glidden could remember a bushel of oysters had been taken out of the creek in a single tide.<sup>148</sup>

A confluence of factors accounts for the expansion of oyster consumption in America in the 1800s: waterborne commerce, the establishment of a canning industry, the building of the transcontinental railroad between 1840 and 1860, and the California Gold Rush of 1849.<sup>98</sup> The United States expanded along its waterways, and oyster consumption expanded right along with it. Oyster restaurants and oyster taverns were opening all over America's larger waterfront cities.<sup>98</sup> Oysters were cheap in the 19th century: Charles Dickens (1812-1870) wrote, 'Poverty and oysters always seem to go together.'<sup>98</sup>

In 1820 New Jersey permitted individuals to store oysters on unoccupied sea bottom, thereby allowing private control of formerly common ground.<sup>79</sup> Similar legislation followed: Rhode Island (1827); Maryland (1830); Connecticut (1842).<sup>79</sup>

In 1849, the Maine Legislature approved an act to encourage and protect the planting of oysters.<sup>16</sup> The act gave every inhabitant of the State of Maine the right to lay down or plant oysters, below the low water mark, in any of the navigable waters of the state, provided the planter obtained the consent of the owners or occupants of the adjacent shores.

The act specified the manner of enclosing such an area with stakes; it granted the planter the exclusive right and privilege of taking up and disposing of such oysters in that enclosed area.<sup>16</sup> Inhabitants though were not allowed to mark, stake, or enclose any natural oyster bed which all citizens had a common right to. Also, citizens could not obstruct the free navigation of waters.

The act had been petitioned for by Bangor merchants Wm. H. Vinton and Asa Porter.<sup>63</sup> They explained that the course of their business required them at great expense to obtain and deposit annually near the mouth of the Penobscot River a large quantity of oysters in order to furnish them fresh and superior quality in the market of Bangor. The purpose of their petition was to protect their oyster deposits from the depredations of evil disposed persons.\*<sup>7</sup>

Because of this new act, trespassers on such enclosures were liable to the oyster planter for any damages they caused that planter's oyster plot.<sup>16</sup> Offences committed at night were to be punished more severely than offences committed during the day. The punishment was a fine or jail time. In 1870 the revised statute allowed for the same punishment for offences committed during the day, as those offences committed during the night--the offender shall forfeit not exceeding twenty-five dollars, or be confined in jail not exceeding three months.<sup>18</sup>

During these years oyster dredges were used in the Long Island Sound, leaving few oysters for reproduction, and the Long Island oyster beds were quickly exhausted.<sup>81</sup> Similarly the disappearance of oysters off Cape Cod forced Massachusetts to import large numbers of the tasty bivalve in the 1850s. New England dredge boats soon entered Chesapeake Bay, and their reports of abundant seafood brought on a great oyster rush. Marylanders protested against the "plundering Yankee drudgers" and passed a law banning oystering by nonresidents.<sup>81</sup>

During the winter, the oysters which are taken north are used for immediate local consumption, while those taken in the spring are used almost exclusively for bedding purposes.<sup>158</sup> The oysters planted in the spring were left to grow over summer and sold during the subsequent fall.<sup>158</sup>

To the Hon. Senate and House of Representatives  
of the State of Maine in Legislature Assembled.

The undersigned, citizens of Bangor,  
respectfully represent that the course of their business  
requires them, at great expense, to obtain and deposit  
annually near the mouth of the Penobscot river, a  
large quantity of oysters in order to furnish them  
fresh and of superior quality in the market of  
Bangor. The deposits thus made by them are liable  
in the absence of any law for their protection, to the  
degradations of evil disposed persons. They therefore  
pray your honorable body to make such provision  
by law for the protection of that species of property,  
and for the punishment of offenders, <sup>against the State</sup> as may be  
deemed just and expedient. And as in duty  
bound will ever pray.

Bangor April 3. 1849-

Wm. H. Vinton  
Asa Porter

Figure 7: The 1849 petition of William Vinton and Asa Porter for a law to plant and protect oysters in Maine.  
(Courtesy of the Maine State Archives).

**OYSTER SALOON  
AND BATHING ESTABLISHMENT.**  
*In the Granite Front Building, nearly opposite  
the Mansion House.*  
**BY SYLVESTER WILLIS.**  
**O**YSTERS Fried, Stewed, or in any other form,  
served up at the shortest notice.  
**BATHING ROOMS** open on **WEDNESDAYS**  
and **SATURDAYS** of each week.  
All kinds of Confectionary kept constantly on hand.  
Also, Cigars of the best qualities, &c., &c.  
Augusta, April 24, 1849. 17

Figure 8: A June 7, 1849 advertisement in the publication "The Age" for an Oyster Saloon and Bathing Establishment in Augusta.<sup>169</sup>

 **OYSTERS!** 

At 62 1-2 Cents per Gallon, or Bushel.  
**NEW OYSTER HOUSE.**  
**THIS DAY RECEIVED, A CARGO OF OYSTERS.**  
**T**HE subscribers having taken the Building on  
**FEDERAL STREET**, east of the Elm House,  
would inform the public that they intend to carry on  
the **OYSTER BUSINESS** in all its branches. Having  
engaged a Line of Clipper Schooners, with experienced  
masters, we purchase our Oysters at the best beds in  
Virginia and Maryland; by so doing we can sell us  
low as any Oyster establishment in New England.  
Dealers in Oysters in the cities and towns east of  
Portland, who have before purchased in Boston, will  
find it to their advantage to be supplied from Portland,  
for we are ready to supply Oysters in any quantity, at  
the shortest notice.  
**FREEMAN & HOPKINS.**  
Portland, Dec. 2, 1852. islawif

Figure 9: A December 28, 1852 ad in the Portland Advertiser for a new oyster house exclaiming they have engaged a line of clipper schooners with experienced masters, and they buy from the best beds in Virginia and Maryland, and by thus doing they can sell as low as any oyster establishment in New England. The ad also advises the advantageousness of cities and towns east of Portland to buy their oysters from Portland rather than from Boston.<sup>170</sup>

In 1854 the Maine Farmer noted an act pending before the Legislature providing for the planting and preserving of oysters in St. George River, and expressed the sentiment that this business will proceed.<sup>17</sup> The article writer noted the whole system of raising this excellent shellfish was not yet known. The author wrote, "A great deal of research and many experiments are needed before it can all be perfectly understood."

The act was called “An Act granting power to plant and protect oysters in the bed of Georges River in Lincoln County.”<sup>90</sup> The petition for the law was referred to the Committee on Interior Waters, then it was passed by the house and the senate, and it was enacted into law. Section 1 of the act reads >>

Job Spear, Seth Summer, & David H Summer of Warren in County of Lincoln, their associates, successors, and assigns, are hereby created a body politic and corporate by the name of the “Warren Oyster Company” for the purpose of planting, propagating and preserving oysters in the waters of Georges River and tributary streams in said Warren.<sup>90, \*15</sup> <<

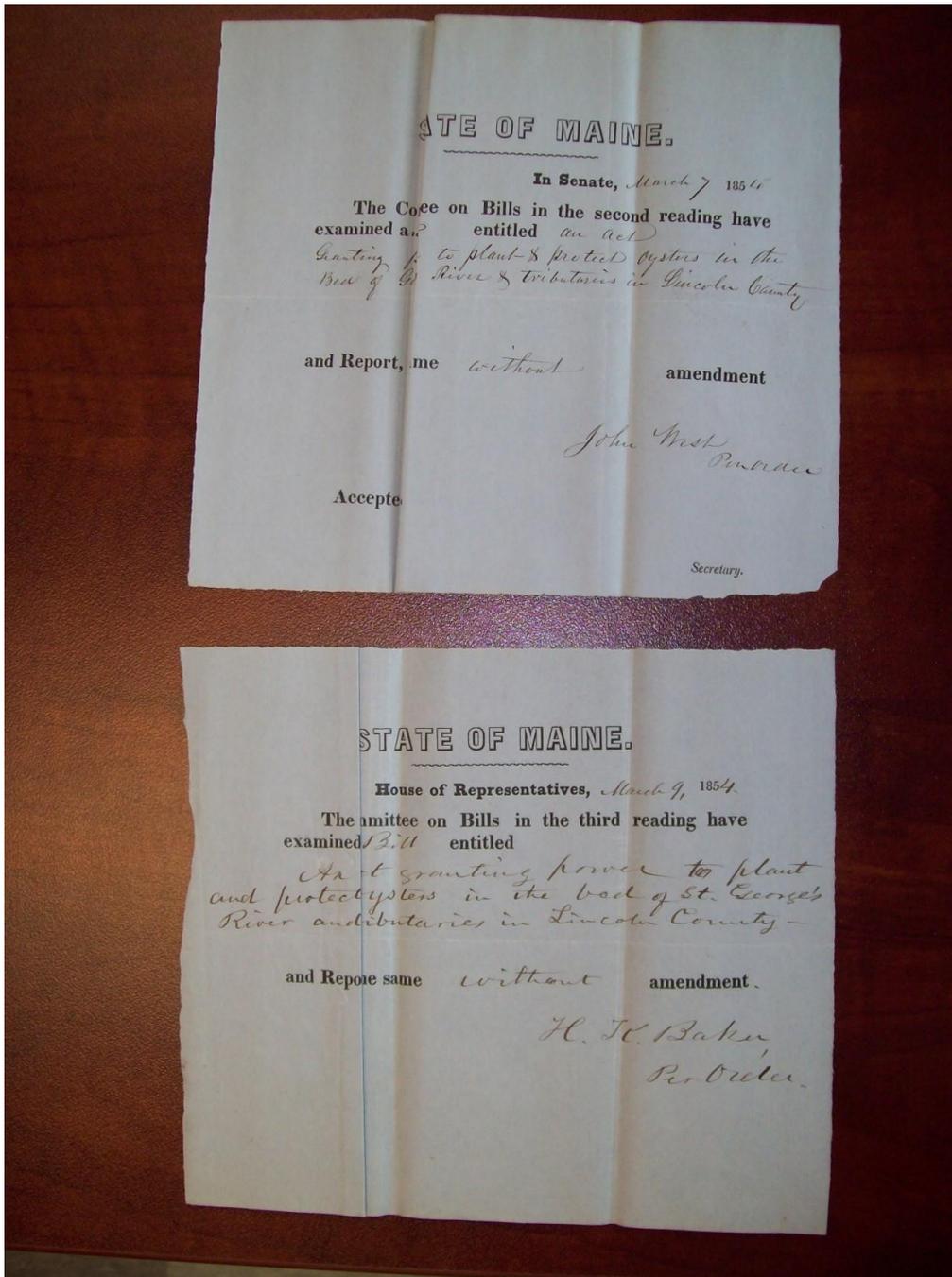


Figure 10: Bills that passed the Maine Senate and the Maine House of Representatives creating the Warren Oyster Company in 1854. (Courtesy of the Maine State Archives)

In 1855 Connecticut oystermen began to practice aquaculture, buying or leasing underwater plots and taking young oysters from natural beds to grow in these artificial beds.<sup>79</sup> During the oyster boom in the Chesapeake in the sixties, seventies, and eighties the American and foreign demand for oysters advanced faster than the supply.<sup>81</sup> As James Richardson concluded in Scribner's Magazine in 1877, "If every acre of available coast water, from Cape Cod to the mouth of the Chesapeake were brought under cultivation, it is doubtful whether the supply of oysters could even outrun the demand." Added another Maryland observer, "Nobody tires of oysters. Raw, roasted, scalded, stewed, fried, broiled, escalloped, in pâtés, in fritters, in soup, oysters are found on every table, sometimes at every meal, and yet no entertainment is complete without them."<sup>81</sup>

That 1854 act was amended later that year; The words "and tributary streams" were removed from the law.<sup>91</sup> The area of the Georges river (St. George River) the state granted the new company started at the Narrows in Thomaston, and went through the town of Warren to the head of the tide.<sup>90</sup> The company was required to commence planting and propagating oysters within two years after the act was passed, otherwise the law would become inoperative.\*<sup>10</sup> It was reported that oysters were planted in the Oyster River near the George, in 1853, but without success, though a few living large ones were taken there in 1864.<sup>87</sup>

 James Freeman, the "Oyster King", of Portland, Maine, has sent a keg of oysters to every editor in that State.

Figure 11: On New Year's Eve, 1857, it was announced in The New-London Weekly Chronicle that James Freeman, the "Oyster King", of Portland, Maine, has sent a keg of oysters to every editor in that state.<sup>142</sup>

**O Y S T E R S .**

 The subscriber takes this method of informing his friends and customers that he will be constantly supplied with the *choicest selection of*

**FRESH VIRGINIA OYSTERS,**

Shipped directly to him through the winter, and is now ready to contract to supply dealers and consumers at a reasonable rates as any other Oyster House in New England, and at as short notice. His facilities are such that he can pack and forward large quantities immediately on receipt of orders, causing the least possible delay.

On hand **KEGS and CANS** of all sizes, which will be put up either **Solid or Liquor**, as the order may direct.

All orders enclosed in an envelope and addressed to the subscriber, can be sent by mail or express, and will be sure of prompt and personal attention.

**JAMES FREEMAN,**  
53 and 55 Federal St., east of Elm House, Portland, Me.  
November 10, 1859. ised2m&wlm

Figure 12: James Freeman advertises in the December 6, 1859 Portland Advertiser, that he has on hand kegs and all sizes of cans of oysters which will be put up either Solid or Liquor, as the order may direct.<sup>171</sup>

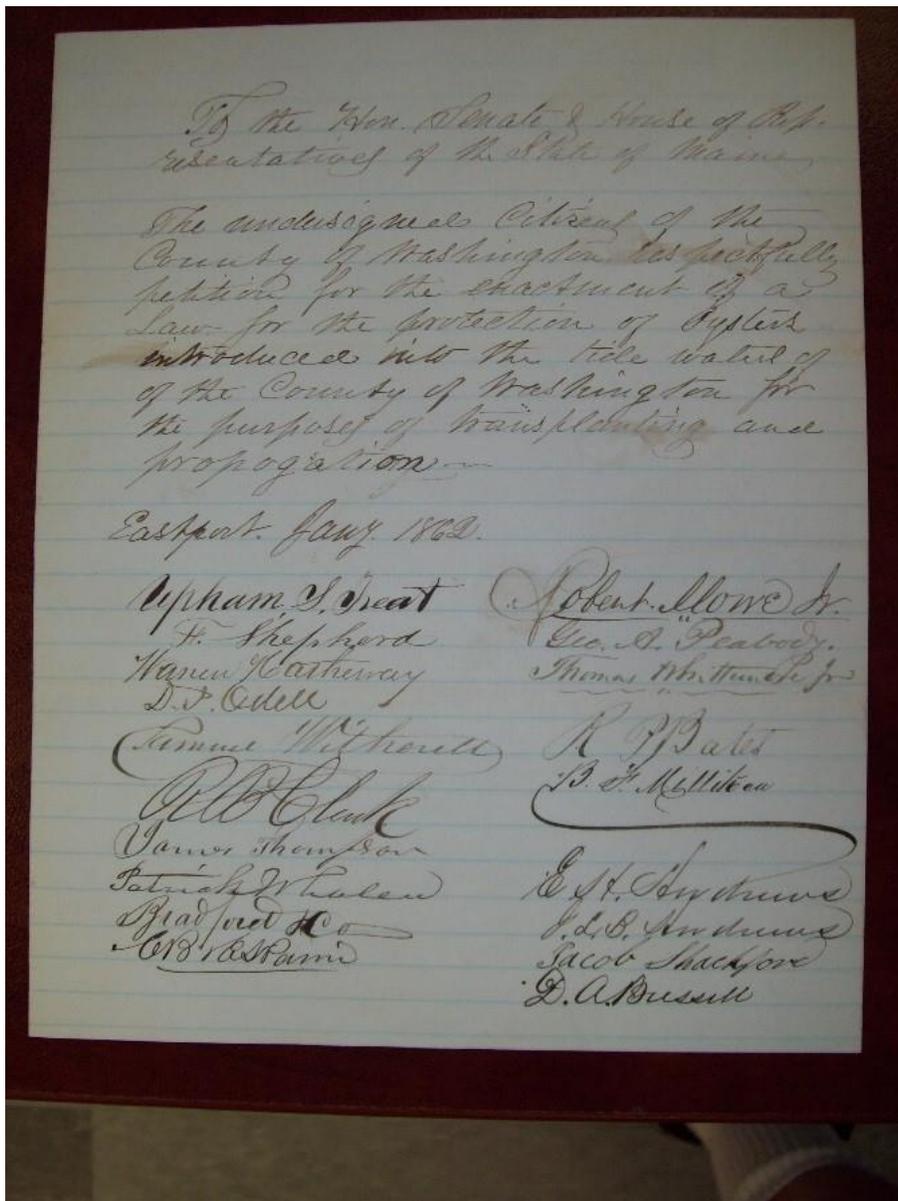


Figure 13: The 1862 petition to the Maine Legislature for a law that protects oysters introduced into Washington County tide waters for the purpose of transplanting and propagation. (Courtesy of the Maine State Archives).

In 1862 some Washington County residents petitioned the Legislature to form an oyster company.<sup>92</sup> The petition for the law was referred to the Committee on Fisheries, then passed the house and senate, and was enacted into law. Section 1 of the act reads >>

Upham S. Treat, Franklin Treat, Forest Shepherd, Robert Howe Jr., and Joseph Sanborn Jr., their associates, [successors?], and assigns, are hereby created a corporation by the name of the Maine Oyster Company for the purpose of introducing and transplanting oysters in the harbors, bays, and estuaries of the County of Washington in this state for the purpose of breeding and propagation with power by that name to sue and be sued, use a common seal, and have all the privileges and powers, and be subject to all requirements granted or required by the laws of the state.<sup>92, \*22</sup> <<

Mr. Upham Treat conducted his own fisheries research. See Note # \*22

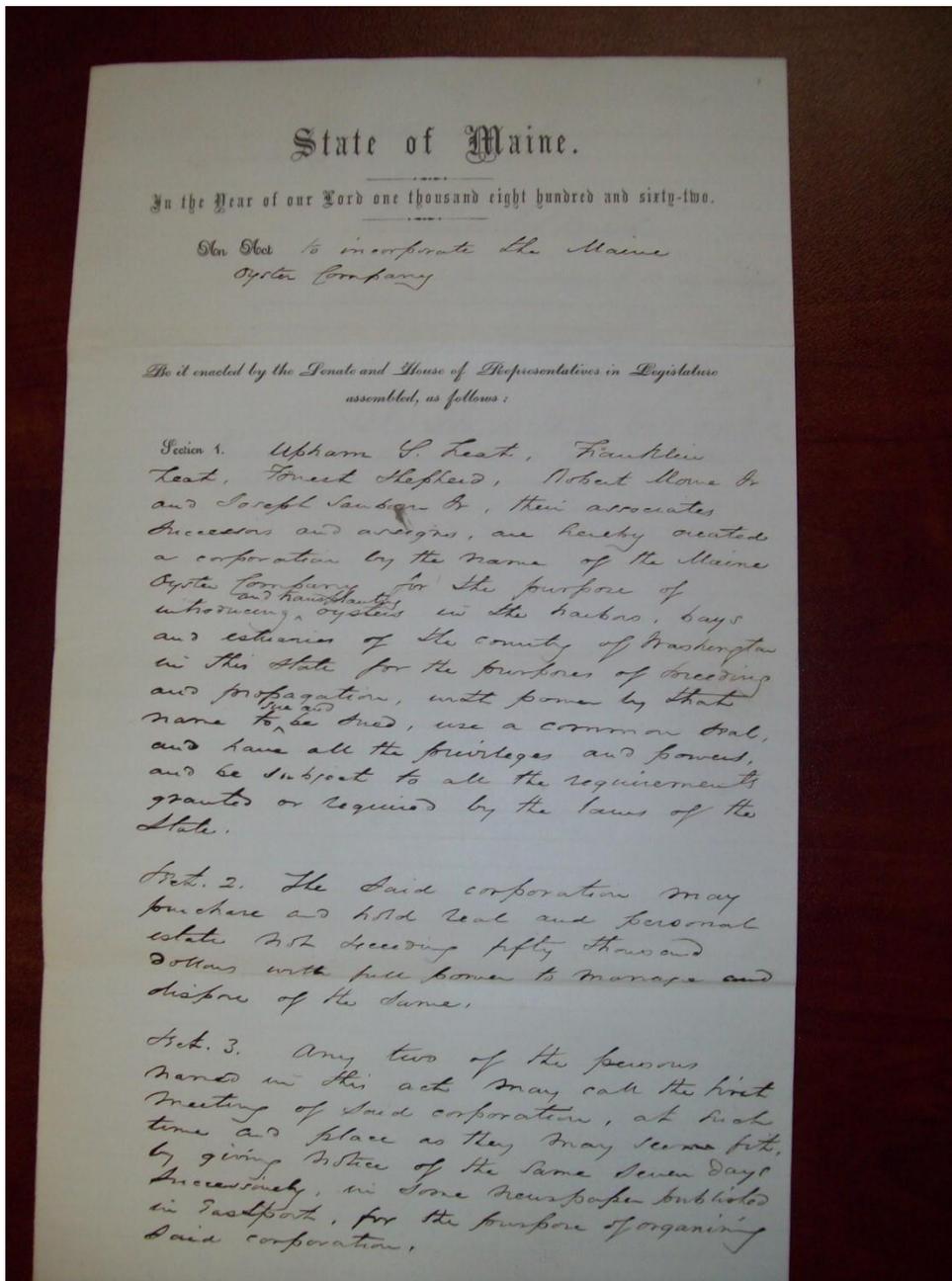


Figure 14: First page of an 1862 legislative bill authorizing the incorporation of the Maine Oyster Company.<sup>92</sup> The 2nd page contains one other section which reads: This act shall take effect [?] after its approval by the [?]. (Courtesy of the Maine State Archives).<sup>\*12</sup>

That 1854 act incorporating the Warren Oyster Company provided protections and penalties in Section 5 of the statute against those persons who would “willfully destroy, disturb, or obstruct the growth of any oysters where the same may have been planted or propagated.”<sup>90</sup> This 1862 law incorporating the Maine Oyster Company provided no such remedies.<sup>92</sup> Subsequently Upham S. Treat and others petitioned the legislature next year for a law to protect oysters introduced into tide waters of Washington County for the purpose of transplanting and propagation and thus providing for those remedies.<sup>93</sup> This law failed to pass and the bill was sent to the legislative graveyard.<sup>\*10, \*12</sup>

In an article titled “Oil Vs. Oysters” the Portland Daily Advertiser reports on 19 June 1863 the bark Hebron, which had on board some 8000 barrels of petroleum oil for the European market, has been

libeled for damages done to the oyster beds at Portland Harbor.<sup>140</sup> It was thought that the immense weight of the cargo crushed the lower tiers of barrels in the hold, and the oil was pumped out into the harbor while the bark was lying at Victoria Wharf, which destroyed several beds of oysters planted near the Cape, valued at some seven thousand dollars. The article ended by stating, “The oil can be seen on the surface of the water in our harbor in all directions.”<sup>140</sup> A later article in the *Maine Cultivator and Hallowell Gazette* reported the bivalves were not killed, but so impregnated with the offensive odor of the oil as to be made worthless.<sup>141</sup>

Another June 20<sup>th</sup> article from the *Daily Eastern Argus* reports, “We learn from a gentleman well informed in the matter that the *Hebron* has been at the wharf but a short time, had only about about 2,750 instead of 8,000 bbls. of the oil for cargo,—that it was well stowed,—that, according to his information, the barrels were not crushed by the weight, and that but very little oil could have come from the vessel. He thinks it came from other sources. The matter is to be legally adjudicated and will involve interesting points of law. The *Hebron* sailed with her cargo for Cork on Thursday. [June 18]”

Years later, in 1866, an English weekly, commented that oysters at once take on the flavor incidental to their surroundings.<sup>123</sup> They then related, “A vessel laden with petroleum having foundered in the Bay of Portland, Maine, every oyster taken there for a long period had the flavor of coal oil ; the hungry bivalves having fattened upon the oil of the Pennsylvanian wells, just as consumptive patients do on the oil extracted from the liver of the cod.”

The oil spill happened a week or so before the [Battle of Portland Harbor](#) . The *New York Times* reported on the 28<sup>th</sup> of June, THE REBEL PIRATES: A Daring Adventure in Portland Harbor. The Revenue Cutter Caleb Cushing Cut Out by Men from the Pirate Tacony. Prompt Pursuit by Two Armed Packet Steamers. The Cushing Abandoned and Blown Up by Her Captors. The Rebels All Captured and Taken to Portland. Their Intention to Destroy Two Gunboats on the Works.<sup>121</sup> This ended a 2 or 3 week spree of destruction in which Confederate Lt. Charles W. Read and his crew burned or captured more than twenty merchant vessels causing widespread panic and consternation in the Northern cities. \*<sup>19, 122</sup>

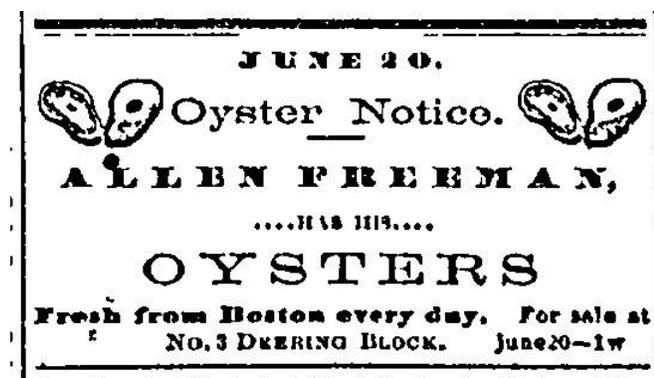


Figure 15: A day after the oil spill was announced in the *Portland Daily Advertiser*, Allen Freeman advertises his Oysters are fresh from Boston every day.<sup>172</sup>

Under the heading of Marine Aquaculture, in the Ninth Annual Report of the Secretary of the Maine Board of Agriculture, the production of the oyster was treated.<sup>125</sup> It noted the oyster shells and mounds to be found on some parts of the coast, and that there were few oysters to be found now.<sup>125</sup> The report states, “Whatever may have been the real cause of the decrease of oysters in our own waters, there are undoubtedly many locations where, with care and attention, they may be now successfully propagated. This is evident from the fact that they do still exist here.”

The report then went on to tell how to breed oysters.<sup>125</sup> It stated breeders must place solid bodies, that these animalculae, these almost invisible oysters, could meet and stick to. Breeders must select a suitable location where there shall not be any very swift currents. It goes on to instruct, “Procure oysters on or before the month of May, and deposit them. Then place frameworks of wood, or hurdles like fish weirs, around and among them, which the young floating oysters shall meet and adhere to. Yankee

ingenuity will not be slow to contrive fixtures for this purpose, and applicable to the location where they are wanted.” The report then described different apparatus that were successfully used for this purpose in Europe.<sup>125</sup>



**EAGLE  
OYSTER HOUSE!**

Lovers of the “Genuine”  
**Providence River Oysters,**  
Would benefit themselves as well as the proprietor,  
by calling at his place,  
**No. 139 Fore Street.**  
N. B. A Free Lunch served at all hours every day.  
Remember 139 Fore Street.  
feb1tjel0 **G. L. WELANDER.**

Figure 16: February 12, 1864 ad in the Portland newspaper, Eastern Argus.<sup>173</sup>

The report then ended the section on oyster culture by asking, “Are there not thousands of such places on the coast of Maine, now comparatively unproductive, that, with very little capital and labor, might be converted into rich and productive oyster banks, affording innocent and nutritive luxury to the community and remunerating profit to the proprietors?”<sup>125</sup> An 1865 article in the Daily Eastern Argus titled “The Profits of Oyster Farming” notes the rapid growth of this industry on the

Isle de Re.<sup>126</sup>

In the latter half of the 19th century and the beginning of the 20th, reports and notices of oyster suppers being held across Maine abound in Maine newspapers. Americans were enveloped in a “great oyster craze;” No evening of pleasure was complete without oysters.<sup>158</sup>

**WEBSTER & BURNS'**  
GENTLEMEN AND LADIES'  
**Oyster Saloon**  
3 Deering Block, Congress St.,  
PORTLAND, MAINE.

**T**HE subscribers have taken the above saloon, which is one of the most elegantly fitted and furnished in the country, and will serve the choicest and freshest of all kinds of oysters. They have secured the services of skillful cooks and polite attendants and will give satisfaction to all patrons.

Oysters for sale by quart or gallon. Orders by mail or telegraph will be promptly filled.

GEO. WEBSTER, JOHN BURNS,  
dec21f

Figure 17: This ad is from a March 9, 1868 issue of the Daily Argus. It appeared all winter after the oysters arrived on December 21, 1867.<sup>174</sup>

Nov. 13, 1866, the Daily Eastern Argus reports the LOSS OF AN OYSTER LADEN SCHOONER. Bound for Portland from Chesapeake Bay, it struck a rock east of [Boon Island](#) and was lost.<sup>20</sup> The cargo consisted of 2000 bushels of the best oysters that had ever been dredged for this market, and was owned by James Freeman, Timmons & Hawes, and others of Portland.<sup>127</sup> There was no insurance upon it. The article goes on to say, “Oyster lovers may regard this loss as a personal one in consideration of the superior quality of the cargo and the fact that it will be some weeks before the arrival of another.”<sup>127</sup>

The oyster business is thriving in Portland after the Civil War. In a December 1868 advertisement the Oyster King James Freeman announces his oysters are selling at the lowest Boston prices, having Chartered six fast Clipper Schr’s to supply him with Oysters during the winter from the best Oyster Beds of Virginia and Maryland.<sup>129</sup> In 1869 an ad for the Federal street oyster dealers in Portland, the H. Freeman & Co. states, “Oysters are now not only a luxury but a reasonable indulgence.”<sup>130</sup> The Night Compositors on the PRESS and the Argus of Portland determined to have an oyster bake instead of the common clam bake.<sup>143</sup> Held on Saturday Oct. 9, 1869 at “Brimstone Point,” it was declared a grand success in the Monday edition of the PRESS, and stated they were deeply indebted to the oyster king, Mr. James Freeman, for the many

kindnesses he showed them, and to whom that success was largely due.<sup>143</sup> An 1870 ad declares H. Freeman & Co. at 101 Federal St. in Portland as the Oldest Oyster House in the city.<sup>135</sup>

**THE OYSTER TRADE.**—Portland is the leading point of supply in the oyster traffic for a large portion of the Canadas, New Hampshire and all Maine. Atwood & Co., are the chief dealers and their business is very extensive. They have arranged this winter to receive their oysters direct from Virginia by the tri-weekly steamers from New York to this port, and will therefore not be dependent upon the uncertainty of sailing craft, but will be able at all times to fill orders promptly with fresh oysters. Our friends in the interior should make a note.

Meantime the Atwood restaurant on Center street has been refitted for the season and the gents lurch, dinning and oyster room in charge of Mr. John Kilbride, is all that could be desired and the ladies department is a gem in its way. There you can always get that which is choice, well cooked and well served.

**THE OYSTER BUSINESS.**—The time is at hand when the oyster business will be brisk in our city, not only for the local supply, but for the country demand and for the Canada trade, which has grown to very large proportions. We noticed the preparations of Messrs. Atwood & Co.; for the business a few days since, but they are by no means the only ones prominent in this trade. Mr. James Freeman is perhaps the oldest and largest dealer, confining himself chiefly to the wholesale trade. Messrs. Timmons & Hawes, Market Square, are also noted for the care and perfection for which they put up oysters to order, or serve to their customers.

Oysters are also served by all the restaurant keepers in the best styles. Mr. Barnum, under Lancaster Hall, Messrs. Webster & Burns, in Deering Block, Congress street, Mr. Samuel Kyle, under the Falmouth Hotel, the Messrs. Freeman, on Federal street, Mr. Nettles, on Middle street, and others, will always be found ready to wait upon their customers.

Figure 18: Some October, 1868 Portland newspaper articles.<sup>128, 132</sup>

**MR. JAMES FREEMAN, the Oyster King, has established great popularity all over the State by his courteous and gentlemanly dealing with the trade. His oysters may be relied on as being just as he says.**

Figure 19: Ad in the Oct. 11, 1869 Eastern Argus.

[Web links to a few images of 19<sup>th</sup> century Maine oyster establishments \[Zoom In\]](#)

[Timmons & Hawes Wholesale Oyster House | Portland | ca. 1870](#)

[M.W. Woodman Fish & Oysters | Rockland | ca. 1875](#)

[H.A. Harding Oyster House | Portland | 1892](#)

THE oyster trade of Virginia will be likely to suffer if there is any truth in the report which reaches us that a shrewd Yankee in Maine has discovered a compound that is equal to our delicious bivalve. It seems that his patent oyster is made out of flour, tapioca, salt and water. The inventor puts these in second-hand oyster shells, which are carefully glued around the edges. We should like to see one of his real imitations of the York River or Lynnhaven Bay oysters. What next will "the universal Yankee nation" undertake to do? Can they beat all "natur?"

Figure 20: This somewhat or somewhat not amusing little article appeared in an 1873 issue of the Lynchburg Virginian.<sup>19</sup>

The oyster fisheries, as far as the canning industry is concerned, suffered a severe shock during the financial [Panic of 1873](#), although the panic did not seem to affect consumption of the oyster while fresh.<sup>134</sup> Between 1869 and 1875 the number of oysters shipped to Portland increased from 33,369 bushels to 71,673 bushels.<sup>87</sup> The wholesale price for a [bushel](#) of oysters ranged from 50 cents in 1869 to 35 cents in 1879, while the retail price for a bushel was a dollar in 1869 and 55 cents by 1879, though during the summer when no oysters could be had from Virginia the price could go up to \$1.50.

In 1876 one local newspaper reports the Maine Legislature is looking to a general law to protect the planting of oysters.<sup>20</sup> The law increased the fine--to people who trespass on an oyster enclosure, or to people who take oysters without consent of the enclosure's owner--to not less than twenty nor more than fifty dollars, or be confined in jail not exceeding three months.<sup>21</sup>

In an 1877 news article titled "Magazine Notices" the Portland Daily Press noted, "James Richardson's paper on American Oyster Culture (also illustrated) is not a compilation of statistics, but an interesting account of the methods employed in American waters for the culture of the oyster."<sup>136</sup> Written in Scribner's Magazine, it described the discovery of successful culturing with prepared shell stock.<sup>149</sup>

On January 9, 1879, an article in the Portland Daily Press announced the arrival of the oyster schooner Mary Steele with a cargo of 2700 bushels of oysters from the Rappahannock River.<sup>137</sup> The paper noted, "There has been an oyster famine not only in Portland but in Boston for some time time [sic] past, and the Mary Steele was hailed with joy."

In the 1880s a few hundred bushels of oysters were bought from the Chesapeake or Long Island Sound, to Portland Harbor or Casco Bay. There they were laid down on the flats in the summer to fatten.<sup>84</sup> It was said they will not live through the winter, and usually are not allowed an opportunity to attempt the experiment.<sup>84</sup>

Statistics for the oyster industry in 1880 revealed Maine was the only state in the U.S. oyster industry that did not produce any bushels of oyster.<sup>22</sup> The value of oysters sold by the oyster industry in Maine was \$37,500 for that year. This amount represented simply the enhancement of the oysters, the first cost being included in the Maryland and Virginia statistics.\*<sup>8</sup> The number of bushels enhanced in Maine was 75,000 bushels. In 1880 5 fishermen and 10 shoremen were involved in the Maine oyster industry.<sup>22</sup>

Ingersoll described the Portland oyster industry in 1881, reporting on its history, "No oysters are native at Portland, and the city is supplied directly from the Virginia producers."<sup>87</sup> The real beginning of the oyster-trade in Portland was made by James Freeman, about forty years ago, and two ship-loads from the South, amounting to, say, 200 bushels a year, filled the demand of Portsmouth, New Hampshire, and Portland together. Sometimes, also, a ship-load would be bought from Staten Island to Wellfleet, on Cape Cod, and laid down, to be drawn upon during the summer.<sup>87</sup> It was not until a few years ago that four merchants began to charter a vessel or vessels to run south and buy oysters, to be divided between them . . . "

Ingersoll also reported at the then present activities of the oyster business, writing, "The vessels employed in carrying the oysters are mackerel-schooners clearing from Cape Cod ports."<sup>87</sup> They spend the summer in fishing and the winter in this trade. In 1878, the Mary Steele, Nathan Cleaves, Mary Whorf, and H. E. Willard were engaged. An average load is about 3,000 bushels, and a voyage in March has been made in ten days, but the usual time is from three to four weeks."

He further writes, "As the weather begins to warm in the spring, all the surplusage of each cargo which each dealer can spare, is sent about five miles down Casco bay in large, open boats, and dumped overboard on the flats for summer-keeping. These oysters improve in quality, fatten up, and the shells add a "feather edge", often of remarkable size."<sup>87</sup> It is estimated that one-fourth at least of these will

perish, while the increase in value is only from 20 to 25 cents more than when they were put down. In consequence, the practice has fallen into disrepute, and only one merchant now beds extensively.”

Ingersoll commented on the present state of the Portland oyster industry, writing, “That there has been no growth in the business of importing and selling cargo-oysters commensurate with the growing population and the cultivated palates off the region tributary to Portland is acknowledged.<sup>87</sup> The late depression in prosperity has made itself felt here, since the oyster ranks among luxuries. Neither so large prices, nor, proportionately, so wide profits, can now be obtained. This is ascribed by all dealers to the new fashion of buying oysters already opened in Norfolk and other areas in the South, and bringing them here in barrels and cans.” He also talks about the number of families the oyster trade supports, and the wages different workers earned.<sup>87</sup>

An October 25, 1880 ad in the Portland Daily Press for Timmons & Hawes announces they have OYSTERS for sale, both Planters and Shippers.<sup>138, \*25</sup>

Figure 21 is an 1880 advertisement in the newspaper, *Republican Journal*, for Collins’ Fish and Oyster Market in Belfast, Maine.<sup>23</sup> The market is selling Providence Oysters, and the advertisement boasts that Collins’ facilities are such that their prices for this famous oyster are lower than any other place in the city. The ad states: We plant our own oysters and take them fresh from the water every day, thus assuring our patrons of a perfectly fresh oyster, not surpassed by any in the state.\*<sup>3</sup>

In March, 1881, it was reported the state senate had passed a bill to be engrossed authorizing J.A. Creighton to plant and preserve oysters in Georges river [St. George River].<sup>24</sup> It assigned exclusive right to James A. Creighton to plant, propagate and preserve oysters in the waters of the Georges river and tributary streams; it gave him exclusive right to occupy the bed of said river and tributary streams below low water mark at any point between the head of tide and the lower narrows. Said Creighton and assigns were required to commence planting oysters within 2 years of the passing of this act (March 9, 1881), or the law would become inoperative.<sup>25</sup>

The *Republican Journal* reported 31 March 1881 that Civil War veteran Allen J. Maker of Rockland is contemplating planting an oyster bed in the harbor between Crockett and

Figure 21: 1880 ad for Collins’ Fish & Oyster Market in Belfast, Me. [Source: [19th Century U.S. Newspapers](#) ]

Jameson Point.<sup>26</sup> The Journal reports on April 14 that A.J. Maker is going to plant several oyster beds at Rockland Harbor.<sup>27</sup> It also reports he is in company with Capt. J. A. Creighton, and contemplating planting a bed in the Georges river, for which purpose the two have gone to Boston to arrange for the enterprise.<sup>27</sup> April 28 the paper reports Mr. A. J. Maker of Rockland will begin planting oysters this week and will put down some 300 bushels.<sup>28</sup> The paper relates a statement from the Free Press saying, “There is no doubt that oysters can be propagated here as they have been in former times and the best quality of bivalves be raised in our waters.”<sup>28</sup> On May 19, 1881, the Republican Journal reports Mr. Maker has planted several bushels of oysters in the Gig Pond, South Thomaston.<sup>29</sup>

In 1881, Ernest Ingersoll, wrote, “. . . oyster culture proper, the propagation of oysters in permanent beds, which annually increase by their native spawn, remains almost unknown in the Gulf of Maine . . .”<sup>87</sup> He also writes that oysters occasionally have been dropped into the tide waters below the bridge in Damariscotta and have afterwards been fished out grown to a large size.<sup>87</sup>

In an 1881 news article the Portland Daily Press printed, “. . . Deterioration of American Oyster-Beds, by Lieutenant Francis Winslow, of the United States Navy, follows next, and is full of useful information, bearing directly upon one of the most important problems affecting American food supply. . . .”<sup>139</sup>

In 1882 the Maine Farmer noted there are no oysters in the Damariscotta/Newcastle region now, and none of the inhabitants there has seen a living oyster, though it was said among them that their fathers had obtained oysters long ago.<sup>88</sup>

In the summer of 1886, a paragraph appeared in a column titled *Gatherings from Our Exchanges* in an August issue of the Biddeford Daily Journal.<sup>1</sup>

It reads >>

Several years ago Messrs. W. N. Child and F.S. Knowlton planted a colony of oysters in Damariscotta river, and the result of the experiment has been regarded with great interest.\*<sup>1</sup>, \*<sup>2</sup> The oysters are now a temptation to local poachers. <<

September 25, 1886, the Biddeford Daily Journal announced that there are plenty of oysters.<sup>30</sup> The paper states, “Since the first of September there has been a large demand for the succulent oyster. Those who love the oyster, and know what a good oyster is, will rejoice to hear that the outlook was never better than now. The great run immediately in prospect is destined to be in small and medium sized oysters. The oyster beds are in prime condition, so that the supply will fully satisfy the demand.\*<sup>4</sup> There has been less trouble than usual from drum-fish, stars, borers and other destroyers of the oyster. These pests are sometimes vexing and expensive, as they can use up an oyster bed in short order, and no way has yet been found to avoid them. All that can be done is to watch the beds closely, take up the oysters, and after picking off the pests, put the oysters back.<sup>30</sup> Prices for all kinds of oysters will probably remain the same as last year.”

An article in the Feb. 3 1887 issue of the Republican Journal titled OYSTER CULTURE reports a bill was presented in the legislature that would grant Charles H. Burd of Belfast “the exclusive right and authority to use the tide waters in Belfast river and Belfast bay, from Sears’ Island to Saturday Cove, in Northport, for the cultivation and propagation of oysters for the term of twenty-five years.” The article writer says the product of this oyster garden would be exempt from taxation for 10 years, and that

Mr. Burd some time since planted several bushels of oysters near the mouth of Little River.<sup>31</sup> The paper felt the application to the legislature indicated the experiment proved successful. It also stated: Small salt water oysters planted in the sea near the mouth of a stream will increase in size, but whether conditions are favorable to the propagation of oysters in our waters remains to be seen. We should like to see the matter fully tested.<sup>31</sup>

The bill was introduced by Representative Ayer of Montville.<sup>32</sup> It was referred to the Committee on Fisheries and Game, of which Representative Wilson of Belfast was a member. Mr. Ayer was assured support in the committee, however, without a hearing, he was given leave to withdraw Feb. 17. A Feb 17, 1887 news article states that Mr. Burd had already invested hundreds of dollars, and had intended to engage in the business of raising oysters in Belfast on a large scale.<sup>32</sup> Having already planted oysters, the paper reports Mr. Burd will remove the oysters in the spring and go elsewhere, and laments that what might have become a profitable local industry has been driven away. However next week the paper backtracked and said the Legislature had no choice but to reject the bill because it granted Mr. Burd a monopoly on the use of waters belonging to private landowners, and thus violated the law, Chap 40, Sec. 28, the law about oyster planting.<sup>33</sup> A response from Mr. Burd was printed in the March 10 issue of the Journal.<sup>34</sup> He says, "I make no complaints." He laid out the particulars of the case. He felt there should have at least been a hearing.<sup>34</sup> A 1907 article in the same paper recalls Mr. Burd's experiment was unsuccessful.<sup>35</sup>

In March, 1887, the Maine Legislature approved an amendment to the 1881 law granting James Creighton oyster planting rights on the Georges River.<sup>39</sup> The amendment simply inserted the words 'his heirs' after the word "Creighton" in the existing law.

The May 26, 1887 issue of the Republican Journal reports Mr. L.M. Fogg of Hampden had recently planted oysters at Castine, and that he had returned to New Haven to work on his oyster steamer.<sup>36</sup> The paper hoped for success, and stated Mr. Fogg would go into the business extensively if it was successful, locate near Bucksport, and that this would be an important enterprise.

In September the Republican Journal reports of another oyster enterprise at Penobscot Bay of a Mr. R. H. Grindle near Fort Point and Castine.<sup>37</sup> He made the reporter a present of a half pint of the first fruits of his labor. The reporter thought the size and flavor of the oysters compare very favorably with the southern oyster, and he wrote, "The great question now to determine is the effect of winter on these beds." Next week the paper reports Capt. Grindle has planted 50 bushels of oysters from his bed at Sandy Point in the stream above the upper bridge.<sup>38</sup> The writer wrote, "This experiment may lead to oyster culture here on a large scale."

Next year, in the May 3 issue of the Republican Journal, it is reported that the specimens planted last season at Sandy Point show that they have grown about one half in size.<sup>38</sup> The reporter relates that many thought the oysters would not survive the past winter on account of so much ice. He states the experiment is considered a success, and a great many oysters will be planted this season.<sup>38</sup>

In 1885 Maryland oystermen harvested a record 15,000,000 bushels of oysters--subsequent harvests began a long decline.<sup>79, \*5</sup> Between 1898 and 1912 oyster production peaked in the Northeast: nearly 25,000,000 pounds of oyster meat in New York, 15,000,000 in Connecticut, and 15,000,000 in Rhode Island.<sup>79</sup> Thus began a precipitous decline in U.S. oyster production. Brooks declared the demand for oysters has outgrown the natural supply.<sup>83, 149</sup>

Beginning with the Depression of 1893 everything changed for oyster lovers, oyster chefs, and oyster fishermen.<sup>98</sup> By the 20th century oyster beds all over the East Coast of the U.S. were closing, some due to depletion, and others because pollution made their product unsaleable.<sup>98</sup>

As late as 1895, live, healthy edible oysters were said to be taken from Oyster Creek on the Damariscotta.\*<sup>99</sup> Mr. Gilbert E. Gay was said to have procured a supply of oysters from there for a novelty supper the men of the Damariscotta Baptist Church held at that time.<sup>82</sup>

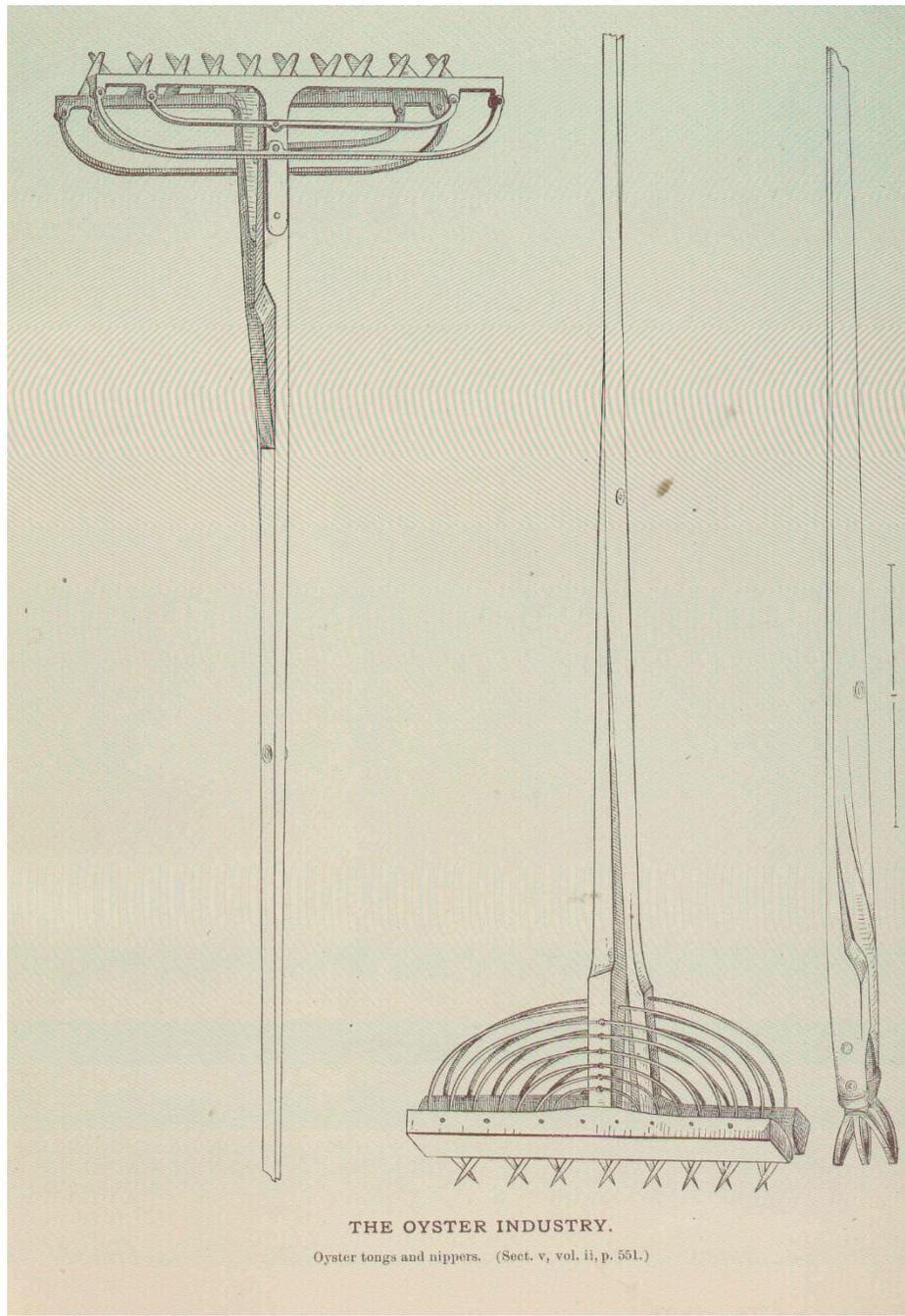


Figure 22: Oyster tongs and oyster nippers. (Courtesy of the NOAA National Marine Fisheries Service. [NOAA Photo Library](#))

## 20<sup>th</sup> Century {}{}{}{}{}

The following is a June 20, 1901 article in the Republican Journal titled: Oysters in Maine Waters.<sup>40</sup> It reads >>

The first oyster farm in northern New England is being established on the shore of Little Whaleboat Island, Portland Harbor, Me., by Benj. Thompson, an experiment which fish experts claim should result successfully.<sup>40</sup>

The first consignment of oysters for the farm have been received from the Prince Edward Island beds.<sup>40</sup> Their planting is an interesting process. A spot where the water is from 5 to 20 feet deep at low water is selected, and the bottom harrowed to get the kelp off and start the settlings from the water. The four corners of the oyster bed are staked off and the space covered with small, smooth stones scattered thickly about. Then the stones are given a covering of shells with the oysters over all.

Mr. Thompson has procured from the Maine legislature an act prohibiting the taking of shell fish from the island until July 1, 1906.<sup>40</sup>

Oysters flourish in the waters off Prince Edward Island, differing little from those off the Maine coast except in their lower temperature.<sup>40</sup> <<

The following is a May 8, 1902 article in the Republican Journal titled: Cultivating Oysters.<sup>41</sup> It reads >>

A year ago, Benjamin Thompson, Esq. planted some oysters in deep water off Whaleboat Island in Casco Bay and a few days ago he visited the island and looked over the oyster beds. He found that the oysters were thriving and it is his opinion that oysters may be cultivated in this bay. The experiment is being watched with great interest.--Portland Press.<sup>41</sup> <<



Figure 23: Tonging Oysters (Courtesy of the Freshwater and Marine Image Bank. [University of Washington Libraries.](https://www.lib.berkeley.edu/Books-and-Images/))

The following is an Aug 6, 1903 article in the Republican Journal titled: A Rival of Maine Clams.<sup>43</sup> It reads >>

Maine has a very promising oyster bed, thanks to an experiment being conducted in Casco Bay under the direction of Hon. George H. Bowers, U.S. Commissioner of Fish and Fisheries.<sup>43</sup> At his request Dr. W. C. Kendall, one of the assistants in the department of scientific investigation, visited Little Whaleboat Island, the scene of the experiment, last week. It is necessary to visit the oyster bed at low water, and shortly before that time Dr. Kendall, with his instruments and party, left the island to make investigation. The oysters are planted in about two feet of water at low tide, and in a short time after the party reached the bed the tongs brought to the surface a large number of finely formed and remarkably clean, bright-shelled oysters, which were carefully examined by Dr. Kendall, who stated that the bivalves seemed to be growing exceedingly well and were unusually clear, more so than the oysters from other localities. They had increased in size as rapidly as could be expected. Dr. Kendall took several oysters ashore and found their flavor to be of a very superior quality.<sup>43</sup> <<

An October 1903 news article noted the oysters in the Sheepscot were multiplying rapidly and increasing in size very fast.<sup>44</sup> The paper expressed the hope the government would take charge and protect and propagate the oysters, and asked if experts could discover why the oyster disappeared from the Damariscotta, and if they could be reestablished. A 1907 article described the naturally occurring oysters in the Sheepscot River as being small, watery and lacking in flavor, being thus of no market value.<sup>48</sup> A 1905 news article notes the propagation of the oyster in Maine waters is again receiving attention, and noted the arrival of 20 barrels of oyster seed, most of which was to be planted at York Beach.<sup>45</sup>

A 1906 Bath Independent article announced the beginning of oyster season on September 1, and noted that oysters are among the most popular sea foods the local dealers have to sell, and a luxury that a great many find it hard to get along without them.<sup>46</sup> The price was 60 cents a quart. The oysters used in Bath came from Rhode Island, Virginia, and other southern states. One local dealer noted the past season has been one of the best for oysters that they ever had.<sup>46</sup>

Time and time again Mainers would ask themselves if oysters once existed here, why can't they exist today.<sup>48, 49, 50</sup>

At the beginning of the 20<sup>th</sup> century, faced with an alarming decline in the shellfish industry, Department of Sea and Shore Fisheries Commissioner Alonzo R. Nickerson cast about for means by which the shellfish industry could be replenished, and the cultivation of oysters was considered.<sup>52</sup> In 1905 a state law was enacted granting the commissioner of sea and shore fisheries the right to set apart certain waters and flats for experiments in clam and oyster culture.<sup>47</sup> Surveys of the Maine coast were undertaken by Dr. H.F. Moore of the U.S. Fish Commission and by John S. Payne, a shellfish and oyster grower/dealer from Providence, R.I.<sup>51, 52</sup> Time was limited, and the surveys were not too thorough; J.S. Payne only covered the western half of the state. Both recommended locations along the coast where they thought conditions were favorable. Payne also recommended protecting the Sheepscot oysters so they could increase, and that it be used as a nucleus upon which to enlarge and experiment oyster beds in Maine's coastal waters.<sup>51</sup>

Four sites were selected: one on the York River near the mouth (most highly recommended by Dr. Moore) (oysters formerly flourished at this point), one on the Saco River (unqualified endorsement of Mr. John S. Payne), one on the New Meadows River near Bath, and one on the Damariscotta River,

or Bay.<sup>49, 51</sup> 10 barrels of oysters were planted at each site. No mention was made in the commissioner's report about which oysters were used at the experiment sites, and it was later assumed Prince Edward Island (PEI) oysters were used.<sup>51, 52</sup> However it was actually the Providence River variety of oyster that was used in the Maine experiment.<sup>49</sup> While the PEI oysters were thought to be the more hardier to withstand the cold, the Providence oysters were chosen because of their superior size and flavor.

From time to time Mr. Payne inspected sample oysters from the above deposits, and had briefly reported thereon. Extracts from those letters are as follows :—

May 7, '06, he says, "The York River samples show they are in a good and healthy condition, somewhat poor in meat, but very strong."<sup>51</sup>

June 14, '06, "The Saco River sample, the body or meat, as we call it, is very poor, but quite strong. I think they do not get food enough. If it is possible, have them taken up and transferred about two miles up the river. I notice a set of mussels on them. If they are thick, they will kill the oysters. Mussels are the oysters' worst enemy."<sup>51</sup>

June 25, '06, "It gives me great pleasure to inform you that the samples from the New Meadows River are in the best condition of any of the samples I have yet examined. The meat is fair, and a fair amount of milk, or spawn, in body, and compares favorably with some of ours of same age. I think you will catch a set in the river if conditions are favorable and the temperature reaches 70 or more degrees from the 8<sup>th</sup> of July until August 1<sup>st</sup>."<sup>51</sup>

August 29, '06. "The Damariscotta River samples have a fair meat for the season. The growth was, I think, a little better than ours here in R. I. of the same age. I think the water is too salty to give the body that hardness and color we get where there is less density. All the oysters which I have examined from you I find strong and in a healthy condition, and with the expenditure of a few dollars to put the grounds in condition, etc., the weather being favorable, you will get a set, or in other words, they will propagate."<sup>51</sup>

One news article from the Bath Independent states the Damariscotta river location was the most promising because of the vast shell deposits.<sup>49</sup> The 10 bushels here were placed just above the town bridge. Commissioner Nickerson was generally averse to telling where he placed the oysters because their presence might prove too great a temptation to epicurean admirers, but an exception was made for the Damariscotta location as 10 bushels had already disappeared.<sup>49</sup> A thorough search of the vicinity was made, and it was ruled out the oysters were stolen, as it was thought a thief could not have possibly got away with every single oyster of those 10 bushels, on account of the haste that would naturally be necessary to escape discovery--plus the location had been a secret anyway. There were no empty shells, so it was thought they had not died. It was naturally assumed the oysters had migrated. It was thought not every oyster could have travelled a very long distance, and the news article author wrote, "At no very late date an expedition will be equipped to do nothing but search for traces of the lost tribe of oysters."<sup>49</sup>

That Bath Independent article also stated that for years it was considered the waters on the Maine coast were too cold for the successful propagation of the creatures, but that the existence of the piles of shells at Damariscotta, and the existing bed in the Sheepscott effectively disposed of that notion.<sup>49</sup> Up to

this point the present experiment looked promising, and the author thought that in a few years Maine oysters will be as important feature of commercial centres as Maine lobsters are.

In 1910 a state law was passed, entitled, “Protection of Oysters in Sheepscot and Dyer’s Rivers, Lincoln County, Maine.”<sup>53</sup> The law authorized the Alna and Newcastle selectmen to issue licenses or permits to any Maine inhabitant to take oysters from Sheepscot or Dyer’s River above Sheepscot Falls, not to exceed one bushel in any one week.

The commissioner’s report for 1908 states: the experiment of propagating oysters in this State has been a failure, although there are some of the oysters still living on the beds.<sup>52, 54</sup> For unknown reasons they do not seem to thrive or multiply as they do in waters further south, and the general opinion is that our climate, and seacoast bottom is not adapted to their cultivation. Then in the 1910 report Commissioner Donahue reversed himself and wrote: . . . this Department has given oyster culture a very thorough investigation and also made several experiments, with the result that it is now demonstrated beyond a doubt, that oysters can be successfully propagated in Maine.<sup>52, 55</sup>

The 1910 Maine Commissioner of Sea and Shore Fisheries report states there were 8 oyster beds in Maine in 1909.<sup>55</sup> The oldest was at the Sheepscot. 600 bushels of oysters had been taken from the beds there in 1909; 3,000 bushels were taken from those oyster beds in 1910. The reports states the oysters were spreading up and down the river for a distance of some three to five miles. The Maine Sea and Shore Fisheries Department planted 3 oyster beds in 1910 at Damariscotta Bay.<sup>55</sup>

The 1910 report goes on to state a Mr. Bowditch of Boston was experimenting with oysters at Isle Au Haut, and he reports the seed oysters from the Sheepscot were doing well, but the PEI oysters were not doing well.<sup>55</sup> 1910 also finds Benjamin Thompson still experimenting with oysters in Casco Bay, but that experiment was not going well.<sup>55</sup> Mr. Thompson thought the oysters did not have the proper care, and so he planned to plant on a much larger scale in 1911.<sup>55</sup>

Commissioner Donahue attended the National Shell-fish Commissioners convention in Mobile, Ala. in 1910 to learn all he could about expert oyster planting.<sup>144</sup> There he gave an informal address on “Maine Shell Fish.” On one of three days, the association held its meeting aboard a revenue cutter, which took them on a 25-mile cruise down Mobile Bay, where there were hundreds of acres of oyster beds.<sup>144</sup> The commissioner later announced in the Maine Woods and Maine Sportsman his plans to make several plantings of oysters in different sections of the state.<sup>144</sup> One place the commissioner had in mind was a location just above Fort Point on the Penobscot River.

[Web links to a few images of 20<sup>th</sup> century Maine oyster establishments \[Zoom In\]](#)

[Restaurant and Oyster House | Saco | ca. 1900](#)

[Quick Lunch Diner | Oysters and Clams | Sanford | about 1910](#)

[Alfred Jones’ Sons, Fish and Oyster Dealers | Bangor | 1911](#)

[J.H. McDonald | Fish, Oysters, Clams | Portland | 1924](#)

Another state survey was done in 1910 and 1911 to find suitable beds for oysters.<sup>52</sup> Disappointingly, very little of the Maine coast was found to have a suitable bottom for oyster cultivation. River mouths, generally the best locations, were so badly polluted by sawdust and mill waste

that they were unsuitable. It was concluded that the commercial culture of the oyster was not feasible although raising oysters on a small scale was possible.<sup>52</sup>

An article appeared in the May 4, 1911 issue of The Republican Journal entitled, Maine Oysters at Baltimore.<sup>56</sup> It reads >>

It seems a bit like carrying coal to Newcastle to exhibit Maine oysters in Baltimore, for there is no city that makes a greater specialty of the oyster business than Baltimore with its adjacent waters teeming with oysters, but there was a Maine exhibit of oysters at the National Shell Fish convention, just held at Baltimore and it is worthy of note that the exhibit attracted much favorable comment.<sup>56</sup> The delegates from oyster-growing states expressed much surprise as they did not think it possible to raise such oysters in Maine.

It was but a few years ago that this latter view was very generally held in Maine, principally because of the cold temperature of our waters.<sup>56</sup> <<

The article goes on to say Commissioner James Donahue of Sea and Shore Fisheries has worked diligently to develop this industry, and that his efforts are meeting with remarkable success.<sup>56</sup> Mr. Donahue wrote the Bangor Commercial and said, "I plan to plant oysters in every coast county of the state where suitable bottoms can be found, this season, and I believe it is only a matter of a few years before Maine can be a large shipper of oysters . . . "

In 1911 Prof. A. G. Verrill of Yale wrote that it is impossible to plant and raise oysters on the coast of Maine because of the cold temperatures.<sup>57</sup> Later, the Oxford Democrat reported Prof. A. G. Derrell of Yale said basically the same thing.<sup>58</sup> He said the ancient shell heaps in Maine do not prove the oysters will live and grow on the Maine coast now, except in the summer season.\*<sup>11</sup>

In the Sea and Shore Fisheries report for 1913-1914, the commissioner wrote: Experiments have been made by this Department in previous years to cultivate oysters, but with disappointing results. As the oyster is so valuable and desirable a food product, I still thought it advisable to experiment still farther.<sup>66</sup> Bottom conditions and water temperatures were tested in several locations.<sup>66</sup>

A new survey was conducted by the state in 1914, and the next report was favorable.<sup>52</sup> 50,000 seed oysters were planted in the Damariscotta River in November. The oysters came through the winter "fairly well," therefore experiments were conducted in fattening both native Sheepscot River, and out-of-state oysters in the Damariscotta River. In 1916 Commissioner Brennan stated the Damariscotta had the best grade of oyster food in it than any other place in Maine, but the short summers cut down growth to about  $\frac{2}{3}$  of Rhode Island and Connecticut oysters. He said, "However, people are safe to fatten and flavor oysters in Maine waters if they choose to do so."<sup>52</sup>

The commissioner reported in 1916 the oysters survived two winters fairly well and came out with excellent flavor.<sup>60</sup> They did not expect to propagate oysters extensively, but they thought to fatten them and plump them up to a heavy and delicate flavor, as reports come from Southern New England dealers. The commissioner felt the transplants took on the high shellfish taste of all the Maine products of that kind.<sup>60</sup> The department experimented with native oysters then growing at the Sheepscot bridge, taking them into the Damariscotta river for two months only, and it was thought the oysters had done wonderfully.<sup>60</sup>

A Sam E. Conner would later write that the replacement of Commissioner Donahue, a native of Rockland, set back oyster research in Maine, scrapping the research work already done, and throwing it into the junk heap.<sup>73</sup> He describes how then Governor Haines had a row with his council, because it would not confirm his appointee, as a result of objection from all parts of the State. Therefore, in a pique, the governor named a person who had no knowledge of fisheries, and no real interest in oyster cultivation.<sup>73</sup> There was then little attempt at oyster propagation in Maine during the 1920s and 1930s, though speculation about the matter was fairly frequent.<sup>52</sup>

In both Europe and America, the combination of over-population, poor sanitation and the oyster's unique breeding environment created a perfect storm in the dissemination of diseases -- specifically cholera, typhoid fever, and gastrointestinal orders.<sup>98</sup> Many people switched to beef as ample quantities were now available in population centers.<sup>158</sup> In 1906 Congress passed the The Pure Food and Drug Act which bought a complete change in the way oysters were handled, packaged, and shipped. Between 1905 and 1917 oyster prices declined or stagnated, production costs increased, company profits became minimal, and many oyster businesses failed or were merged.<sup>158</sup>

In 1912 the Maine Experiment Station of the University of Maine was charged with inspecting open shellfish.<sup>145, 158</sup> Oysters from 98 markets and dealers across the state were examined in 1914 at the station, with many of the oyster samples being remarked as "Liquids too high," or "Solids too low."<sup>146</sup>

During Prohibition saloons and other drinking places where many oysters had been served were legally closed. As the 20th century progressed the insatiable hunger of growing populations, and disease, led to the deterioration and destruction of many oyster beds up and down the Atlantic coast of the U.S.<sup>102</sup> The deadliest occurrence of oyster-borne typhoid occurred in the winter of 1924-25.<sup>98</sup> Simultaneous reports from New York, Washington D.C., and Chicago had people suffering; more than 1500 were sick and 150 dead. Subsequent oyster demand was said to plummet 50 to 80 per cent worldwide.<sup>98</sup>

In Maine, two generations of oyster eaters slowly forgot such a delicacy even existed. They all but dropped from the menus of celebrated restaurants. Oysters seemed down-and-out, with all hope lost.<sup>102</sup> The oyster as a family staple would never again see the explosion of availability or desirability it had experienced in the 1800s.<sup>98</sup> The oyster became a specialty food.

In 1931 the Bath Independent noted the passing of Henry C. Rowe, a long time summer resident who owned vast holdings at Thorne's Head, Bath.<sup>71</sup> Mr. Rowe was a pioneer in deep water oyster culture, and one of the most prominent individuals in that business. He received his first grant of oyster grounds about New Haven in the Long Island Sound from Connecticut for the propagation of oysters in 1874. Many looked on the venture as impractical and foolhardy and he had many a hard year in the beginning. At the time of his death the H. C. Rowe & Company controlled 10,000 acres of oyster grounds, shipping oysters to all parts of the United States, and to Germany and England.<sup>71</sup> More colorful reminiscences of Henry C. Rowe can be found in Wennersten's *The Oyster Wars of Chesapeake Bay*, where he is described as ". . . the powerful oyster pasha who controlled the fate of thousands with the ease and ruthlessness of an Ottoman prince."<sup>81</sup>

In 1938 a [W.H. Hays?] planted oysters in Hodgdon Cove in the vicinity of Boothbay Harbor.<sup>53</sup> A few bushels of *C. virginica* were placed in a deep pocket between the rocky ledges several feet below low water. The oysters were examined 6 Sept. 1940 and found to be watery, they had not released their

spawn, and were extremely salty to the taste. No young oysters or spat were found on the rocks, shells, or other objects in the vicinity of the planted area.

For many years it had been contended that oysters were once abundant along the Maine coast and that a propagation program would revive the industry.<sup>59</sup> The Maine Department of Sea and Shore Fisheries, greatly interested in the theories, planted an experimental bed at Southport at the end of the thirties. When it did not show signs of spreading or producing young stock they decided a survey by oyster experts was advisable before any more time or money was expended.<sup>59</sup>

At the request of Mr. Arthur Greenleaf, Maine Commissioner of Sea and Shore Fisheries, a survey of the inshore waters of the state was made in September, 1940 by Drs. Paul S. Galtsoff and Walter A. Chipman, Jr., of the U. S. Fish and Wildlife Service, with the view of determining the possibilities of reestablishing the oyster industry in this state.<sup>53, 59</sup> Local Damariscotta area residents reported a few oysters were seen on the bridge pilings in Oyster Creek by boys swimming in the summer, but examination of those structures failed to reveal any oysters. No oyster shells were noticed on the bottom near those structures. At the invitation of Mr. Nathaniel Thompson a short trip was made to Broad Cove near Yarmouth. In this locality and farther offshore oysters which had been planted by private persons apparently survived but they had failed to propagate. Galtsoff and Chipman reported that an attempt to establish an oyster industry in the state where natural conditions are not favorable for the propagation of the American oyster is not likely to succeed.<sup>53</sup> The reasons were, primarily, low water temperature, high salinity, softness of bottom, and formation of ice on tidal flats.<sup>72</sup> Only limited areas were found where oyster farming on a small scale appeared feasible.<sup>72</sup> Some areas which originally supported oysters had become badly polluted through mill waste and sawdust, while others had been altered by the construction of dams.<sup>52</sup>

In 1943 Sam E. Conner asked, “What has Happened to Maine Coastal and River Waters?”<sup>73</sup> If oysters had once flourished here, and past oyster research had been encouraging, then why had all the experts who had been here in recent years shake their heads and say conditions in Maine aren’t suitable for oyster cultivation. He told of then Maine Governor [Sumner Sewall](#)’s Uncle, Harold S Sewall, who talked about the oysters which had been tonged in the Sheepscot River. Mr. Sewall swore they were the best oysters he had ever eaten. He also told of eating oysters that came out of the Damariscotta River, and often wondered why something wasn’t done to redevelop those oyster beds.<sup>73</sup>

Between 1946 and 1948 the Sea and Shore Fisheries Department conducted considerable oyster research at Salt Pond in the vicinity of Sedgwick, experimenting with the survival and spawning of Eastern, European and Japanese Oysters in Maine waters.<sup>61</sup> In August, 1947 it was announced that brothers Arnold and Vance Beede, in cooperation with the Sea and Shore Fisheries Department were experimenting with oysters in a local salt pond.<sup>74</sup> Arnold Beede said that seed stock from the Great Bay, New Hampshire oyster beds, were planted in the pond in November, 1946, and they had made excellent growth.<sup>52, 74</sup> During the 1947 growing season individual oysters had nearly doubled in weight, and that a study was now being made to find out if the oysters spawned.<sup>74</sup> Sea and Shore Fisheries officials warned past efforts had been unsuccessful. But they also said this attempt will be assisted by Fish and Wildlife Service specialists, and that the work will be much more exhaustive than previously attempted. Maude Beede, along with Arnold and Vance Beede, filed papers with the State in September, 1947, and the Maine Oyster Corporation was formed.<sup>96</sup> In 1949 the filing was excused as it had become inactive.<sup>96</sup>



Figure 24: Japanese Oysters at Salt Pond. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))

DMR Department of Marine Resources  
<http://www.maine.gov/dmr/>



Figure 25: Oysters. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))



Figure 26: Dr Loosanoff Working With European Oysters. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](http://www.digitalmaine.com))

In 1949 both European and Japanese oysters were placed in a Maine pond that summer by the department for experimental purposes, and the oysters were to be closely monitored as there was some concern about the introduction of foreign species.<sup>62</sup> The Japanese oysters were planted by Robert Dow and Dana Wallace of the Research Division, Maine Department of Sea and Shore Fisheries, Warden Supervisor Owen Richardson of the Coastal Warden Force, Harlan Spear, Research Biologist of the U. S. Fish and Wildlife Service, and local resident Vance Beede.<sup>77</sup> By August 1954 only 11 surviving Japanese oysters were found at the pond.

Shortly after the Maine planting of European oysters, [Dr. Victor Loosanoff](#) established experimental plantings of the European oyster in both Maine and Connecticut to determine their rate of survival.<sup>62</sup> European oysters were also planted at Basin Cove, Harpswell, Boothbay Harbor, and Taunton River in Franklin.<sup>76</sup> Loosanoff and Davis also conducted spawning experiments with Eastern oysters, taking them from Long Island Sound early in the season (usually late May), and transplanting them to the waters of Maine.<sup>78</sup>

On September 8, 1949, an article appeared in the Portland Press Herald entitled: Oyster Industry Revival Scheduled.<sup>75</sup> It announced that Anthony Look, head of the A. M. Look Canning Co. at Holmes Bay in Whiting, would use every means to restore to production the once prolific oyster growth on these shores. For a quarter of a century Anthony's father, Willard M. Look--founder of the canning company--had struggled to bring oyster cultivation to Maine, and now another generation of the fighting Look stock would carry on the struggle. The Maine legislature and departments the elder Look had appealed to for assistance had refused to give him any encouragement. The young Look would again seek both

State and federal support for oyster cultivation on a large scale. Oysters were then taken commercially in every seaboard state except Maine and New Hampshire, yet were formerly prolific here, and the article notes the quantities of shells that had been found on Turner's Stream in Cutler where it was known oysters once flourished.<sup>75</sup>

In 1950, a small batch of European oysters, shipped to Maine in kegs from the Netherlands, surprised everyone by spawning in the waters near the Department of Sea and Shore Fisheries research station at McKown Point. They had been planted here because the European oyster propagates at lower temperatures than the Eastern oyster.<sup>68, 78</sup> Loosanoff later reported Eastern oysters had grown and propagated naturally in New England waters and had become established in Maine.<sup>78</sup>

The Pacific oyster experiments indicated moderately good growth, but poor survival and no evidence of surviving reproduction.<sup>52</sup> Survival and growth records of the transplanted Great Bay oysters were inadequate, and several plantings had disappeared. At least one of these plantings had been removed following its discovery by local residents. Several periodic checks of survival and growth indicated only average results. Laboratory examination of gonads indicated that spawning did not take place during the seasons checked.<sup>52</sup>

In 1955 the six year experiment to propagate European oysters in Maine coastal waters was rated a fair success, but not successful enough to encourage private development.<sup>89</sup> The oysters in the Boothbay Harbor region had successfully propagated each year.<sup>89</sup>

DMR Department of Marine Resources  
<http://www.maine.gov/dmr/index.htm>



Figure 27: Lowering Tray Containing European Oysters. Maine Department of Sea and Shore Fisheries.  
(Courtesy of the [Digital Maine Repository](#))



Figure 28: Oyster Aquaculture. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))

A Lincoln County News article declared that Maine is too cold for oysters in 1956.<sup>68</sup> It reported cold winters and extremely low tides are rough on European oysters which have been transplanted to Maine, according to a state report. Marine biologists at the Department of Sea and Shore Fisheries reported no oysters survived at the Mill Cove area at Boothbay Harbor. Near the West Harbor dam there was a 50% mortality. At Carrying Place Cove where biologists had moved the oysters to below the low tide mark, survival during the past couple of years had been excellent -- better than 90 per cent were alive and healthy. Robert Dow, director of the department's research division said, "We're not too optimistic. Areas where these European oysters can survive seem to be very limited . . .," and there's little evidence a commercial oyster industry could be established in Maine.<sup>68</sup> The article went on to relate various things they had learned about the European oyster.

In 1954 the oyster beds of the Sheepscot River and its tributaries were surveyed by the Maine Department of Sea and Shore Fisheries.<sup>52</sup> The report concluded that in view of the present unthrifty status of the oyster population as well as past attempts and subsequent failures at oyster culture in the Sheepscot River system that there appears to be no justification in attempting to replenish the present stock.<sup>52</sup>



Figure 29: Oyster Aquaculture. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))

The Marsh River was the site of an intense oyster fishery from 1954 to 1968, during which time over 18,000 kg of oyster meats (about 5,300 bushels) were removed, mostly by scuba divers.<sup>67</sup> Spawning became light, so recruitment failed to replace loss from exploitation. To protect the population, the Maine Department of Marine Resources closed part of the river to oyster harvesting in 1968, declaring it a conservation area. In 1968, oysters were transplanted from the Piscataqua River to the Marsh River. A viral infection though was accidentally introduced.<sup>67</sup>

The Maine Department of Sea and Shore Fisheries continued research work about transplanting, growing and harvesting of oysters and oyster seed into the 1960s.<sup>94</sup>

In 1963 the Department of Sea and Shore Fisheries completed an inventory of native populations of Eastern oysters in the Piscataqua River area as part of a U. S. Department of Commerce research grant.<sup>69</sup> Oyster spawning in the state, following a set found in 1964 in the Piscataqua River, reached alarmingly low levels in the years which followed.<sup>94</sup> Since it was clear that, if oyster stocks were going to sustain a population, new areas for reproduction would have to be found, the Department's marine



Figure 30: An image from a 1959 Portland Press Herald article titled Oyster Fishing's In Season Along the Sheepscot's Banks. (Courtesy of the Maine State Library).<sup>104</sup>

scientists began an investigation of potential growing areas. In 1966, strings of cultch were suspended from a raft moored in Spinney Creek in the town of Eliot in the hope of obtaining a set of juvenile oysters. Spawning occurred from late June through August, with setting throughout the summer.<sup>94</sup>

In 1967, 4100 pounds of oyster meats were landed at Maine ports valued at \$4,432.<sup>94</sup> Decreasing abundance of oyster landings were thought to be caused by the cyclic decline in sea temperature since 1953.

In 1968 five bushels of oysters were planted in the New Meadows Lake in West Bath in an experiment financed jointly by the town of Brunswick and the Maine Department of Sea and Shore Fisheries.<sup>103</sup> Aquaculturist and Brunswick High School biology teacher Claude Bonang, with help from high school and college students had by 1972 grown the oysters to marketable size.<sup>103</sup> Similar experiments were being conducted elsewhere in Maine.

Raft-cultured oysters in Spinney Creek which reach market size in three years were used by the Department in culture experiments in thermal water discharges at Cousins Island, Yarmouth, in the New Meadows River, and in the Sheepscot River system.<sup>69</sup> In a field laboratory at Birch Point, Wiscasset, culture experiments with Eastern and European oysters were underway in 1970 using thermal, mixed, and normal temperature water under a research grant from the Maine Yankee Atomic Power Company.<sup>69</sup>



Figure 31: Another in a long list of disappointments - Sea squirts, by the thousands, have descended upon the oyster "set" time and again in the past four years and raised havoc with attempts to raise Maine's first crop of oysters. Sea squirts are one of a number of sea creatures which have plagued the prospective oyster crop and the "sea farmers" in their first venture into aquaculture. Most problems have been resolved, however, and this week Maine's coastal water surrendered the first marketable crop of man-raised oysters. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))



Figure 32: Site of Aquaculture's modest beginning in Maine - These are a portion of the rafts used to culture oysters in New Meadows River in Brunswick. The culture site is located next to the railroad trestle between Route 1 and Interstate 95. Initially, strings of scallop shells were dangled from the rafts and "spats" from strategically located natural oysters attached themselves to the shells and grew into adult oysters. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))



Figure 33: Aquaculturist and Brunswick High School Biology Teacher Claude Bonang with some of his student helpers. Maine Department of Sea and Shore Fisheries. (Courtesy of the [Digital Maine Repository](#))



Figure 34: Reaping the 'Just Deserts' of Oyster Culture. Maine Department of Sea and Shore Fisheries. This photo may be from an "oyster savoring party" held by members of the Brunswick Shellfish Conservation committee, town council and state and federal fisheries officials at the New Meadows Inn in October, 1972.<sup>103</sup> (Courtesy of the [Digital Maine Repository](#))

In 1965 Ira C. Darling donated his estate on the Damariscotta River to the University of Maine (UM). In 1970 shellfish biologist Dr. Herb Hidu was hired by the University of Maine, reinvigorating the quest to establish and sustain a healthy oyster industry in Maine.<sup>70</sup> UM's The Darling Center received Maine's first "sea grant" in 1971, \$100,300 for "projects related to the culture of resources in the cold water environment."<sup>97</sup> Hidu established a research program at the [Darling Marine Center](#) cultivating oysters which was instrumental in establishing the shellfish aquaculture industry on the Damariscotta River.<sup>97, 99</sup> A number of students in the Hidu lab went on to form their own oyster businesses, and today seven of the nine shellfish farms on the Damariscotta River have ties to the DMC.<sup>70</sup> Today, oyster farming in Maine is a healthy, thriving, and expanding industry.<sup>100</sup> And today, thanks to commercial oyster growing and the oyster's prolific spawning, the wild American oyster is restored to the Damariscotta River, and thriving.<sup>101</sup>

[Web Link to more images of the Maine Department of Sea and Shore Fisheries oyster culture research from the 1940s to the 1970s at the Digital Maine Repository.](#)

By R.A.L

Randy A. Lackovic

## Notes

\_\_\_ This is a second edition history newsletter; The title has been changed. The first edition was titled Of Oyster Planting and Oyster Experiments in Maine (1800s-1970s). The author welcomes any additional source information. If you would like to contribute source material, please contact me by email, [randy.lackovic@maine.edu](mailto:randy.lackovic@maine.edu), by phone, (207) 863-8193, or in person at the [Darling Marine Center Library](#) during office hours. I am the only person working in the library. If you plan to visit, please call ahead to ensure I am in that day.

\_\_\_ If a news article stated an oyster planting was an experiment, then the author relates that as it was recorded in that time period; the author makes no attempt to distinguish what constitutes an experiment, scientific or otherwise, and what doesn't.

\_\_\_ For further research on this topic one might try searching historical collections and items from Massachusetts for earlier colonial and pre-statehood oyster material for Maine. Not all local historical societies in the towns where oyster plantings and experiments had taken place were contacted. Past issues of the Lincoln County News are currently being digitized; they may have additional information on Oyster commerce, plantings, and experiments in Maine.

\_\_\_ Thanks to Robin at the Sagadahoc History & Genealogy Room at Patten Library, Jessica Lundgren at the Maine State Law and Legislative Reference Library, Kevin Johnson, Ben Fuller, Carol Sprague at the Penobscot Maritime Museum, Valdine C. Atwood at the Washington County Historical Society, Dan Belknap at the School of Marine Sciences, and anyone else who have helped answer questions.

\_\_\_ The intent of this work was not so much to duplicate 20<sup>th</sup> century information material on oystering in Maine in the 20<sup>th</sup> century, which may be widely known and available to the Maine oystering community, but rather to highlight and expand knowledge on earlier oystering in Maine which seems to be less widely known.

\_\_\_ For more information on the history of oystering in America read >> [History of Oystering in the United States and Canada, Featuring the Eight Greatest Oyster Estuaries](#)<sup>110</sup>

\*<sup>1</sup> **W. N. Child** \_ William Nickels Child was born in Pemaquid, Sept. 18, 1853, the son of Captain Ambrose and Lucretia (McLoure) Child.<sup>2</sup> William married Mary C. Chapman of Damariscotta in October, 1873.<sup>3</sup> Mary had 5 children.<sup>5</sup> During the 1880s William was a watchmaker and a jeweler at Damariscotta; in 1887 he was also listed as a merchant of sporting goods.<sup>4</sup> By 1900 he had become an electrical engineer, and he and Mary were living in Gorham with their sons, 13 year-old Fred and 7 year-old Ward.<sup>5</sup> On the 1910 federal census William is listed as an Electrician in the Power House industry residing in Gorham; there is also a William Child of the same age, born in Maine, residing at a boarding house in East Providence, Rhode Island--he is an Inspector in the Wire industry. [William](#) and [Mary](#) Child are buried at the [Hillside-Norris Cemetery](#) in Damariscotta.<sup>6</sup>

\*<sup>2</sup> **F. S. Knowlton** \_ Fellows Stetson Knowlton (1823-1888) was the child of William Stetson and Anna Knowlton.<sup>2</sup> He had his name changed. While growing up he and his friends pooled their money to buy a potent noise maker for celebrating Independence Day and other special events; they purchased a [little canon](#).<sup>10</sup>

Fellows married Sarah Ann Lamphear of Woodstock, Vermont in November, 1851.<sup>3</sup> They had eight children. On the 1850 census Fellows is listed as a Ship Carpenter.<sup>7</sup> After the [Panic of 1857](#), 1860 finds Fellows a farmer at Damariscotta.<sup>8</sup> He is listed as a Ship Fastener on the 1870 census.<sup>9</sup> On the 1880 census Fellows is again listed as a Ship Carpenter.<sup>5</sup> From 1881 to 1882 he is one of three constables for the town of Damariscotta.<sup>12</sup>

Fellows and his son James Everett Knowlton were among several local collectors recruited by Harvard Professor [Frederic Ward Putnam](#) to make collections for the Peabody Museum along the Damariscotta coastal inlet.<sup>13</sup> In the 1880s Putnam was instrumental in saving many of the artifacts at the Damariscotta shell middens

when the shells were being ground up for poultry feed.<sup>15</sup> During the 1880s Fellows and James Knowlton donated the majority of their materials from the Damariscotta shell heaps and the Maine coast to the Harvard museum.<sup>14</sup>

[Fellows](#) died in June 1888 at the age of 64. [Sarah Ann](#) died 6 months later at the age of 52.<sup>11</sup> They are both buried in the [Bethlehem Cemetery](#) in Damariscotta.

\*<sup>3</sup> A search of the [Chronicling of America](#) database from the [Library of Congress](#) for “Collins’ Fish & Oyster Market” yielded 63 results from Republican Journal issues published between the years 1877 and 1881.

\*<sup>4</sup> The article does not state where these oyster beds are located.

\*<sup>5</sup> In 1839 the output of Maryland oysters in bushels was 710,000. In 1858 it was 3,500,000 bushels. Maryland oyster production peaked in 1884 at 15,000,000 bushels. By 1910 the oyster output was back down to 3,500,000 bushels.<sup>81</sup>

\*<sup>6</sup> Many thanks to Catherine Schmitt of Maine Sea Grant for providing a copy of this work. I could not find a library that had this item.

\*<sup>7</sup> William Henry Vinton and Asa Porter (Vinton & Porter) were listed as confectioners in the 1846 Bangor Directory; they were doing business at 30 Main Street, 35 Mercantile Square.<sup>5</sup> In 1848 William Vinton is listed as a Confectioner and Victualing.<sup>64</sup> In 1850 Mr. Vinton is listed as a merchant instead of a confectioner. By 1851 he is no longer in business with Asa Porter, and he is again listed as a Confectioner. It was reported that on Wednesday, April 18, 1855, the Bangor police made seizures of liquor in the establishment of Albert Richards, John Hines, and William H. Vinton.<sup>65</sup> Vinton had managed to elude the police for a long time, and the following account is given of the visit to his shop:

“Men were stationed at the different entrances to the establishment, and one man was placed in the cellar. On entering the upper room the Marshal inquired of a servant employed therein if there were any intoxicating liquors on the premises, who replied in the negative, and immediately jumped on a dumb waiter and descended into the cellar below, and was there cordially received by one of the staff. The servant immediately seized a demijohn contained in the cupboard, ran into the coal room under the side walk, and smashed it against the wall. Enough remained, however, to determine it to be brandy.”<sup>65</sup>

\*<sup>8</sup> It was noted that Ingersoll’s “Report on the Oyster Industry of the United States” does not say southern oysters planted in northern waters were large marketable oysters awaiting a market, or small “seed” oysters.<sup>85</sup>

\*<sup>9</sup> Perhaps they were planted oysters. Pure speculation on my part.

\*<sup>10</sup> I was referred by the Maine State Archives to the Maine Bureau of Corporations, Elections and Commissions to find out when the Warren Oyster Company or the Maine State Oyster Company may have gone out of business. After an extensive search, no records about either company could be found.<sup>96</sup>

\*<sup>11</sup> More precisely, [Addison Emery Verrill](#) .

\*<sup>12</sup> The Maine Oyster Company was still on the books in 1873, though the Warren Oyster Company was not.<sup>178</sup>

\*<sup>13</sup> Thanks to Reference Librarian Michelle Bran and Maine State Library staff for their help.

\*<sup>14</sup> Thanks to Samuel N. Howes, Archivist II, Maine State Archives and Archive staff for their help.

\*<sup>15</sup> Job Spear was born January 18, 1802 and died at age 67 June 27, 1869. He is buried in the town cemetery in Warren. He lived in Warren and his occupation is merchant. When he petitioned the state for creating the oyster business in 1854 he was 52.

Seth Sumner was born in 1792 and died September 12, 1863 and he is buried in the town cemetery in Warren. Seth lived in South Warren at 547 Cushing Road in Warren. He married Hannah Hall July 1, 1819.

Seth Sumner's house is a Cape Cod with black trim, having a center chimney, and a glassed-in porch, and is now part of the Maine State Prison Farm.

Seth's son David H. Sumner was born Dec 3, 1824. He married Sarah F. Gerrish March 6, 1833. They lived in Thomaston. David was a sea captain. David Sumner received a Seamen's Protection Certificate December 19, 1844. He was at the NY city port, he was 20 years of age, and he was 5' 8" tall.

David Sumner owned a vessel named Thomas and Edward that was lost during a storm in January 1859. David also served in the Navy during the Civil War. He served on the navy Frigate Constellation. David died May 6, 1868 at age 44. He is buried in the Thomaston village cemetery.\*<sup>16</sup>

\*<sup>16</sup> Special thanks to Karin Larson, Warren Historical Society Historian, for researching these men, and for finding historical information about oysters in Warren.

\*<sup>17</sup> Town names are spelled as they are spelled in the act. It also curious to note that in listing the towns the act uses the conjunction "or" rather than the conjunction "and" which I used instead.

\*<sup>18</sup> [William Bentley](#) (June 22, 1759, Boston, Massachusetts – December 29, 1819, Salem, Massachusetts) was an American Unitarian minister, scholar, columnist, and diarist. He was a polymath who possessed the second best library in the United States (after that of Thomas Jefferson), and was an indefatigable reader and collector of information at the local national and international level.

\*<sup>19</sup> For further reading: [That time the Civil War was fought in Portland Harbor Bangor Daily News](#) ; [American Civil War—Battle of Portland Harbor Ancestry.com](#) ; See also citations 121, & 122.

\*<sup>20</sup> The crew survived, and managed to save the sails and a portion of the rigging.<sup>127</sup>

\*<sup>21</sup> It is here noted that in Maine the years 1775 to 1790 were an economically bleak time, and even in years thereafter for many Mainers.

\*<sup>22</sup> Upham Stowers Treat was born 1 March 1808 in Prospect, ME.\*<sup>23</sup> He married Sarah Sanborn (1815-1875) in Prospect, 30 Sept. 1832.<sup>156</sup> They had nine children. In the 1830s he made his living smoking great heaps of salmon caught each spring as they migrated up the Penobscot.<sup>151</sup> He, his family, and two friends, Isaac Noble (from Calais) and Tristram Holliday (from Scotland where he had seen salmon being preserved in a novel fashion imported from France: the fish were cooked, deboned, and packed in airtight metal cans in which they could be kept edible for years.) made their way to salmon-rich Calais in 1839.<sup>151</sup> They experimented with canning, hermetically sealing such articles as salmon, lobsters, fish, beef, mutton, vegetables, &c., &c.<sup>152</sup>

In 1842 the three men went into business and opened up the first lobster cannery in Maine called Treat, Noble, & Co.<sup>154</sup> In 1846, Mr. Treat purchased [Allan Island](#) in Eastport, which was subsequently and is presently known as Treat Island.<sup>152</sup> Business was slow at first, but with the California Gold Rush his orders increased far beyond any former precedent.<sup>153</sup>

By 1855 the Maine Register stated, Mr. Treat puts up from fifty to seventy-five thousand cans of salmon, lobsters, herring, vegetables, &c., annually, and from fifteen to twenty thousand boxes of

smoked herrings.<sup>152</sup> The 1855 Maine Register noted quite a number of similar establishments have grown up in various parts of the state.<sup>153</sup> The Eastport/Lubec region became famous for canned seafood, with more than three dozen canneries operating by the late 19th century.<sup>153</sup>

Upham Stowers Treat was elected a representative to the state legislature in 1855.<sup>155</sup>

The spring of 1857 finds Upham Treat buying up Alewives, Shad, Bass, and Salmon and depositing them in Shattuck Lake and a few adjacent places to spawn.<sup>177</sup> He had secured the right of way between the lakes and the sea so that his fish could pass without interruption to the ocean. Mr. T didn't expect any return on his speculation for 3 years, and if they multiply a return every year thereafter, having expended \$2,000 in the operation to date. The news article noted the project has been successfully tried in France.<sup>177</sup>

When fish were plentiful, Upham Treat undertook fisheries research trying to determine whether the offspring of captive salmon, striped bass, shad and alewives hatched in unfamiliar waters would return to those waters.<sup>153</sup> He and his son bred fish in ponds in Robinson and then released them to the sea through the Red Beach and Lowe Stream.\*<sup>26</sup> The Machias Union reported in 1861, "The fishes have returned and Mr. Treat will now be repaid we hope, for his labor, anxiety, and expense."<sup>153</sup>

In 1861 he accompanied [Addison Verrill](#) on an expedition to explore Anticosti Island and the Labrador coast.<sup>159</sup>

The 1864 Maine Board of Agriculture Annual Report noted, "At Treat's Island, near Eastport, some 150 or 200 tons of fish guano is made annually, but it nearly all finds a market among the farmers of Connecticut . . . ." <sup>153</sup>

In 1871 Upham S. Treat was awarded a patent ([US118987A](#)) for THE IMPROVEMENT IN FERTILIZERS FROM SEA-WEEDS.

In 1876-7 Japan wished to have its people instructed in the art of canning and at the request of the U.S. gov't., Upham Treat went to Washington D.C. to be briefed, and then subsequently he spent several years in Japan for that purpose.<sup>150</sup> The Japanese wanted to commercially produce and export canned salmon, and Mr. Treat oversaw the construction of a cannery at the mouth of the Ishikari River in Hokkaido, and he provided instruction in canning techniques.<sup>160</sup> In its first year, besides canning salmon, it also canned venison, oysters, and beef. Hokkaido officials also authorized Treat to conduct the island's first salmon hatching experiments.<sup>160</sup>

Upham Treat was on his way home from Japan, when he was stricken with paralysis at the residence of his daughter, Kate A. Staples in St. Paul, Minn., and he died Nov. 2, 1883; He was buried in Eastport, ME.<sup>157, \*23</sup>

The author conducted a cursory search, but did not find any information on whether Mr. Treat conducted any oyster research.

\*<sup>23</sup> Special thanks to Susan M. Sanfilippo and the Pembroke Historical Society for providing information about Upham S. Treat and various family members.<sup>150</sup>

\*<sup>24</sup> Ingersoll states Chouacoet is Portland, Maine, though numerous sources say it is Saco.

\*<sup>25</sup> The author makes the assumption that *planters* are the young seed oysters for transplanting to Maine waters for fattening, while the *shippers* are oysters ready for consumption.

\*<sup>26</sup> Special thanks to Deidre Whitehead of the Maine Coastal Heritage Trust for providing information on Upham S. Treat.<sup>176</sup>

## Works Cited

1. Gatherings from Our Exchanges. Biddeford Daily Journal. Monday Evening, August 30, 1886. [NewspaperArchive](#) . Fogler Library, University of Maine, database subscription. Accessed 5 September 2018.
2. Dodge, Christine H. Vital Records of Old Bristol and Nobleboro in the County of Lincoln, Maine: Including the Present Towns of Bremen, Damariscotta, South Bristol, and the Plantation of Monhegan. Vol. 1 \_Births and Deaths. Portland. 1947. Maine Historical Society.
3. Dodge, Christine H. Vital Records of Old Bristol and Nobleboro in the County of Lincoln, Maine: Including the Present Towns of Bremen, Damariscotta, South Bristol, and the Plantation of Monhegan. Vol. 2 \_Marriages. Portland. 1947. Maine Historical Society.
4. Donham, G.M.. MAINE REGISTER OR STATE YEAR-BOOK AND LEGISLATIVE MANUAL FROM APRIL 1, 1887, TO APRIL 1, 1888. ESTABLISHED 1870. Portland, Me. J. B. Gregory. 1887. Accessed 7 September 2018.
5. Ancestry.com
6. *Find A Grave*, database and images (<https://www.findagrave.com> : accessed 11 September 2018), memorial page for William Nickels Child (18 Sep 1853–30 Aug 1932), Find A Grave Memorial no. [36022104](#), citing Hillside-Norris Cemetery, Damariscotta, Lincoln County, Maine, USA ; Maintained by David J Bollman (contributor [46932973](#)) .
7. "United States Census, 1850," database with images, *FamilySearch*(<https://familysearch.org/ark:/61903/1:1:M6JB-JZK> : 12 April 2016), Fellows Knowlton, Damariscotta, Lincoln, Maine, United States; citing family 169, NARA microfilm publication M432 (Washington, D.C.: National Archives and Records Administration, n.d.). Accessed 11 Sept. 2018.
8. **Source Citation:** Year: 1860; Census Place: Damariscotta, Lincoln, Maine; Roll: M653\_442; Page: 557; Family History Library Film: 803442. **Source Information:** Ancestry.com. 1860 United States Federal Census [database on-line]. Provo, UT, USA: Ancestry.com Operations, Inc., 2009. Images reproduced by FamilySearch. **Original data:** 1860 U.S. census, population schedule. NARA microfilm publication M653, 1,438 rolls. Washington, D.C.: National Archives and Records Administration, n.d. Accessed 11 Sept. 2018.
9. <https://www.familysearch.org>.
10. Dow, George F. Nobleboro History: The little cannon in Damariscotta. Lincoln County News. Damariscotta, Maine. 9 December, 1993. Accessed via [Digital Archives of the Skidompha Library](#) . Accessed 11 Sept. 2018.
11. *Find A Grave*, database and images (<https://www.findagrave.com> : accessed 11 September 2018), memorial page for Sarah Ann Knowlton (26 Apr 1836–25 Jan 1889), Find A Grave Memorial no. [118112021](#), citing Bethlehem Cemetery, Damariscotta, Lincoln County, Maine, USA ; Maintained by Jessica Irish (contributor [48082694](#)) .
12. Hoyt, Edmund S. MAINE REGISTER OR STATE YEAR-BOOK AND LEGISLATIVE MANUAL FROM APRIL 1, 1881, TO APRIL 1, 1882. Portland, Me. Hoyt, Fogg, & Donham. 1887.
13. Browman, David L; Stephen Williams. Anthropology at Harvard : a biographical history, 1790-1940. Cambridge. Peabody Museum Press. 2013. p109.
14. Reports of the Peabody Museum of American Archaeology and Ethnology. In Connection with Harvard University. Vol e. 1880-86. Cambridge. Printed by order of the Board of Trustees. 1887.
15. Sanger, David, Mary Jo (Elson) Sanger. BOOM AND BUST ON THE RIVER: THE STORY OF THE DAMARISCOTTA OYSTER SHELL HEAPS. *Archaeology of Eastern North America*. Vol. 14 (Fall 1986). Published by: Eastern States Archeological Federation. pp. 65-78.
16. Chapter 142: AN ACT to encourage and protect the planting of oysters . PUBLIC LAWS OF THE STATE OF MAINE, PASSED IN THE YEARS 1842 TO 1851, INCLUSIVE; WITH A GENERAL INDEX. HALLOWELL. MASTERS, SMITH & COMPANY. 1852. [GoogleBooks](#) . Accessed 14 September 2018.
17. Oyster Business. Maine Farmer (1844-1900). Apr. 13, 1854. pg. 2. [American Periodical Series Online](#). Accessed 14 September 2018.
18. The Revised Statutes of the State of Maine. Passed March 24, 1870. Effective February 1, 1871. To Which Are Prefixed THE CONSTITUTIONS OF THE UNITED STATES AND OF THE STATE OF MAINE. With an Appendix. Augusta. 1870. c.40, § 21.
19. THE oyster trade of Virginia will be likely to suffer if there is any truth in the report which reaches us that a shrewd Yankee in Maine has discovered a compound that is equal to our delicious bivalve. *Lynchburg Virginian* (Lynchburg, Virginia), Friday, June 20, 1873; Issue 226. (108 words). [19th Century U.S. Newspapers](#). Accessed 13 Sept. 2018. **Gale Document Number:** GT3002823683.

20. Mane State Legislature. Republican Journal. Belfast, ME. 20 Jan, 1876. [Chronicling America](#) . Library of Congress. Accessed 10 September 2018.
21. Acts and Resolves of the Fiiifty-Seventh Legislature of the State of Maine. 1878. Published by the Secretary of State. Augusta. Sprague, Owen & Nash, Printers to the State.
22. Ingersoll, Ernest. The Oyster, Scallop, Clam, Mussel, and Abalone Industries. [The fisheries and fishery industries of the United States / prepared through the co-operation of the commissioner of fisheries and the superintendent of the tenth census by George Brown Goode ... and a staff of associates](#) by George Brown Goode and a staff of associates. Washington. Govt. Print. Off. Section V. Volume II. 1887. Louise Dean Library. Darling Marine Center.
23. *The Republican journal*. [volume] (Belfast, Me.), 01 Jan. 1880. *Chronicling America: Historic American Newspapers*. Lib. of Congress. Accessed 11 September 2018. <<http://chroniclingamerica.loc.gov/lccn/sn78000873/1880-01-01/ed-1/seq-4/>>
24. Maine Legislature. Republican Journal. Belfast, ME. March 10, 1881.
25. An act to authorize James A. Creighton and his assigns to plant, propagate and preserve oysters in the water of Georges river and tributary streams. ACTS AND RESOLVES OF THE SIXTIETH LEGISLATURE OF THE STATE OF MAINE. 1881. Published by the State, agreeably to Resolves of June 28, 1820, February 18, 1840, and March 16, 1842. Augusta. Sprague & Son, Printers to the State. 1881.
26. Fishing Items. Republican Journal. Belfast, ME. March 31, 1881.
27. Fish and Fishing. Republican Journal. Belfast, ME. April 14, 1881.
28. Fish and Fishing. Republican Journal. Belfast, ME. April 28, 1881.
29. Fish and Fishing. Republican Journal. Belfast, ME. May 19, 1881.
30. Plenty of Oysters. Biddeford Daily Journal. Biddeford, ME. 25 Sep. 1886.
31. Oyster Culture. Republican Journal. Belfast, ME. Feb. 3, 1887.
32. A Promising Local Enterprise Driven Away. Republican Journal. Belfast, ME. Feb. 17, 1887.
33. The Law to protect Oyster Planting. Republican Journal. Belfast, ME. Feb. 24, 1887.
34. *The Republican journal*. [volume] (Belfast, Me.), 10 March 1887. *Chronicling America: Historic American Newspapers*. Lib. of Congress. Accessed 16 Sept. 2018 <<http://chroniclingamerica.loc.gov/lccn/sn78000873/1887-03-10/ed-1/seq-1/>>
35. Republican Journal. Belfast, ME. Feb. 14, 1907.
36. Local News. Republican Journal. Belfast, ME. May 26, 1887.
37. OYSTER PLANTING IN PENOBSCOT BAY. Republican Journal. Belfast, ME. Sept. 15, 1887.
38. News of Belfast and Vicinity. Republican Journal. Belfast, ME. May 3, 1888.
39. Compiled by the Secretary of State. Private and Special Laws of the State of Maine from 1887 to 1889, Inclusive. Augusta. Burleigh & Flynt, Printers to the State. 1889.
40. Oysters in Maine Waters. Republican Journal. Belfast, ME. June 20, 1901.
41. Cultivating Oysters. Republican Journal. Belfast, ME. May 8, 1902.
42. *The times*. (Richmond, Va.), 11 May 1902. *Chronicling America: Historic American Newspapers*. Lib. of Congress. <<http://chroniclingamerica.loc.gov/lccn/sn85034438/1902-05-11/ed-1/seq-3/>> Accessed 17 September 2018.
43. A Rival of Maine Clams. Republican Journal. Belfast, ME. Aug 6, 1903.
44. Maine Oysters. Republican Journal. Belfast, ME. Oct. 29, 1903.
45. Maine Oysters. Kennebec Journal. Augusta, ME. June 10, 1905.
46. OYSTER SEASON SOON. Bath Independent and Enterprise. Bath, ME. Sept. 1, 1906.
47. Maine Fisheries of 1905. Republican Journal. Belfast, ME. Thursday, Mar. 1, 1906.

48. *The Republican journal*. [volume] (Belfast, Me.), 31 Jan. 1907. *Chronicling America: Historic American Newspapers*. Lib. of Congress. <<http://chroniclingamerica.loc.gov/lccn/sn78000873/1907-01-31/ed-1/seq-3/>>
49. Oyster Culture. Bath Independent and Enterprise. Bath, ME. 31 March 1906.
50. Oyster Culture in Maine. Twentyeighth Report of the Commissioner of Sea and Shore Fisheries of the State of Maine. for 1903 and 1904. AUGUSTA. KENNEBEC JOURNAL PRINT. 1905. p51. Accessed 17 Sept. 2018 at [Friends of Penobscot Bay](#).
51. Twenty-Ninth Report of the Commissioner of Sea and Shore Fisheries of the State of Maine for 1905 and 1906. Augusta. Kennebec Journal Print. 1907. p57.
52. Taxiarchis, Louis N., Robert L. Dow, and Frederick T. Baird, Jr. Survey of the oyster beds (Crassostrea virginica) in the Sheepscot River and its tributaries, 1954. Sheepscot Area Report No.1. General Bulletin # 7. Department of Sea and Shore Fisheries. Augusta, Maine. December, 1954. Retyped May, 1967. Louise Dean Library. Darling Marine Center.
53. Galtsoff, Paul S., and Walter A. Chipman Jr. Oyster Investigations in Maine. 1940. Unpublished Item.\*6
54. Thirtieth Report, State of Maine Commissioner of Sea and Shore Fisheries 1907 and 1908. James Donahue, Commissioner. Rockland, Maine. Waterville, Me. Sentinel Publishing Company. 1909. Accessed 18 Sept. 2018 at [Friends of Penobscot Bay](#).
55. Thirty-First Report of Commissioner of Sea and Shore Fisheries State of Maine. 1909 and 1910. James Donahue, Commissioner. Rockland, Maine. Augusta, Me. Kennebec Journal Print. 1911. Accessed 18 Sept. 2018 at [Friends of Penobscot Bay](#).
56. Maine Oysters at Baltimore. Republican Journal. Belfast, ME. 4 May 1911.
57. Republican Journal. Belfast, ME. 20 July 1911. pg4.
58. Maine News Notes. Oxford Democrat. Oxford, ME. 1 Aug., 1911.
59. Oyster Survey. A Brief Report of the Activities of the Department during 1939-1940. State of Maine. Eleventh Biennial Report. Department of Sea and Shore Fisheries. Boothbay Harbor, Me. Arthur R. Greenleaf, Comm. 1941. [HathiTrust Digital Library](#) . Accessed 22 Sept. 2018.
60. Oysters. Thirty-Fourth Report of the Commissioner of Sea and Shore Fisheries of the State of Maine. 1915-1916. Sentinel Publishing Company. Waterville, Maine. 1917.
61. Oysters. State of Maine. 15th Biennial Report. Department of Sea and Shore Fisheries. For Period July 1, 1946 to June 30, 1948. Plus Additional Information to Dec. 30, 1948. Vickery Hill Building. Augusta, Me. <https://www.hathitrust.org/>
62. Carriker, Melbourne R., and Sandra E. Shumway. Taming of the oyster : a history of evolving shellfisheries and the National Shellfisheries Association. Hanover, PA. Printed by Sheridan Press. 2004. pg 91.
63. An Act to encourage and protect the planting of oysters. 1849. Accessed wed. 19 Sept. 2018. Maine State Archives. Type: PL Ch 155. Reference Code: 246-155.
64. Bangor Directory; Containing the Names of the Inhabitants, Their Occupations, Places of Business, Residence, City Officers, Banks, Churches, and Other Useful Information . Bangor.Samuel Smith. No. 13 West Market Square. 1848.
65. Liquor Seizures at Bangor. Maine Farmer. April 19, 1855. [American Periodicals](#)
66. Oyster. Thirty-Third Report of Commissioner of Sea and Shore Fisheries. State of Maine. 1913 and 1914. Henry S. Woodbury, Commissioner, Portland, Maine. Sentinel Publishing Company. Waterville, Maine. 1915.
67. Cowger, Joel, "Natural Occurrence of the American Oyster, Crassostrea viginica, in Maine and its Relevance to the Critical Areas Program, 1975" (1975). *State Planning Office*. 87.  
[https://digitalmaine.com/spo\\_docs/87](https://digitalmaine.com/spo_docs/87)
68. Maine Too Cold For Oysters. Lincoln County News. Damariscotta, Maine. 17 August, 1956. Vertical Files. Folder: Oysters. Louise Dean Library. Darling Marine Center. Accessed 22 September 2018.
69. Dow, Robert L., Director of Research , Maine Department of Sea and Shore Fisheries - July 20, 1970. Existing Aquaculture Research in Maine. (Reprinted from NRC Maine Environmental Bulletin, July 1970.) Vertical Files. Folder: Dept. of Sea and Shore Fisheries. Louise Dean Library. Darling Marine Center. Accessed 22 September 2018.
70. Aquaculture . <https://dmc.umaine.edu/welcome/history/history-aquaculture/> . Accessed 10 Sept. 2018.

71. Late Henry C. Rowe Was Pioneer in Deep Water Oyster Culture. The Bath Independent. Thursday, April 9, 1931.
72. Annual Report of the Secretary of the Interior. For the Fiscal Year Ending June 30, 1940. United States Government Printing Office. Washington. 1940.
73. Conner, Sam E. CONNER'S CORNER: What Has Happened to Maine Coastal And River Waters? Lewiston Evening Journal. Dec 16 1943.
74. START OYSTER FARMING IN LOCAL SALT POND: Maine Folks Trying an Experiment Over at North Sedgwick. The Bath Independent. Bath, Maine. Thursday, August 28, 1947.
75. Decker, George S. Oyster Industry Revival Scheduled. Portland Press Herald. Thursday Morning, September 8, 1949. [NewspaperArchive](#) Accessed September 2018.
76. Schmitt, Catherine, "All About Maine Oysters" (2017). *Maine Sea Grant Publications*. 157. [https://digitalcommons.library.umaine.edu/seagrant\\_pub/157](https://digitalcommons.library.umaine.edu/seagrant_pub/157)
77. Dow, Robert L., and Dana E. Wallace. Japanese oysters (crassostrea gigas) in Maine . Augusta, Me. Maine Dept. of Marine Resources. 1971.
78. Loosanoff, Victor L., and Harry C. Davis. Rearing of Bivalve Mollusks. In: Advances in marine biology . London, New York, Academic Press. vol. 1. 1963.
79. Timeline of Maritime Activities in American History. Collections & Research. Accessed 22 September 2018. <https://research.mysticseaport.org/exhibits/19th-c-merchant-marine/timeline/> [Mystic Seaport, The Museum of America and the Sea](#)
80. Myers, Allen C. The Damariscotta oyster shell heaps : some future considerations. Thesis (B.A.)--Princeton University, 1965.
81. Wennersten, John R. The oyster wars of Chesapeake Bay. Centreville, Md. Tidewater Publishers. 1981.
82. Castner, Harold Webber. A story of the mystifying, prehistoric oyster shell heaps of the Damariscotta River: containing records of explorations by scientists and all known data on this man-made wonder of antiquity. Damariscotta, Me. Printed by the Lincoln County News. 1950. Louise Dean Library. Darling Marine Center. Walpole, Me.
83. Brooks, William Keith. The oyster: a popular summary of a scientific study. 2<sup>nd</sup> ed. Baltimore. Johns Hopkins Press. 1905.
84. Bulletin of the United States National Museum No. 27. Published under the direction of the Smithsonian Institution. Washington. Government Printing Office. 1884.
85. Report of the Oyster Commission of the State of Maryland, January, 1884. Annapolis. James Young, State Printer. 1884
86. Wilson, Calvin Dill. OYSTER-PLANTING AND OYSTER-FARMING. Lippincott's Monthly Magazine (1886-1915). April 1897. American Periodicals.
87. Ingersoll, Ernest. THE OYSTER-INDUSTRY. The History and Present Condition of the Fishery Industries by G. Brown Goode. Washington. Government Printing Office. 1881.
88. The Damariscotta and Muscongus Shell Heaps. Maine Farmer (1844-1900). Nov. 23, 1882.
89. Fair Success in Me. Oyster Experiment. Daily Kennebec Journal. Dec. 3, 1955. Vertical File: Oysters. Maine State Library. Accessed 19 September 2018.
90. An Act granting power to plant and protect oysters in the bed of Georges River in Lincoln County. 1854. Accessed Wed. 19 Sept. 2018. Maine State Archives. Type: PS Ch 114. Reference Code: 294-114.\*<sup>14</sup>
91. An Act to amend an Act granting power to plant and protect oysters in the bed of Georges River in Lincoln County . 1854. Accessed Wed. 19 Sept. 2018. Maine State Archives. Type: PS Ch 219. Reference Code: 300-219.\*<sup>14</sup>
92. An Act to incorporate the Maine Oyster Company . 1862. Accessed Wed. 19 Sept. 2018. Maine State Archives. Type: PS. Reference Code: 378-52.\*<sup>14</sup>
93. Report on the petition of Upham S. Treat and others for a law for the protection of oysters introduced into tide waters of Washington County 1863. Accessed Wed. 19 Sept. 2018. Maine State Archives. Type: GY. Reference Code: 455-51.\*<sup>14</sup>

94. Programs and Services. State of Maine Department of Sea and Shore Fisheries. 25th Biennial Report. For period July 1, 1966 to June 30, 1968. State House. Augusta, Maine. Published under Appropriation No. 4310.
95. State of Maine Department of Sea and Shore Fisheries. 26th Biennial Report. For period July 1, 1968 to June 30, 1970. State House. Augusta, Maine. Published under Appropriation No. 12661.
96. Phone Interview with Angela of the Maine Bureau of Corporations, Elections and Commissions. 24 September 2018.
97. Schmitt, C., and S. Hartin. Marine Sciences at the University of Maine. Maine History. 50 (2). 2016. pg.64.
98. Tillie, Carolyn. Oyster: a Global History. Reaktion Books, Limited. 2017.
99. Pearson, Bill. Something in the water. Wiscasset Newspaper. Wiscasset, Maine. March 10, 2015
100. Hill, Samuel. Market Reports. ATLANTIC OYSTERS. Demand continues to skyrocket as Maine farmers sprint to keep up. National Fisherman. Portland, Me. v99:no.5. September, 2018.
101. Cartwright, Steve. Oysters Make Comeback on Damariscotta River. Fishermen's Voice. v19:no.3. March, 2014. Accessed 27 September 2016.
102. Moore, Sarah. New Oyster Cult. Portland Magazine. Summer, 2017. Accessed July 1, 2018.
103. Cummings, Bob. Sea Farm Produces Oyster Crop; Pioneers Needed to Start Beds. Maine Sunday Telegram. October 22, 1972. Darling Marine Center Archives\News\News Articles\Aquaculture Articles\1970s. Louise Dean Library.
104. Dinsmore, C.I.. Oyster Fishing's In Season Along The Sheepscot's Banks. Portland Press Herald. Thurs. Dec 3. 1959. Accessed September 2018. Maine State Library. Vertical File: Oysters.\*<sup>13</sup>
105. State of Maine Department of Sea and Shore Fisheries. 24th Biennial Report. For period July 1, 1964 to June 30, 1966. State House. Augusta, Maine. pg.32.
106. Dow, Robert L. Huge Potential Seen For Maine Aquaculture: It Could Be Leading Industry, Says State Research Director. Fisheries Circular No.25. Reprinted from National Fisherman. February and March, 1971 issues. DMC Archives\News\News Articles\Aquaculture\1970s.
107. Winship, George Parker of the John Carter Brown Library. SAILORS Narratives OF VOYAGES along the New England Coast 1524-1624. Boston. Houghton, Mifflin & Company. 1905.
108. Memorial volume of the Popham celebration, August 29, 1862: commemorative of the planting of the Popham colony on the peninsula of Sabino, August 19, o.s., 1607, establishing the title of England to the continent. Pub. under the direction of the Rev. Edward Ballard. Portland. Bailey & Noyes. 1863. GoogleBooks. Accessed March, 2019.
109. Larson, Karin. Warren Historical Society Historian. "Warren Oyster Co." E-mail to Randy Lackovic. March 13, 2019.
110. MacKenzie, Jr. , Clyde L. History of Oystering in the United States and Canada, Featuring the Eight Greatest Oyster Estuaries. Marine Fisheries Review. 1996. 58:4. pp. 1-78. Aquatic Commons . Accessed 17 march 2019.
111. Eaton, Cyrus. Annals of the town of Warren; with the early history of St. George's, Broad Bay, and the neighboring settlements on the Waldo patent. Hallowell, ME. Masters, Smith & co. 1851.
112. 1742-43 Chap. 0011. An Act To Prevent Dam[m]age Being Done Unto Billingsgate Bay In The Town Of Eastham. By Cattle And Horse-Kind And Sheep Feeding On The Beach And Islands Adjoining Thereto. Massachusetts Archives Accessed 15 March 2019.
113. THE ACTS AND RESOLVES, PUBLIC AND PRIVATE, OF THE PROVINCE OF MASSACHUSETTS BAY: TO WHICH ARE PREFIXED THE CHARTERS OF THE PROVINCE. HISTORICAL AND EXPLANATORY NOTES, AND AN APPENDIX. PUBLISHED UNDER CHAPTER 87 OF THE RESOLVES OF THE GENERAL COURT OF THE COMMONWEALTH FOR THE YEAR 1867. Volume IV. BOSTON. WRIGHT & POTTER PRINTING CO., STATE PRINTERS, 18 Post Office Square. 1890.
114. 1771-72 Chap. 0013. An Act In Addition To An Act, Made In The Fifth Year Of The Reign Of His Present Majesty, Intituled "An Act To Prevent The Destruction Of Oysters In The Several Bays And Rivers, Hereafter Mentioned, Within This Province." State Library of Massachusetts. <http://hdl.handle.net/2452/116892> . Accessed 12 March 2019.
115. THE LAWS O F THE COMMONWEALTH OF MASSACHUSETTS, Passed from the Year 1780, to the End of the Year 1800, WITH THE CONSTITUTIONS of THE UNITED STATES OF AMERICA, AND OF THE COMMONWEALTH, PREFIXED, To which IS ADDED AN APPENDIX, containing ACTS AND CLAUSES OF ACTS, FROM THE LAWS OF THE LATE colony, PROVINCE

- AND STATE of MASSACHUSETTS, WHICH EITHER ARE UNREVISED OR RESPECT THE TITLE OF REAL ESTATE. in Two volumes. VOL. II. PUBLISHED BY ORDER OF THE GENERAL COURT. B O S T O N. PRINTED BY MANNING & LORING. 1801.
116. Legislative Acts/Legislative Proceedings. Eastern Argus (published as Supplement to the Eastern Argus). Portland, ME. May 22, 1821. "America's Historical Newspapers" Database. Readex. Accessed 1 Mar 2019.
117. Advertisement. Eastern Argus (published as Eastern Argus). Portland, ME. Dec. 16, 1828. "America's Historical Newspapers" Database. Readex. Accessed 1 Mar 2019.
118. Advertisement. Eastern Argus (published as Eastern\_Argus\_Semi\_Weekly). Portland, ME. Feb. 27, 1829. "America's Historical Newspapers" Database. Readex. Accessed 1 Mar 2019.
119. Letter From the Editor. Portland Advertiser. Portland, ME. Aug. 3, 1830. "America's Historical Newspapers" Database. Readex. Accessed 1 Mar 2019.
120. Bentley, William. The diary of William Bentley, pastor of the East Church, Salem, Massachusetts. Salem, Mass. The Essex Institute. 1905-1914.
121. THE REBEL PIRATES.: A Daring Adventure in Portland Harbor. The Revenue Cutter Caleb Cushing Cut Out by Men from the Pirate Tacony. Prompt Pursuit by Two Armed Packet Steamers. The Cushing Abandoned and Blown Up by Her Captors. The Rebels All Captured and Taken to Portland. Their Intention in Destroy Two Gunboats on the Works. Forty Sail of Vessels Destroyed by a Steamer off Cape Sable. OFFICIAL DISPATCH TO HON. S.P. CHASE IN REGARD TO THE REVENUE-CUTTER CALEB CUSHING. New York Times. Jun 28, 1863. Database: ProQuest Historical Newspapers: The New York Times. Accessed 21 Mar 2019.
122. Shaw, David. Sea wolf of the Confederacy : the daring Civil War raids of naval Lt. Charles W. Read . Dobbs Ferry, NY. Sheridan House. 2004.
123. Touching the Oyster. Once A Week: An Illustrated Miscellany of Literature, Popular Science, and Art. New Series. Vol. II. June-Dec., 1866. London. Bradbury, Evans, & CO. 1866.
124. Oysters and Oil. Daily Eastern Argus (published as Eastern Argus). Portland, ME. June 20, 1863. "America's Historical Newspapers" Database. Readex. Accessed 21 Mar 2019.
125. Ninth Annual Report of the Secretary of the Maine Board of Agriculture. 1864. Augusta. Stevens & Sayward, Printers to the State. 1864
126. The Profits of Oyster Farming. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Feb. 11, 1865. "America's Historical Newspapers" Database. Readex. Accessed 8 Mar 2019.
127. Loss of an Oyster Laden Schooner. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Nov. 13, 1866. "America's Historical Newspapers" Database. Readex. Accessed Mar 2019.
128. The Oyster Business. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Oct 27, 1868. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
129. Advertisement. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Dec. 2, 1868. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
130. Advertisement. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Nov. 11, 1869. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
131. [Mr. James freeman; Oyster King; Established; Popularity; Courteous; Gentlemanly; Trade; State]. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Oct. 11, 1869. "America's Historical Newspapers" Database. Readex. Accessed Mar 2019.
132. The Oyster Trade. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Oct. 24, 1868. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
133. Advertisement. Daily Eastern Argus (published as Eastern Argus). Portland, ME. Mar 9, 1868. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
134. Baird, Spencer F (editor). Annual Record of Science and Industry for 1873 . New York. Harper Brothers & Publishers. Franklin Square. 1874. [GoogleBooks](#) Accessed 22 March 2019.
135. Advertisement. Portland Daily Press. Portland, ME. Nov. 2, 1870. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.

136. Magazine Notices. Portland Daily Press. Portland, ME. Nov. 23, 1877. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
137. Arrival of an Oyster Schooner. Portland Daily Press. Portland, ME. Jan. 9, 1879. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
138. Advertisement. Portland Daily Press. Portland, ME. Oct. 25, 1880. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
139. Magazine Notices. Portland Daily Press. Portland, ME. Oct. 25, 1881. "America's Historical Newspapers" Database. Readex. Accessed 10 Mar 2019.
140. Oil Vs. Oysters. Portland Daily Advertiser. Portland, ME. June 19, 1863. "America's Historical Newspapers" Database. Readex. Accessed 8 Mar 2019.
141. [Portland; Impregnated; Hebron:: Petroleum] Maine Cultivator and Hallowell Gazette. Hallowell, ME. June 27, 1863. "America's Historical Newspapers" Database. Readex. Accessed 8 Mar 2019.
142. News Article. New London Weekly Chronicle (published as The New-London Weekly Chronicle.). New London, Connecticut. December 31, 1857. "America's Historical Newspapers" Database. Readex. Accessed 22 Mar 2019.
143. Oyster Bake. The Portland Daily Press. (Portland, Me.), 11 Oct. 1869. *Chronicling America: Historic American Newspapers*. Lib. of Congress. <https://chroniclingamerica.loc.gov/lccn/sn83016025/1869-10-11/ed-1/seq-3/>
144. Plant Oysters in Maine. MAINE WOODS AND MAINE SPORTSMAN. Phillips, ME. May 5, 1910. [Digital Maine Repository](#). Accessed 24 March, 2019.
145. Smith, David C. The First Century: A History of the University of Maine, 1865-1965. Orono, ME. University of Maine at Orono Press. 1979.
146. Thirty-First Annual Report of the Maine Agricultural Experiment Station. 1915. Orono, ME.
147. Conlin, Joseph. Consider the Oyster . AMERICAN HERITAGE. volume 31, issue 2. Feb./Mar. 1980. Accessed 3/15/19.
148. Cushman, David Quimby. The history of ancient Sheepscoot and Newcastle : including early Pemaquid, Damarsicotta, and other contiguous places from the earliest discovery to the present time ; together with the genealogy of more than four hundred families. Bath. E. Upton & Son, Printers. 1882.
149. Oyster in the 18th and 19th century United States. [www.oysters.us/history1-usa.html](http://www.oysters.us/history1-usa.html).
150. Sanfilippo, Susan M.. Pembroke Historical Society Curator. "Maine Oyster Company." E-mail to Randy Lackovic. March 22, 2019.
151. Woodard, Colin. The Lobster Coast : rebels, rusticators, and the struggle for a forgotten frontier. New York. Penguin Books. 2004.
152. Adams, George. The Maine register, for the year 1855 : embracing the state and county officers and an abstract of the laws and resolves; together with a complete business directory of the state, and a variety of useful information. Portland, Me. Black & Carter. 1855.
153. Treat Island :: Maine Coast Heritage Trust . <https://mcht.org/preserves/treat-island>. Accessed 25 March 2019.
154. Billings, Cathy. The Maine lobster industry : a history of culture, conservation and commerce . Charleston, SC. The History Press. 2014.
155. Kilby, William Henry. Eastport and Passamaquoddy : a collection of historical and biographical sketches. Eastport, Me. E. E. Shead & Co. 1888.
156. Upham Stowers Treat (1808-1883) | FamilySearch . <https://ancestors.familysearch.org/en/LCVH-9M8/upham-stowers-treat-1808-1883> . Accessed 22 March 2019.
157. Treat, John Harvey. The Treat family : a genealogy of Trott, Tratt and Treat for fifteen generations, and four hundred and fifty years in England and America : containing more than fifteen hundred families in America : with illustrations, autographs and a map of Somersetshire. Salem, Mass. The Salem Press Publishing & Printing Company. 1893.
158. MacKenzie, Clyde L. Jr. History of Oystering in the United States and Canada, Featuring the Eight Greatest Oyster Estuaries. Marine Fisheries review. v58:no.4. 1996. Aquatic Commons.

159. Cutter, William Richard. New England families, genealogical and memorial; a record of the achievements of her people in the making of commonwealths and the founding of a nation. New York. Lewis Historical Pub. Co., 1913. [GoogleBooks](#). Accessed 27 March 2019.
160. Swanson, Heather Anne. Caught in Comparisons: Japanese Salmon in an Uneven World . Dissertation. University of California\_Santa Cruz. 2013. Accessed 27 March 2019.
161. Champlain, Samuel de, and William Lawson Grant. Voyages of Samuel De Champlain, 1604-1618. New York. C. Scribner's Sons. 1907. [HathiTrust Digital Library](#). Accessed 27 March 2019.
162. Willis, William. The history of Portland, from 1632 to 1864 : with a notice of previous settlements, colonial grants, and changes of government in Maine. Portland, Me. Bailey & Noyes. 1865. 2<sup>nd</sup> ed. [GoogleBooks](#). Accessed 27 March 2019.
163. A voyage to North-America : undertaken by command of the present king of France ; containing the geographical description and natural history of Canada and Louisiana ; with the customs, manners, trade and religion of the inhabitants ; a description of the lakes and rivers, with their navigation and manner of passing the Great Cataracts
164. Advertisement. Gazette (published as Portland Gazette). Portland, Maine. December 17, 1822. Database |America's Historical Newspapers \ Readex. Accessed 1 March 2019.
165. News Article. Portland Daily Advertiser. Portland, Maine. August 21, 1835. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
166. Advertisement. Portland Advertiser. Portland, Maine. December 5, 1835. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
167. News Article. Daily Commercial Advertiser. Bangor, Maine. January 22, 1836. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
168. Advertisement. Maine Cultivator and Hallowell Gazette. Hallowell, Maine. November 13, 1847. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
169. Advertisement. Age (published as the Age). Augusta, Maine. June 7, 1849. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
170. Advertisement. Portland Advertiser. Portland, Maine. December 28, 1852. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
171. Advertisement. Portland Advertiser. Portland, Maine. December 6, 1859. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
172. Advertisement. Portland Daily Advertiser. Portland, Maine. June 20, 1863. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
173. Advertisement. Daily Eastern Argus (published as Eastern Argus). Portland, Maine. Feb. 12, 1864. Database |America's Historical Newspapers \ Readex. Accessed 8 March 2019.
174. Advertisement. Daily Eastern Argus (published as Eastern Argus). Portland, Maine. Mar 9, 1868. Database |America's Historical Newspapers \ Readex. Accessed 10 March 2019.
175. [https://en.wikipedia.org/wiki/William Bentley](https://en.wikipedia.org/wiki/William_Bentley)
176. Whitehead, Diedre. Maine Coastal Heritage Trust. "RE: Question." E-mail to Randy Lackovic. March 29, 2019.
177. Local and Maine News. Bangor Daily Whig & Courier. Bangor, ME. Tuesday, June 30, 1857. Gale Document Number: GT3007211368. Accessed 26 March 2019.
178. Maine Secretary of State. Statistics of industries and finances of Maine for the year 1873. Augusta, Sprague & Son, 1873-86. [GoogleBooks](#) . Accessed 2 April 2019.