

MAINE STATE LEGISLATURE

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Public Documents of Maine:

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

PUBLIC OFFICERS AND INSTITUTIONS

FOR THE YEAR

1877.

VOLUME I.

AUGUSTA:

SPRAGUE, OWEN & NASH, PRINTERS TO THE STATE.

1877

TENTH REPORT

OF THE

COMMISSIONERS OF FISHERIES

OF THE

STATE OF MAINE,

FOR THE YEAR

1876.



AUGUSTA:

SPRAGUE, OWEN & NASH, PRINTERS TO THE STATE.

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REPORT.

To the Honorable the Governor and Executive Council:

Your Commissioners of Fisheries have the honor to report the result of their year's work as of a most encouraging character, both in the increased interest of the people in our labors, the voluntary aid extended to us, as well as the large amount of work achieved from very restricted resources. The Legislature, through its appropriate committee, reported for our use a sum within eight hundred dollars of that expended by our department in 1875. They reported three thousand dollars, but were erroneously instructed that our salaries were provided for elsewhere, and one thousand dollars was, by request, struck from the sum reported, leaving for our use, for all purposes, two thousand dollars, scarcely enough to pay the salaries of Wardens and Commissioners alone. In 1875 the sum appropriated for our use was five thousand dollars; from this we subscribed one thousand dollars to the Bucksport Salmon Breeding Works, for ova to be used for this year's (1876) distribution. At the close of the year 1875 we left twelve hundred dollars unexpended in the Treasury.

SALMON.

We have stated that in 1875 we subscribed one thousand dollars, in behalf of Maine, to the Penobscot Salmon Breeding Works. Our return from this sum was 320,000 salmon eggs, which were sent, 100,000 to Dixfield to be hatched and distributed in the Androscoggin and tributaries, and the remaining 220,000 to Norway and Songo, to be hatched and distributed in the tributaries of the Presumpscot river. Prof. Baird, U. S. Commissioner, presented to the State of Maine through the Messrs. Coffin of the Pembroke Iron Works, 72,000 ova, which were successfully hatched and planted in the Penquaman and Denny's rivers by Mr. Supt. Whitman, to whom Maine is so much indebted for fostering and cultivating an interest in fish culture in his section of the

State. In the month of April, we were notified by Mr. Atkins, Superintendent of the Penobscot Salmon Breeding Establishment, that 250,000 salmon eggs would be turned over to us by the United States Commissioner, if we would assume the expense of paying the cost of tending from date of delivery (April 15th) until the fry was old enough to be transported. This offer we accepted for the State, and when the young fish were advanced enough to move, we assigned 100,000 to the town of Surry, gentlemen of that place generously volunteering to come after and distribute the same in Patten's brook and mill stream and tributaries. The balance we planted in the Mattawamkeag at Bancroft and Kingman, and in the Penobscot at Winn. The latter assignment we designed for Medway, but a variety of casualties occurring during a very violent rain-storm, the team not being promptly on hand, the air-pump breaking and no workman to be found in time to mend it, while the young fry were suffering, we were obliged to consign our precious charges to the river at once to save them.

We cannot refrain here from expressing our sense of obligation to Pres. Jewett and Supt. Cram of the European and North American Railway, for the interest they have taken in our work, and the many acts of courtesy and kindness extended to us, that have so much facilitated the successful transportation of our cans of fishes over their road. If there are two positions in this hard world that require a degree of patience that would throw that of the much vaunted Job into the shade, they are surely those of a railroad superintendent and a baggage master. Mr. Cram has selected his officers well; courtesy and vigilance are the characteristics of the road, from chief to brakeman.

Of the young salmon planted by us in the rivers of Maine, those put into the Penobscot in 1874 were seen the following spring (1875) in very large numbers, on their way down to the ocean. At every incoming tide the little *smolts*, as the year old salmon are called, would collect in considerable numbers at the foot of the dam at Morse's mill on the Kenduskeag. A good many have been caught there by our city boys. This year (1876) the river has abounded with them from the branches of the Penobscot to Bangor. Very many have been caught by anglers at the Water-Works dam, at all stages of the tide.

We take the liberty of appending the following excellent letter from Mrs. Spencer:

MR. STILWELL:

Dear Sir:—My little boy caught five little fish last evening (in the mill pond) like the one I send you. I called them "little trout," but my husband, Albert J. Spencer, the salmon fisherman, says they are young salmon, some of the fruit of the "breeding works," and told me to send one to you and see what you thought, as he would like to hear your opinion about them. He says he never saw anything in the river at this place like them before this spring. Jimmy, the little boy who caught them, says the river "was full of them" last night. Mr. Spencer says, "Please notice the little scales on them exactly like salmon."

Please answer if convenient, and oblige,

Very respectfully,

SARA W. SPENCER.

VEAZIE, May 9th, 1876.

Every spring have we had young smolts exhibited to us, which have been taken from the consignments of smelts brought into our market for sale. In some cases, gentlemen have brought them to us who have found them in our eating saloons, or on our market stalls. Of course but a tithe of those sold among the smelts are known or reported to us, as but very few are sufficiently conversant with the matter to distinguish them. On the Androscoggin, where the first salmon fry were turned in four years since at Norway, we have had information every year of more or less being caught both in the smelt nets and weirs, as well as by boys with hook and line, at Brunswick. We have no doubt that were a good angler to make a cast below the dam at Brunswick or Topsham, with rod and fly, in the months of July or August, he would be rewarded by taking either smolt, grilse or salmon.

We subjoin a letter from Mr. George Gifford, a very intelligent gentleman, and well-known sportsman of Buckfield:

BUCKFIELD, Dec. 7, 1875.

HON. E. M. STILWELL:

Sir:—I have not answered your letter before for the reason that I had no information of any value to you. My business holding me very closely, I have had no opportunity to make inquiries of persons who might be depended upon, for any data of consequence.

I embraced the first opportunity to visit Brunswick, to learn if there were any signs of salmon there the past season, and I am happy to say that there is no doubt but that the salmon *did* return to the mouth of the river, and in considerable numbers. I have been told by men who knew the fish, that they were often seen in the eddy below the lower dam, jumping lively as trout. I am sorry to say I could find no one who had seen them ascend the fish ladder; neither can I find that they made their appearance to any one's knowledge above Brunswick.

There was a story going the rounds in Lewiston and Auburn, that a salmon one and a half feet long, was captured below the falls at Lewiston, and I am quite positive that a paragraph to that effect appeared in the Lewiston Journal, but diligent search and inquiry fails to authenticate it. I have had no opportunity this season to learn anything

in regard to places further up the Androscoggin; Mr. Stanley, your associate, would be likely to know about that.

In answer to your inquiries about the Little Androscoggin, I can only say that it is practically impossible for the fish to get up the stream, as the Little Androscoggin Water Power Company built a dam two years ago in Auburn, near the mouth, with a fall of thirty-five to forty feet (35 to 40 feet) direct, unbroken fall, without any fishway at all, the water striking, at the foot of the fall, on a bed of loose rocks. This, I presume, presents an insurmountable barrier to the fish ascending that stream.

I very much regret that I cannot give you information of some value at this time. If at any time I should learn anything of value, I will communicate it to you.

-Yours very truly,

GEO. GIFFORD, No. Auburn, Me.

HON. E. M. STILWELL, Bangor.

Grilse, which is the distinctive name given to a salmon on its first return from the sea, and weighing from one to three pounds, have been reported to us from time to time. That is to say, we have recognized them from the description of a supposed non-descript fish, represented to us as being of the size of a large chub, but with smaller head, slimmer and longer body, and when cut, the flesh of the color of salmon. The grilse is unknown to our fishermen here, as their nets are of too large a mesh to retain them. Some of our best and most experienced fishermen, until lately, have denied that the salmon was bred in fresh water. As our fishes become more and more scarce at the mouths of our rivers and in our harbors, from over, indiscriminate and unreasonable fishing, the fishermen not only improve the modes and apparatus for catching, but demand increased facilities, by repealing all statutes that place any check upon time, place or season. A great and crying evil, one that effectually checks the increase of our salmon and other fishes, is the repeal of the laws prohibiting menhaden and porgie nets within three miles of the shore, and of the law forbidding drifting for salmon on the Penobscot within five hundred yards of any dam, fishway, or mill race.

Please read attentively the following letters from Dr. F. M. Everleth of Waldoboro,' who has done so much for fish culture in Maine :

WALDOBORO,' March 8th, 1876.

MR. STILWELL:

Dear Sir:—I am confident that the salmon we turned loose have lived, and there were quite a number caught in the smelt weirs below here early in the fall. None have been seen in the river before for *forty years*.

Yours truly,

F. M. EVERLETH.

WALDOBORO', July 28th, 1876.

MR. STILWELL:

Dear Sir:—Mackerel seiners are following the mackerel into our river and destroying everything, salmon, alewives and all. Alewives are swept in abundance, and salmon from one to two feet in length. Can we stop it? I am ignorant of how the law stands, and what course to pursue. The salmon must certainly be some of those we have hatched and turned loose, and it is too bad to have them swept up in this way after being to so much trouble and expense to stock the river. They are not only fishing in tide water but in the Medomak river proper, above the narrows, and all the way from five to twelve miles of this village. Let me hear from you.

Respectfully,

F. M. EVERLETH.

The Dominion of Canada is now not only the great resort for American anglers, but is the chief source of supply of salmon for the United States market. Although her rivers have been less ruthlessly fished than ours, less obstructed by impassable dams, it is as well for us to recognize the fact that she is obliged to protect her fisheries by wise laws, rigidly enforced, to preserve their yield unabated. Let us here present an extract from her fishery laws. Nothing less than something similar, faithfully observed by our people, can restore our fisheries here.

SALMON FISHERY.

1. Salmon shall not be fished for, caught or killed, between the thirty-first day of July and the first day of May, in the Provinces of Ontario and Quebec, and in the River Restigouche, and between the fifteenth day of August and the first day of March, in the Province of New Brunswick; provided always, that it shall be lawful to fish for, catch and kill salmon with a rod or line, in the manner known as fly-surface fishing, between the thirtieth day of April and the thirty-first day of August, in the Provinces of Ontario and Quebec, and between the first day of March and the fifteenth day of September, in the Province of New Brunswick:

2. Salmon shall not be fished for, caught or killed in the Province of Nova Scotia, save as provided and authorized by the laws now in force in that Province;

3. Foul or unclean salmon shall not be at any time caught or killed;

4. Salmon fry, parr and smolt, shall not be at any time fished for, caught or killed, and no salmon or grilse of less weight than three pounds shall be caught or killed; but where caught by accident in nets lawfully used for other fish, they shall be liberated alive at the cost and risk of the owner of the fishery, on whom shall in every case devolve the proof of such actual liberation;

5. Meshes of nets used for capturing salmon, shall be at least five inches in extension, and nothing shall be done to practically diminish or nullify their size:

6. The use of nets or other apparatus which capture salmon shall, except in the Provinces of Nova Scotia and New Brunswick, be confined to tidal waters.

Indubitably the wisest and most economical course, and soonest productive of the desired results, would be to declare a close-

time for a term of six or more years for the river or rivers to be restocked, during which period all fishing, excepting with hook and line, should be declared illegal from source to mouth.

SALMO SEBAGO.

Commonly known as Schoodic, or Land-locked Salmon. The demand for the ova of this favorite fish still continues, both from our own and neighboring States. As we explained in our Report of last year, we can have no traffic in our fishes, and apart from that and other reasons, we have not the means of supplying the wants of our own State. Mr. Atkins has organized an establishment on Grand Lake Stream, something after the plan of that at Bucksport. At present the subscribing parties are U. S. Commissioner Baird, and the Commissioners of Massachusetts and Connecticut. We only exact, as compensation to the Grand Lake waters, that the parent fish, after being used, be turned back alive into the waters whence taken, and twenty-five per cent. of the hatched product of the ova. We hope the legislature will enable her Commissioners, another year, to become subscribers, that we may be able to stock those immense wastes of unproductive waters that have been cut off from access to the migratory fishes; all that line of lakes emptying into the Kennebec at Hallowell and Gardiner and Waterville. These waters are all capable of not only producing an important amount of food, but of making the towns on their shores as favorite places of summer resort, as much frequented, and introducing as much money into the State as Moosehead Lake.

We purchased a small lot of eggs of the Sebago Salmon, taken by Mr. Dillingham at Songo lock. The whole amount we were able to distribute this year was only about thirty thousand, which were disposed of as follows: three thousand in Weld's pond, Weld; three thousand in Howard's pond; three thousand in Rangely lakes, Oxford county; one thousand in Wilson's pond in Auburn; four thousand in Pushaw pond, Penobscot county; four thousand in Wild Goose pond, Harmony, Somerset county; six thousand in Long pond, Lincoln; and six thousand in Cold Spring pond, Lincoln. The supply of the demand from other States is dependent in a great degree upon the U. S. Commissioner, and upon Congress furnishing the means to obtain the eggs. Wherever the pickerel has been introduced, the brook trout are gradually thinned out and

disappear; this does not seem to be the case with the land-locked salmon. In Sebec, Sebago and the Grand Lakes, the pickerel is found in great numbers; in fact, in the latter they are reported to be very destructive to the young wild fowl that feed in the still water among the lilly-pads.

We have good accounts of all the young fry we have hitherto distributed in our lakes and ponds. A gentleman from Boston, while casting with rod and fly over Long pond in Lincoln, this last summer, was surprised at rising, hooking and landing what he supposed to be a young salmon. Upon inspection it proved to be one of the young Sebago salmon turned into the pond the year previous by Mr. Newte. It had attained a length of seven inches. Of those sent to Rangely the last five years, several have been taken with the fly, ranging in weight from four and one-half pounds to half a pound. Moosehead Lake should be stocked with these fish. We hope that the sportsmen who visit Moosehead in the season, will see to it that a hatching house be provided there, by subscription, if necessary, and its care enforced upon the hotel keepers. One million, at least, of young trout should be turned into the lake every year, to supply the immense drain upon its waters. If a hatching house is provided, we will endeavor by some means to obtain Schoodic salmon eggs enough to stock its waters.

BLACK BASS.

The popularity of this fine fish is increasing, rather than abating. We have been entirely unable to meet the demand for stock for ponds. It is not so capricious a fish to catch as the white perch, attaining to a larger size and affords more sport, inasmuch as it is almost as game as a salmon. There is no more destructive fish in the waters of Maine than the chub. The little chub make a regular hunt for small fish of every kind, among the grass and weeds and lily pads, along the shore and elsewhere. They are very destructive to young salmon and trout. The pickerel hides and darts upon his prey, but always in still water; but the chub and yellow perch go regularly on the rampage, and are as much at home in the swift water as in the stagnant pool. We watched some small chub below the dam at the foot of Cobbosseecontee Lake, last summer, approach a brood or school of little black bass, each fish hardly the size of a three cent piece; the chub were three inches long. The little bass did not wait for an attack, but

charged and drove the chub. We hope to see every pond in our state into which the pickerel has been introduced, stocked with this valuable fish. The black bass has not thus far been domesticated; that is to say, artificially bred from taking its spawn. We are obliged in all cases to introduce the live fish. We succeeded last year in taking some of the young fish below the dam in Cobbosseecontee river. We think the better system is the one we have now adopted, to let applicants come after their fish. We then are assured that there is sufficiently strong interest to warrant the belief that the fish will be protected and cared for when introduced into their locality; and it also gives us an opportunity of meeting the parties and instructing them in the habits of the fish and the best modes of taking them, &c., &c., &c. We were much pleased with a visit from Mr. Taylor of Machias, representing the Washington County Game and Fish Protection Society. He came with an assistant, armed with cans, &c. A sufficient number of fish were obtained at two visits to stock some ponds that had been purchased by Mr. Taylor and other gentlemen. A very genial, pleasant party from Dexter, consisting of Messrs. Mitchell, Everett, and several other gentlemen, also visited us, and was equally successful. These fish were all taken from Philips pond, in Dedham. Mr. Philips, proprietor of the Lake House, is a good fisherman, keeps a number of good boats, is always supplied with bass, and is ready to go out with any visitors and instruct and assist them in capturing, and advise as to the best modes of transporting. Let every one who is desirous of witnessing what stocking and protecting a pond can do for a hotel, visit the Lake House in the bass season. At Monmouth, Mr. G. H. Prescott is ready at all times to furnish bass, or to go out with visitors and assist in catching the fish. In all these cases, the Commissioners furnish the applicants with cans, which are kept at Mr. Philips', in Dedham, Penobscot county, and at Mr. G. H. Prescott's, Monmouth, Kennebec county. Besides the ponds referred to above at Dexter and Machias, Mr. H. W. Golder of Belgrade came over in person and obtained of Mr. Prescott of Monmouth eighty fish, which he successfully transported to Great pond, without a single loss. George W. Bisbee, Esq., County Attorney of Oxford, and Mr. DeCosta, joined us at Monmouth and assisted in securing a number of fine bass, which they transported to waters in Buckfield. When gentlemen of influence and position take interest enough in these matters to come themselves,

we are sure that the waters stocked will be protected, and that our cause is progressing. From Cobbosseecontee, bass and bass fry enough were taken to supply Worthly pond, in Peru, 150; Ellis River pond, Roxbury, 150; Brettap's pond, Livermore, 50; Jennie pond, Mexico, 50; Bear pond, Turner, 50; North pond, Buckfield, 150; Great pond, Belgrade, 80.

The law relating to the catching of black bass was most injudiciously altered last winter by our legislature, from the first day of July, to the first day of June. The black bass in Maine spawns from the middle of May to middle of July. The first of July is the very earliest period that fishing for them should be allowed. Mr. Philips of Dedham, found the fish on their spawning beds on the sand bars, the first week in July, in Philips' pond. We also sustain our opinion from such high authority as Mr. Wilmot's report to the Dominion government, which we here quote :

"On the 25th of May some of the bass began to pair off, and to commence making nests, some being made in the deepest part of the pond, others in the shallow places. Some were formed on gravel, others upon sunken sticks at the bottom of the pond. The beds were invariably hollowed out a little, and were made very clean by the action of the fish, which gave them a bright appearance. They were round in shape, and varied from twelve to eighteen inches in diameter. Upon these the parent fish deposited their eggs and milt.

"Nest-making terminated about the 19th of June, (some were later), the time elapsing from the first formation of these beds until the young fry were noticeable, varied from twelve to sixteen days, and a further period of five and six days took place before the little fish left the beds. After the eggs were first laid they were seen with difficulty through the water upon the nests. The surface of the beds presented in a few days a very dark appearance. When hatched out, a perfect mass of little black animals, not unlike tadpoles, covered the whole bed. After five or six days, as stated above, they disappeared from the nests, among the weeds and other substances, where hiding places could be found.

"It was curious to observe the the extreme solicitude and watchfulness displayed by the parent fish from the time of hatching until the young bass left the beds, and the feeling seemed to grow stronger, until such time as the fry disappeared among the weeds. So intent were the old fish in caring for their progeny, that they seemed to care nothing for their own safety, exposing themselves continually to be destroyed by the simplest and rudest kind of weapon."

We most respectfully but earnestly suggest, that the law of close-time for this esteemed fish, be altered by our legislature in accordance with these facts, and that the white perch be included in the provisions of the same law with black bass.

FISHWAYS.

A plan has been furnished the Bangor Water Company for a fishway over the dam at Treat's Falls, and it is under construction. An unusually high stage of water for the season of the year, has somewhat delayed the work, but unless some unforeseen casualty should occur, it will be finished before the time when salmon can be legally taken in the Penobscot river, viz., first of April.

Surveys were made last summer for two fishways on the Mattawamkeag; the one at Gordon's Falls, and the other at Sluegundy. The plans for these will be finished this winter, and they will be built at a favorable stage of water next summer or autumn. A fishway is petitioned for at Sebec Village, and should be made. Sebec Village would become a favorite resort for anglers, and a popular place of summer residence for city families, if the salmon of the lake were enabled by a fishway to obtain access to the river below the dam. A fishway is also required at Milo, to give access to the salmon from the Piscataquis to Sebec river. All these streams are capable of being made favorite runs for trout, lake salmon, &c., by furnishing fishways by which they can go and come to lake and stream, back and forth, at will, and would fill all those pretty little river towns with summer boarders. The Kennebec river is still in a state of blockade, by the indifference to the wishes of the citizens of Maine of the alien owners of the Augusta dam. The Grand Jury of Kennebec county found bills of indictment against the putative owners, but as they are not citizens of our State, and the offence with which they are charged is not indictable in Rhode Island, a requisition upon the Governor of the latter State would not be of any effect in causing the surrender of the offenders. The residents on the Kennebec must continue to bear that "Old Man of the Mountain," as did Sinbad, upon their shoulders, until the legislature grants them relief by the passage of a law that will allow them to proceed against the estate of non-residents.

The Presumpscot river may now be pronounced as accessible to salmon and alewives, as far as Mallisson Falls dam. Everybody ostensibly connected with that property is bankrupt. To the County Attorney is referred the decision as to what course to pursue. Of the fishways already built on the river, there was more or less departure in all from accurate obedience to the plans furnished, and some alterations will be required before we shall accept

them in the name of the State. As a general rule, kindly feeling and a desire to fulfill the wishes of the Commissioners prevails.

Allow us here to state, that in no one instance have we ever, from our own personal desire, enforced a fishway upon any mill owner. In every single instance have we been impelled either by newspaper attacks, or by the petition of the inhabitants of the locality, to take the legal steps that were necessary to produce the result. Even in the matter of the Augusta dam, we have acted solely by the will of the people of the Kennebec, as expressed by letters and petitions. Whatever may be our own individual opinions—our enthusiasm, if you will—in the matter of fish restoration or fish culture, we are no believers in forcing them upon a community, for it would require a standing army of Wardens to compel obedience to the law. Communities must enforce their own laws. It is better to have no law, than high sounding ones broken with impunity. A distinguished cotemporary pertinently observes, "The truth is traditional, that where a community fails to enforce a law of its own, there is something wrong in public sentiment, or in the law itself." We do not apply this to any one locality, but to the whole State. Anonymous letters are poured in upon us continually from all sections. Communications are sent to county papers, and in all the same cause of complaint is set forth, viz : that somebody is committing an infraction of the fishery laws. In many cases the complaints are made in person. If within our reach or our means, we volunteer to prosecute, if the party complaining will furnish us evidence, or take the stand in person; and in every instance, thus far, they desire us to punish some one in some community where the residents are too morally timid to give their testimony, or act themselves. Even the very Wardens, in some cases, expect us to act for them. Let it be clearly understood that we, as Commissioners, have only the authority in all these cases of infractions of the fishery laws, of any other private citizen. We cannot make an arrest, we cannot command aid; a fish warden, a constable, a police officer must be called upon by us Commissioners, as by every private citizen, before an arrest can be made. Let us look at the laws: "Revised Statutes, chapter 40, section 32. Fish Wardens shall prosecute for all offences that come to their knowledge, and when they are resisted in the discharge of their duties, they may require such aid as they deem necessary; and any person neglecting to render it, when thus required, shall forfeit ten dollars."

“Section 46. It shall be the duty of constables and police officers to prosecute for all offences against this chapter that shall come to their knowledge.” “Section 47. Any fish warden, constable or police officer may seize any implement used in illegal fishing, and may render any weir built or maintained contrary to law, incapable of taking fish. Any such officer may, on view, appropriate to his own use or gift any fish taken or possessed in violation of law.” A preceding section (45) gives one-half of all fines and forfeitures to the person prosecuting therefor, whether officer or private citizen. The office of a Commissioner of Fisheries is no sinecure. It now requires the whole of our undivided time, as, apart from other duties, the correspondence, which has become most voluminous, demands constant attention. The high position in all that relates to pisciculture which the attainments of our distinguished predecessor, Mr. Atkins, has given our State, makes us the recipients of continued application for information from anglers, pisciculturists and scientific gentlemen throughout the country. The social demands of our position are by no means inconsiderable. We are obliged to keep a furnished office, where we can receive those who come to consult us, either as to the law or other information pertaining to our duties. Of course we cannot receive them at our houses. In fine, no one under the present circumstances, who has not other and independent resources, can hold the office of Commissioner of Fisheries and perform its duties.

PROPOSED LEGISLATION.

We received a communication during the summer from William H. Venning, Esq, Inspector of Fisheries for New Brunswick and Nova Scotia, informing us of instructions from the Minister of Marine and Fisheries of the Dominion of Canada, to pay no further attention to the enforcement of the law against saw-dust, waste and edgings on the New Brunswick side of the St. Croix; assigning as a reason, the utter disregard of the law on the American side. We have no opinion to express as to whether both sides have not been derelict. It has always been the custom on this river for each side to charge the other. As good neighbors, we prefer to confine our attention to our own side. No attention whatever is paid to the law by our own mill owners; the law is as much disregarded as if it had no existence; neither can it be expected that any man, for a paltry salary of \$75 per annum, will

enter into an active war with mill owners controlling millions. At present there is no Warden on the river, neither would the appointment of one be productive of any other result than to take \$75 out of the State Treasury. The St. Croix is a good salmon river; is capable of being developed into one of the best fisheries, as well as one of the best angling rivers for both sea and Schoodic salmon at the North. We expressed our opinion last year, that an officer should be appointed especially for that station, similar to the one for the Penobscot river. We have now an important auxiliary in the Washington County Fish and Game Protection Society, who would look after the conduct of any officer in that district, and make life a burden to any one guilty of neglect or malfeasance. We again repeat our suggestion of last year!

We respectfully request that it be brought to the attention of the legislature, that the law altering the close-time for black bass from July to June, is most destructive to that valuable fish, as they are on their spawning beds until the middle of July.

The white perch of our lakes is a very fine fish, and worthy of protection. We would suggest that the law for black bass also include the white perch. Our market in late autumn, as well as in spring when they are full of spawn, is filled with them. They are taken in nets. The class of men who commit these acts are the most worthless and vile; non-producers, all of them. These ponds belong to the people, where they can go for recreation, and at the same time procure an agreeable change of diet from the restricted routine of a country table. These ponds, likewise, can be made attractions to bring visitors to all our country villages. The railroad has produced a centralization of wealth. The old country tavern, that was a market for so much of the produce of the surrounding country, has now passed away. No teams, now, with their drivers to feed; no stage horses or passengers; no droves of cattle; no families travelling with their own horses, stopping to dine and rest, or spend the night. We require something now for our quiet little country villages and the hotels, something to restore them. Cultivating our resources in ponds and streams will do this. Let us here quote from a pamphlet by Dr. Middleton Goldsmith of Vermont:

There is a brook in Canada, so narrow that a man can jump over it the most of its way, which would rent, I am told, for one hundred dollars a mile. Some pools on salmon streams bring fifty dollars each for yearly rent. There are brooks in Vermont, worth nothing now, which, if protected, could be leased in ten or twenty years' leases,

at one hundred dollars per mile annually. These rents can be paid as mere money making matters. That is to say, there are brooks which could be made, without expense to the owner, worth one hundred dollars a mile annually, for the purpose of hiring men to catch the fish and send them to market, at anything like the present prices for trout. We can safely affirm that there are many farms in Vermont on which the fishing is more valuable; can be rented for more money than the farm is worth for all other uses; and that on all farms through which good trout streams run, the rental of these streams can be made a greater income, for the area of land occupied, than from any other part of the farm.

In estimating these values it is assumed that the exclusive right to capture goes with the brooks, and that the trout would increase until the food limit of the waters was reached. This limit can be produced quickly and cheaply. All that needs to be done is to place in a brook, say five miles long, one hundred thousand young trout annually. Our impression is that this would not, to a person living on the ground, cost over one dollar per thousand.

It is so obvious to us that the preservation and multiplication of trout in the streams of this State, would naturally necessarily follow the establishment, by statutory provisions, of that right referred to, that it needs only to be stated to be believed.

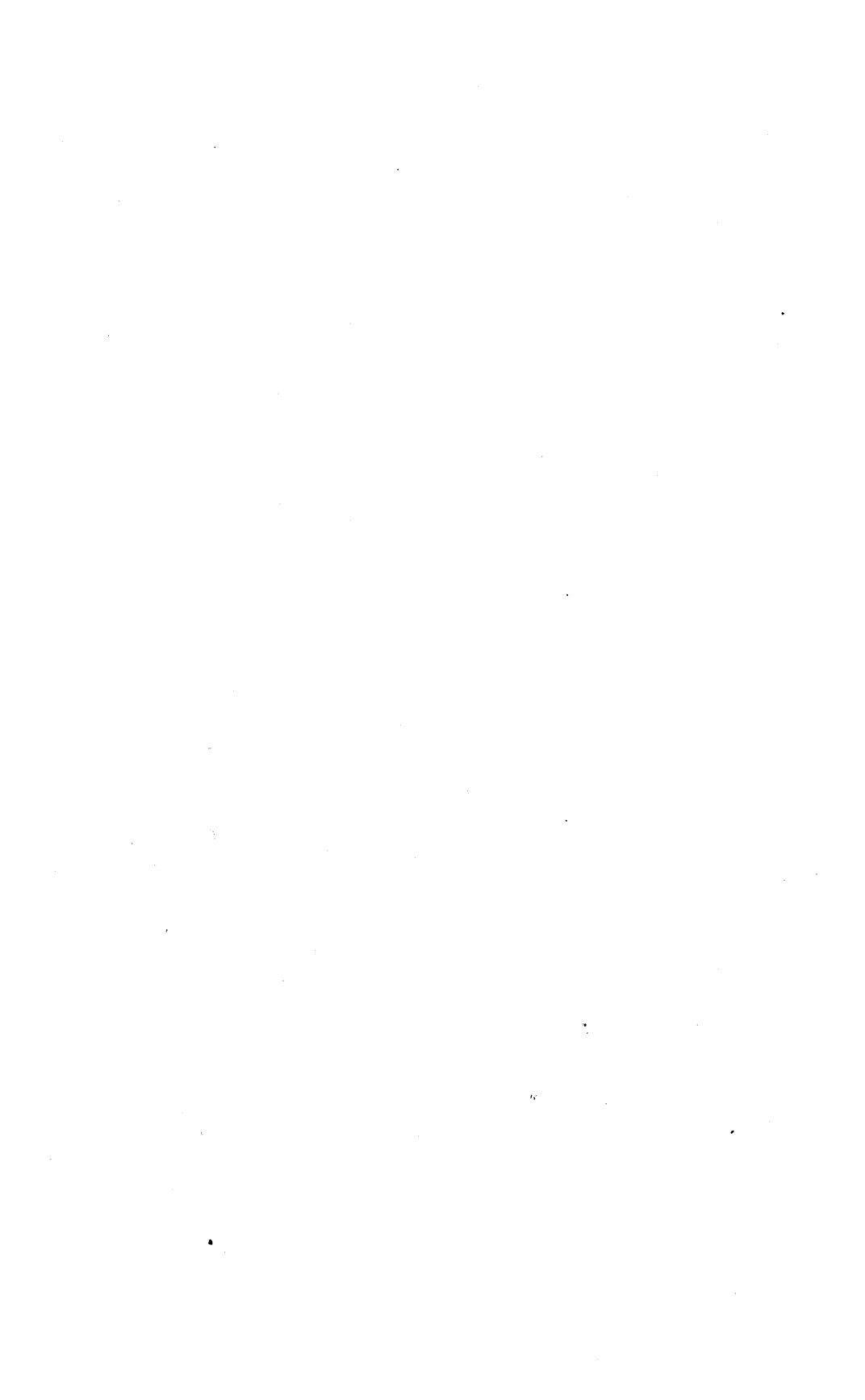
Let us take hold of this matter in earnest. Let the worthless lout who now nets our ponds and streams to obtain the means to prolong a drunken, dishonest, worthless life, be consigned to the shoe pegging or broom department of our county prisons. A severe penalty should be inflicted for netting our fresh water ponds and streams. The carrier should be severely punished, as well as the purchaser, for they incite and instigate the poacher. The carrier makes a double profit, for he speculates on the contraband rum with which he pays for the fish. Let it be an element in all our fishing laws that the possession of any fish during the close-time of that fish, shall be prima facie evidence that the possessor killed the fish, without regard to the place where killed. This will prevent poaching and stealing in the neighboring States and Provinces, and tend to destroy the wandering class of vagabonds, who vary their occupation by horse-stealing and robbery.

The annexed account of the operations of Mr. Atkins, in taking spawn of the Schoodic salmon at Grand Lake stream, will be found of interest, not to only pisciculturists but to our own citizens, as showing the high estimate placed upon the fishes of our State by the General Government, as well as our sister States, and how much money they are willing to expend among our people to procure the ova of our fishes, that we scarce can kindle enough of interest among our own citizens to save from wanton, ruthless destruction, even extermination!

We append the Smelt Law of Massachusetts, supposing it may find interest with our fishermen. One of similar purport in its different provisions is in force in New York.

Respectfully submitted.

E. M. STILWELL,
HENRY O. STANLEY.



APPENDIX.

GRAND LAKE STREAM, December 9, 1876.

To E. M. STILWELL and H. O. STANLEY,

Commissioner of Fisheries, State of Maine:

GENTLEMEN:—In answer to your note of enquiry under date of December 4th, I am happy to give you a brief statement of my doings in the cultivation of salmon during the past year.

1.—PENOBSCOT SALMON.

The spawn on hand last winter proved to be of uncommonly good quality. At the time of distributing it, there were found to be 1,825,000 eggs, and there had been rejected for bad quality, in all, about 195,000. From these figures we compute the original number of eggs at 2,020,000, and the proportion lost from various causes up to shipment at about nine per cent. The eggs were divided in March, and those to be sent away were shipped in 27 separate lots, to various places in Maine, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, Maryland, Ohio, Illinois, Wisconsin and Iowa. In every instance the eggs reached their destinations in good condition, and better than ordinary success attended their hatching.

With the facts pertaining to the hatching of the 251,000 eggs left at Bucksport for Maine, (being only a portion of her share,) you are already familiar and I need not repeat them.

2.—SCHOODIC SALMON.

Of the whole number of eggs taken at Grand Lake stream a year ago, 1,077,000, there were lost before distribution about 144,000, being about 13 per cent. This included not only those that turned white, but also a large number of unfertilized eggs, which, contrary to custom, were carefully picked out from the eggs at Grand Lake stream before they were packed for transportation.

This separation of the unfertilized eggs left those shipped from that point in unusually fine condition, and the loss attending their subsequent incubation was correspondingly reduced. The rejection of the defective eggs left 933,500 to be divided. One-fourth, or 233,250, belonged to the stream, but it so happened that there were actually left at the stream 265,000, or 32,000 in excess of the proper quota. These were hatched with small loss, and all the young fish coming from them, about 250,000, were placed in the stream and in Grand Lake near its outlet, when of the proper age. I feel quite confident that this number is far beyond what would have come from all the eggs had the fish been allowed to lay them in their own way.

The patrons of the establishment last year were the United States government and the States of Vermont, Massachusetts, Rhode Island, Connecticut, Illinois and Wisconsin, and to these parties the eggs were sent. Not having at hand the figures showing the number of fish hatched and distributed by them, I can only say that the result was very satisfactory.

Under the patronage of the United States Commissioner and those of Massachusetts and Connecticut, I have begun another season's work at Grand Lake stream.

Preparations were made for work on a larger scale than before. The old hatching house was torn down, and in its place was built a new one, with a capacity of three millions of eggs, and apparatus for the incubation of nearly as many eggs was provided. The nets to intercept the fish in their descent were in position very soon after September 15, the beginning of the close season, it being my aim to catch every fish that should enter the stream after that date. The arrangements for catching fish were substantially the same as the previous season. A net was stretched across the stream a short distance below the dam at the outlet of Grand Lake, to intercept the fish and turn them into a set of enclosures, whence they were taken at the proper time and manipulated.

The spawning season began early,—earlier than in 1875,—but it also closed earlier. The fish were far from plenty. Only 1,009 were taken. The proportions of the sexes was, however, in our favor, there being a greater proportion of females, and the number of eggs taken was about 537,000. The following statement shows the results of 1875 and 1876 in comparison :

Year.	Salmon caught. Total.	No. of Males.	Per cent. Males.	No. of Females.	Per cent. Females.	Eggs taken.
1875.	2,626	1,055	40	1,571	60	1,077,000
1876.	1,009	272	27	737	73	537,000

This year, in addition to those taken at Grand Lake stream, there were caught at West Musquash lake 25 fish and 11,000 eggs, making the total Schoodic salmon eggs 548,000, or thereabout.

The small ratio of males at Grand Lake stream, entailed a good deal of extra care in manipulation to secure proper fertilization of the spawn, but our success was very satisfactory, the ratio of eggs developing at this date, (Dec. 9th) being, in the principal lots, from 91 to 95 per cent. With sexes in the ordinary ratio, there will be no difficulty in securing an average impregnation of over 96 per cent.

The great decrease in the number of fish from last year to this, is much to be regretted, but it is not safe to infer from this fact that there has been a general decrease of the fish in Grand Lake, native to Grand Lake stream. There are frequent fluctuations in the numbers of fishes from natural causes, and among those causes operating at Grand Lake stream this year was a very low stage of water, and that was against the fish. Perhaps another season will bring them in again in plenty. It seems, however, to be the general opinion among the sportsmen who frequent the stream that there has been for many years a gradual falling off in the supply. If this view is correct, this establishment was founded none too soon, whether we regard the preservation of the fish here or their dissemination abroad.

In my opinion the quota of the eggs which we hatch and turn back into the stream (25 per cent. of those taken) is ample to insure the stock of fish against depletion, and I am quite confident that it will at the proper time be found to have a positive influence in favor of their multiplication. It must be borne in mind that though fishes are enormously fecund of eggs, this fecundity avails in nature only to counterbalance the enormous destruction that occurs to the eggs and young fish. It is simply enough to keep up the supply. All that each pair of fish needs to do is to lay eggs enough to insure the hatching and maturity and subsequent breeding of one other pair. All the rest may perish at some stage between the eggs and the mature breeding fish. Probably if 80 young fish an inch long are hatched out of each litter, that will be

enough. We do far better than that. Instead of 80 we place in the stream 160 healthy young fish out of each litter of eggs. I think that, to say the least, is margin enough to insure against a depletion of the supply.

If the present season's scarcity is indeed part of a general diminution, it is owing to other causes than the taking of spawn. No operations on sufficient scale to be effective were undertaken until Mr. Leonard came, in 1874; and the effect of his operations, whether for good or bad, cannot be seen until 1877 or 1878, for it will take that length of time for the young fish to grow up. What those other causes are, no one acquainted with such affairs will be at a loss to say.

At the present time there is a very healthy sentiment in favor of the preservation of the Schoodic salmon, and I can warrant you that so long as this establishment is maintained there will be very little violation of the law in Grand Lake stream. I have no misgivings, therefore, as to the preservation of the fish, provided the spawning operations be conducted as now.

It is quite evident, however, that the supply of spawn for the dissemination of the fresh-water salmon is not likely to equal the demand for many years to come. It is very desirable, therefore, that all other sources of supply be utilized. There are three or four localities on the Schoodic lakes besides Grand Lake stream that can be made to contribute something for the purpose. Dobsis stream is already occupied by the Dobsis Club, and their foreman has this season taken 65,000 eggs. I am very confident that you will yet succeed in getting a good supply from the Sebago waters, and I do not despair of something being done at Sebec or even Reed's pond. At one or more of these points it is very desirable that there should be organized effort to supply, in part at least, the demand that comes from almost every one of the Northern and Middle States.

Very respectfully yours,

CHARLES G. ATKINS.

SMELT LAW OF MASSACHUSETTS.

1st. Whoever within this Commonwealth offers for sale, or has in his possession any smelts between the 15th day of March and the 1st day of June in each year, shall forfeit for each and every smelt so sold, offered for sale or had in his possession, the sum of one dollar.

2d. Whoever takes or catches any smelt or smelts with a net of any kind, or in any other manner than by naturally or artificially baited hooks and hand lines, shall forfeit for each smelt so caught or taken, the sum of one dollar; (*proviso*—not to apply to smelts caught in Bristol, Barnstable or Dukes counties, by persons lawfully fishing with net for perch, herring or alewives); and in all prosecutions under this act, the burden of proof shall be upon the defendant to show that the smelt or smelts, the offering for sale, possession, or catching of which is the subject of the prosecution were legally caught.

3d. The mayor and aldermen of any city, the selectmen of any town, and all police officers and constables within this Commonwealth, shall cause the provisions of this act to be enforced within their respective towns and cities, and all forfeitures and penalties for violation of the provisions of this act shall be paid, one-half to the person making the complaint, and one-half to the city or town in which the offence is committed.

4th. All acts conflicting with this act are hereby repealed.

[Approved April 9, 1874.]

FISHERY AND GAME LAWS OF VERMONT.

An act for the further protection of fish and game.

SECT. 1. Whenever the owner of any enclosed land in this State shall conspicuously post on the same a notice that shooting, trapping, or fishing thereon is prohibited, if any person shall thereafter wilfully enter upon such land without permission of the owner thereof, for the purpose of shooting, trapping, or fishing, the said owner shall be entitled to recover against such person, in an action of trespass brought for such entry, in addition to the actual damage thereby sustained.

SECT. 2. The presence of any person without permission of the owner, and with the implements of shooting, trapping or fishing, upon any land that is posted, as provided in the first section of this act, shall be taken as prima facie and presumptive evidence of a wilful entry by him thereon for the purpose of shooting, trapping or fishing within the meaning of this act.

SECT. 3. It shall not be lawful to pursue, take, kill or destroy any wild deer in this State, from and after the passage of this act, until the first day of September, 1880. And if any person during said period shall pursue, take, kill or destroy within this State any wild deer, or shall have in his possession any wild deer, or part thereof, so taken or killed, he shall be liable to a fine of fifty dollars for each and every deer so killed, taken, destroyed or had in possession. And the possession of the meat or hide, or any part thereof, of any wild deer, by any person in this State, charged with any of the offences mentioned in this section, shall be presumptive evidence that the person so in possession of said meat, hide, or part thereof, is guilty of said offence.

SECT. 4. Prosecutions for violation of the third section of this act may be brought before any justice of the peace of the county where such offence was committed, under the general provisions of the laws of this State relative to criminal prosecutions, and by any officer authorized to institute criminal prosecutions. And in such prosecutions for offences against this act, it shall not be necessary to state in the complaint, nor prove in what town of such county such offence was committed.

SECT. 5. It shall be lawful for any person to kill any dog found pursuing any wild deer in this State during the period named in the third section of this act, provided such dog be killed while in the actual pursuit of deer.

SECT. 6. The notice mentioned in the first section of this act shall be given by erecting and maintaining signboards, not less than two feet long by one foot wide, in at least two conspicuous places on the premises; such notices to have appended thereto the name of the owner or occupant, and any person who shall break down or in any way deface or injure any such signboard shall be liable to a penalty of ten dollars.

Approved November 22, 1876.

An act repealing sections three, four and five, and amending section nine of an act entitled "an act regulating the capture of fish and game," approved November 24, 1874.

SECT. 1. Section three of an act entitled "an act regulating the capture of fish and game," approved November 24, 1874, is hereby amended so as to read as follows:

Whoever takes or catches any black bass in any of the waters of this State, or has in his or her possession any such fish captured within the limits of this State, between the fifteenth day of May and the first day of July in any year, shall forfeit and pay a fine not to exceed five dollars for each fish so taken, had or possessed, to be recovered on complaint of a town grand juror, before any justice of the peace within the town or county where such offence was committed; one-half of said fine to go to the person who makes the complaint, the other half to go to the State.

SECT. 2. Section four of said act is hereby amended so as to read as follows:

Whoever takes or catches any white fish or lake shad in any of the waters of this State, and has in his or her possession any such fish taken within the limits of this State, between the first day of November and the fifteenth day of the same month in any year, shall forfeit and pay a fine not to exceed ten dollars for each fish so taken, had or possessed, to be recovered on complaint of a town grand juror, before any justice of the peace within the town or county where such offence was committed; one-half of said fine to go to the person who makes the complaint, and the other half to the State.

SECT. 3. Section five of said act is hereby amended so as to read as follows:

Whoever takes or catches any wall-eyed pike or pike perch in any of the waters of this State, or has in his or her possession any such fish taken within the limits of this State, between the

twentieth day of April and the twentieth day of May of any year, shall forfeit and pay a fine not to exceed five dollars for each and every fish so taken, to be recovered on complaint of a town grand juror, before any justice of the peace within the town or county where such offence was committed; one-half of said fine to go to the person who makes the complaint, and the other half to the State.

SECT. 4. Section nine of said act is hereby amended so as to read as follows:

It shall not be lawful for any person to fish for white fish, or lake shad, or for wall-eyed pike or pike perch, with a net whose lashes are less than one and one-half inches in extension, knot to knot, under a penalty of twenty-five dollars for each offence so committed, to be recovered by complaint of a town grand juror, with confiscation of the net or nets, before any justice of the peace, or city court within the town, city or county where such offence was committed; and one-half of said fine shall go to the person who makes the complaint, and the other half to the State.

SECT. 5. Section seven of said act is hereby amended so as to read as follows:

Any person legally engaged in the artificial culture and maintenance of fish may take them in his own waters, how and when he pleases, or take them in other waters for breeding purposes; *provided*, he gets the written permit of the commissioners of fisheries to do so, together with the consent of the owner or occupier of the land, if such waters are on the lands enclosed and duly posted, but shall not sell them for food at seasons when their capture is prohibited by this act.

SECT. 6. The word "public" wherever it occurs in said act is hereby stricken out.

SECT. 7. This act shall take effect from its passage.

Approved November 28, 1876.

An act in amendment of an act approved November 24, 1874, entitled an act regulating the capture of fish and game.

SECT. 1. So much of section thirteen of an act approved November 24, 1874, entitled an act regulating the capture of fish and game, as relates to the catching or destroying of mink, beaver, fisher, or otter, is hereby amended by striking out the word "October," and inserting in lieu thereof the word "November."

SECT. 2. This act shall take effect from its passage.

Approved November 28, 1876.

An act to amend an act approved November 6, 1857.

SECT. 1. An act entitled an act for the preservation of muskrats in the towns therein mentioned, shall be amended by striking out the word "Orwell."

SECT. 2. This act shall take effect from its passage.

Approved November 22, 1876.

An act to protect fish.

SECT. 1. Whenever the fish commissioners shall place any fish in any pond or stream in this State, they may post on the banks of the same a notice that fishing therein, or in specified portions thereof, is prohibited for a period of time not to exceed three years, and shall also give like notice in a newspaper published in the county.

SECT. 2. If any person or persons shall hereafter fish or attempt to fish in said waters within the time so specified, such person or persons shall pay a fine of ten dollars to the treasury of the State, together with the costs of prosecution, and stand committed until the judgment be complied with, provided the prosecution be commenced within six months after the offence is committed.

SECT. 3. Justices of the peace in the several counties shall have jurisdiction to hear and determine all offences against this chapter, and the same may be tried upon the complaint of the grand juror of the town in which the offence was committed, or of the state's attorney within and for the county in which the offence was committed, or of one of the fish commissioners of the State of Vermont.

SECT. 4. Any person may be allowed to appeal from the judgment rendered against him by any justice on the trial of a complaint under this chapter; *provided*, he shall first recognize to the State before such justice, in such sum and with such surety or sureties as shall, in the opinion of such justice, be good and sufficient, conditioned that he will prosecute his appeal to effect, and pay all fines and costs, and undergo all penalties that may be awarded against him upon the final disposition of such complaint.

SECT. 5. It shall be the duty of the justice of the peace or county court before whom any case arising under this chapter is tried, if requested by either party, to take the recognizance of such witnesses as shall be deemed necessary, for their appearance at the county court, in the same sum in which the respondent

is ordered to find bonds. And in case any such witness shall refuse to enter into the bond of recognizance ordered, he may be committed to jail on the warrant of the justice or court making such order.

SECT. 6. This act shall take effect from its passage.

Approved November 28, 1876.

An act to prevent the use of any explosive material for the purpose of catching, killing or destroying fish.

SECT. 1. It shall be unlawful for any person or persons to use at any time or place, in any of the waters of this State, any giant, blasting or gunpowder, or other explosive material, for the purpose of catching, killing or destroying fish; and any person violating the provisions of this section shall be fined twenty-five dollars for the first offence, double that sum for the second, and treble that sum for each succeeding offence, to which may be added imprisonment for any time not exceeding ninety days.

SECT. 2. This act shall take effect from its passage.

Approved November 28, 1876.

An act for the better enforcement of the acts concerning the capture of fish during the spawning season.

SECT. 1. That the selectmen of any town may appoint and remove at pleasure within such town, a person to be fish warden therein, who shall have power to arrest within the county in which he shall be appointed on view any person found violating any law for the preservation or protection of fish, and to take such person so arrested immediately before the proper court or magistrate, and to make complaint for and prosecute such offence.

SECT. 2. Any person found on the public waters or the shores thereof of this State, or on private waters or the shores thereof, without the consent of the owner or occupant thereof, in the possession of any net, fish trap, spear, jack, light or gun, with intent to use the same for the capture or destruction of fish contrary to law, shall be deemed guilty of a misdemeanor, and, on conviction thereof, shall be punished by a fine not exceeding ten dollars, by imprisonment not exceeding thirty days, or both such punishments, in the discretion of the court.

Approved November 28, 1876.

COMMISSIONERS OF FISHERIES.

United States.

Prof. Spencer F. Baird.....Washington, D. C.

Arkansas.

N. H. Fish.....Pine Bluffs.

J. R. Steelman.....Little Rock.

N. B. Pearce.....Fayetteville.

California.

B. B. Redding.....Sacramento.

S. R. Throckmorton.....San Francisco.

J. D. Farwell.....San Francisco.

Connecticut.

William M. Hudson.....Hartford.

Robert G. Pike.....Middletown.

James A. Bill.....Lyme.

Georgia.

Thomas P. James.....

[Duties embracing the work of the Fish interest assigned to Commissioner of
Agriculture.]

Iowa.

Samuel B. Evans.....Ottumwa.

B. F. Shaw.....Anamora.

Charles A. Haynes.....Waterloo.

Kentucky.

Pack Thomas.....Louisville.

Maine.

E. M. Stilwell.....Bangor.

Henry O. Stanley.....Dixfield.

Maryland.

T. B. Ferguson.....Baltimore.

T. W. Downes.....Denton.

Massachusetts.

Theodore Lyman.....Brookline.

Asa French.....South Braintree.

E. A. Brackett.....Winchester.

FISHERIES.

Michigan.

George Clark	Ecorse.
A. J. Kellogg.....	Allegan.
E. R. Miller	Richland.

Minnesota.

R. O. Sweeney	St. Paul.
Robert Owesly.....	_____.
William Golcher	_____.

New Hampshire.

Col. Samuel Webber	Manchester.
Albina H. Powers	Grantham.
Luther H. Hayes	Milton.

New Jersey.

B. P. Howell.....	Woodbury.
J. R. Shortwell.....	Rahway.
G. A. Anderson.....	Trenton.
George Ricardo	Hackensack.

New York.

Horatio Seymour.....	Utica.
Robert R. Roosevelt	New York City.
Edward M. Smitts.....	Rochester.

Ohio.

John C. Fisher.....	Coshocton.
John H. Klippot	Columbus.
Robert Cummings.....	Toledo.

Pennsylvania.

H. J. Ruder.....	Easton.
B. L. Hewitt.....	Hollidaysburg.
James Duffy	Marietta.

Rhode Island.

Newton Dexter	Providence.
Alfred A. Ried, Jr.....	Providence.
John H. Barden	Scituate.

Utah Territory.

A. P. Rockwood	Salt Lake City.
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[Superintendent of Fisheries, Zions Co-operative Society.]

Vermont.

M. C. Edmunds Weston.
 M. Goldsmitts Rutland.

Virginia.

A. Moseley Richmond.
 W. B. Robertson Lynchburg.
 M. G. Ellzey Blacksburg.

Wisconsin.

William Welch Madison.
 A. Palmer Boscobel.
 P. R. Hoy Racine.

Dominion of Canada.

W. F. Witcher Ottawa.
 W. H. Venning St. John, N. B.

[Inspector of Fisheries for New Brunswick and Nova Scotia.]