

State of Rhode Island and Providence Plantations.

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NINTH ANNUAL REPORT

OF THE

COMMISSIONERS OF INLAND FISHERIES,

MADE TO THE

GENERAL ASSEMBLY

AT ITS

MAR 28 1888

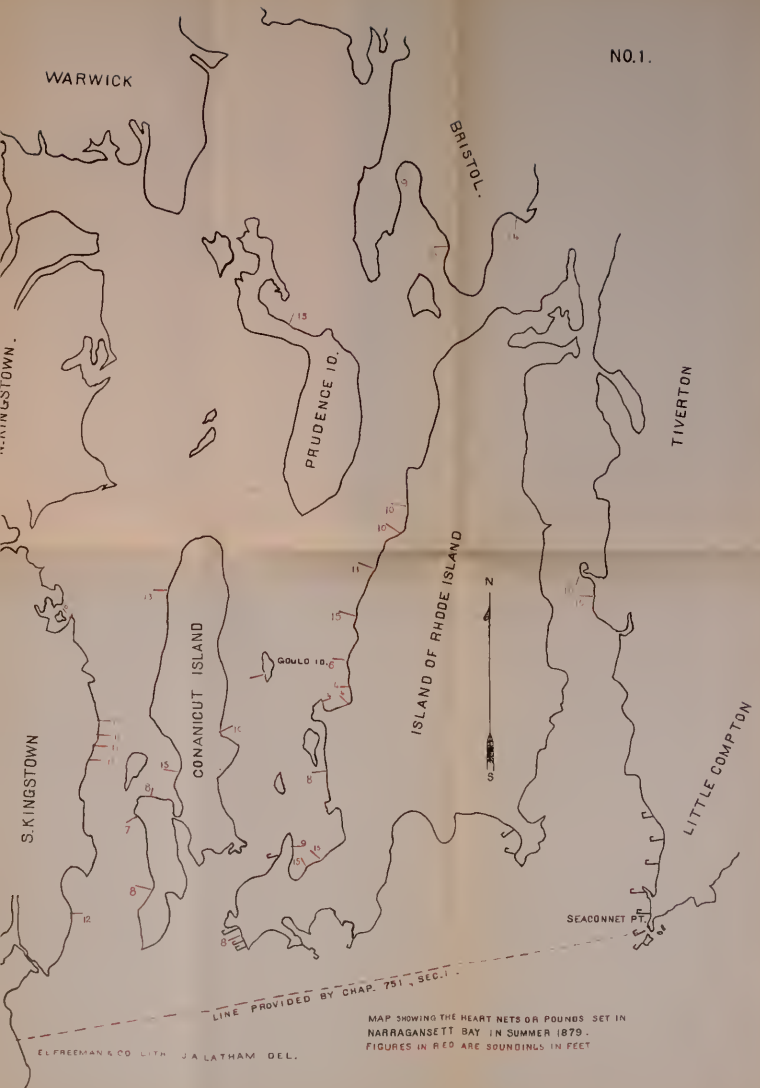
LIBRARIES

JANUARY SESSION, 1880.

PROVIDENCE:

E. L. FREEMAN & CO., PRINTERS TO THE STATE.

1880.



MAP SHOWING THE HEART NETS OR POUNDS SET IN NARRAGANSETT BAY IN SUMMER 1879. FIGURES IN RED ARE SOUNDINGS IN FEET

State of Rhode Island and Providence Plantations.

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REPORT.

*To the Honorable the General Assembly of the State of Rhode Island,
January Session, 1880 :*

The Commissioners of Inland Fisheries beg leave to present their report for the year 1879.

The act which follows was passed March 26th, 1879.

NOTICE TO THE PUBLIC.

The Commissioners of Inland Fisheries desire to call the attention of parties interested to Chapter 751 of the Public Laws of Rhode Island, as follows :

CHAPTER 751.

An Act in amendment of Chapter 134 of the General Statutes, "Of Certain Fisheries."

(Passed March 26, 1879.)

It is enacted by the General Assembly as follows:

SECTION 1. There shall be between the first day of May and first day of August, in each year, a weekly closetime, extending from Saturday morning at sunrise to Monday morning at sunrise, during which time no fish of any description shall be taken by weirs, traps or similar contrivances, from the waters covered by a line drawn from Seaconnet Point in a westerly course to the Narragansett lower pier, and including all the waters above said line. If there be any weir, trap, or other stationary contrivances, used for the purpose of catching or obstructing the passage of fish in that part thereof, where the fish are usually taken, the netting at the mouth of the same shall be floated to the surface of the water so as to effectually close the mouth thereof during the weekly closetime; so that dur-

ing said time the fish may have a free, unobstructed passage, and no device shall be placed in any part of said limits which shall tend to hinder such fish from running up the waters of such river. In case the enclosure where the fish are taken is furnished with a board floor, an opening three feet wide shall be made, extending from the floor to the top of the weir, trap or other contrivances; provided, however, that nothing herein shall be so construed as to apply to the shad and herring fisheries in the tributaries of Narragansett Bay.

SEC. 2. The Commissioners of Inland Fisheries shall have a general supervision of all matters relating to the subject contained in the first section of this act, and may make all needful regulations to carry out the provisions described in said section, and shall, from time to time, examine all the weirs, traps or other contrivances, with a view of carrying out such regulations as are most beneficial to the people of the State, and shall prosecute for the violation of such regulations. They may coöperate with the Fish Commissioners of other States, and shall make an annual report to the General Assembly of their doings, with such facts and suggestions in relation to the object for which they are appointed as they may deem proper. Said Commissioners shall be allowed their actual disbursements made in the execution of this act.

SEC. 3. Every person who shall violate any of the regulations made by said Commissioners, under the authority of the provisions of the preceding sections of this act, or who, between the days mentioned in said first section, shall set any weir, trap, or contrivances, contrary to such provisions, shall upon conviction be fined not exceeding one hundred dollars, or be imprisoned not exceeding three months, or both, in the discretion of the court before whom the offender shall be tried.

SEC. 4. All acts and parts of acts inconsistent with the provisions of this act are repealed.

And the Commissioners give notice that it is their intention to enforce the above to the utmost of their ability. To do this they desire the hearty coöperation of all persons interested in the same. It is their intention to appoint deputies so that supervision may be had of all traps, pounds, weirs, &c., in all waters of the State, as described in Chapter 751.

They will be glad if persons interested will report to them any violations of the above chapter, that may escape the notice of the Commissioners or of their deputies, but desire to have it distinctly understood that no attention will be paid to any communication unless the complainant is prepared to take oath or can produce one or more witnesses to take oath as to the time and place of violation.

All communications should be addressed to Newton Dexter, Providence, and silence may be considered a negative to applications for the position of deputy.

NEWTON DEXTER,	} Commissioners	
ALFRED A. REED,		of
JOHN H. BARDEN,		} Inland Fisheries.

It will be seen the Commissioners called the attention of the public to the above, and caused the same to be published once a week for four weeks in the principal papers in the State. They then proceeded

to appoint deputies who should have supervision of certain parts of the bay shores included in the act.

Capt. Samuel Place, of Warren, R. I., was appointed to attend at Seaconnet Point during the season of trap fishing and to supervise the heart nets, or pounds in the eastern waters of the bay, Bristol harbor, &c.

S. R. Vaughn, of Wickford, to look after the heart nets in the west passage, and Wilson D. Wilcox, of Warwick, to attend the traps at the south side of the Island of Rhode Island, and the heart nets in the vicinity.

We were very fortunate in the selection of these gentlemen and they performed their duties and carried out their instructions with the utmost fidelity.

We will consider first the trap fishing for scup carried on at Seaconnet Point, and the south side of the Island of Rhode Island, and continuing (this season) from May 10th to June 20th. As will be seen by the map No. 3 attached to this report, there were at Seaconnet Point seven traps extending from just below Church's Point on the north, to West Island on the south, a distance of about three miles. Seaconnet Point for the past twenty years or more has been favored with the presence of trap fishermen and more than any other locality attracted the attention of the public interested in fisheries.

During all these years it would doubtless surprise the fishermen themselves if it could be known how many thousands of barrels of scup have been taken, but it never will be ascertained, and in the future when it is to be hoped a strict supervision may be had over them it will be impossible to estimate the catch save in the manner to be hereafter suggested. When the collection of these sort of statistics is dependent on the information to be obtained from fishermen, and said fishermen imagine that their interests are at stake, it will at times be found that their statements clash (not to use a stronger expression) with the exact truth.

The Commissioners visited Seaconnet several times during the season of scup fishing, and Capt. Place was on hand during the close days while the season lasted. We were heartily received by the fisher-

men there and every facility was shown us to examine the traps and method of fishing. A glance at map No. 3 will show how these traps are set and give an idea of the locality. By the 10th of May the traps were all in, but very few scup were taken before the 15th when they began to make their appearance, some of the traps averaging twenty barrels a day and finding a sale at \$3.00 per barrel. By June 1st the scup came in vast shoals and of large size, and on the 6th very large numbers had been taken. Attached to the sides of a trap is a square of netting, say thirty by fifty feet, called a pound, and as a trap has three sides an equal number of these pounds can be attached. Into these the fish are turned when the fishermen wish to hold them for better prices. By June 10th these pounds were full, one, two or three to each trap. Such large numbers were taken to the westward (on the Island of Rhode Island,) that prices fell off from \$1.50 to twenty-five cents per barrel, several of the gangs landed their fish and sold them to the farmers for manure. On June 15th there were four traps in with their pounds full, holding for better prices, and on June 25th two.

Capt. Place says, "There were seven different gangs of men that had set (traps) at Seaconnet Point this spring. The gangs were doubled up, one containing fifteen men and the others not less than eight. Their shares varied much owing to the location of the sets, and the prices obtained for the fish. I was told of one gang that did not clear their expenses while others made \$75.00 per man. One of the men who was in the gang of fifteen said the shares were about \$25.00 per man. As regards the observing of the close time law it was generally complied with as far as came under my observation. Certainly there was no raising of the traps during daylight. There may have been times when the mouths of the traps were not tied up as the law required. There was no necessity to evade the law for they had more fish than they wanted toward the last of the fishing."

Thus we see that at Seaconnet, and at Newport and Middletown as well, the fishing this year began about May 15th and was kept up to June 25th. In the early part of the season owing to scarcity of fish, prices were high, but as few were taken profits were not large. Later

when the grand run came along the prices fell off to a very low figure, and it is difficult to see where much if any money was made in the business. How much or how little it is impossible to ascertain, for fishermen look upon their business as a legitimate one and do not like to be asked impertinent questions. It is a hard life while it lasts, and whatever profit is gotten out of the business is fairly earned. A large amount is invested in the trapping business. Traps and leaders are usually made of old purse nets. New gear would cost about \$3,000.00 per trap, but second hand they stand worth from \$1,000.00 to \$1,200.00. Losses are frequently met with from rough weather and it would seem as if the profits year by year were not great.

The law was well observed and only one instance was reported of its evasion. This we intended to prosecute as much to make a test case as anything, but it was decided after taking legal advice not to make any prosecutions this year. Benjamin Tallman "the father of trap fishing," was the party we were after, and in the event of any future transgressions on his part we hope to make an example.

The difficulties of enforcing the present law as far as the trap fishing is concerned are obvious, during the run of the scup the traps are overhauled at least every two hours, night and day, a deputy can overlook a limited number of traps during daylight, but after dark, particularly in rough weather it is impossible unless a boat is anchored beside each trap to tell what goes on, for a gang can go off to their trap, overhaul it, dump the fish into the pound and come ashore, and the deputy be none the wiser. When no fish are running the fishermen are very willing to be law abiding, but we were frankly told that in the event of a run of fish on close days several of them would run the risk of prosecution.

The first run of fish command the highest prices and then, if ever, is when the law would be disregarded. The fish are put on board schooners, packed in ice, and taken to New York and Philadelphia, in some cases sold at the traps and in others sent by the trappers. We understood that the past season the sale was very poor in both cities.

In our opinion the law as applied to trap fishing does no harm, if it does not accomplish what its originators hoped it would, for it gives

to the law abiding trapper two days to rest from his labors including the Sabbath, during which time he may attend to his family duties, if he has any, and at least ponder on the advantages of a strict observance of the fourth commandment.

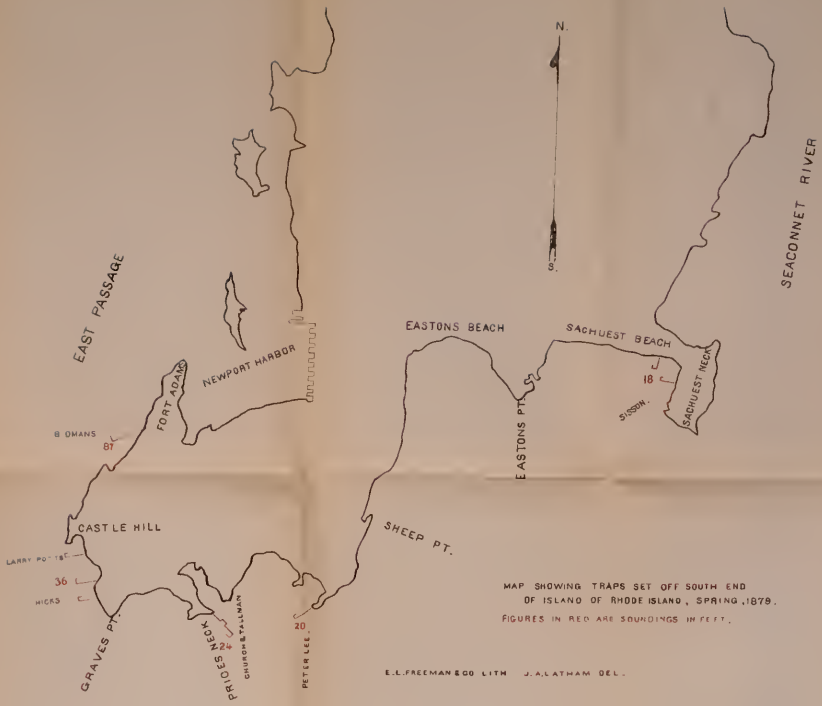
The grave question, does the spring trapping interfere with the summer fishing with hook and line in the Narragansett Bay we do not propose to argue. Enough, and more than enough has been printed on this subject and we are no nearer to a solution of the question than we were twenty years ago.

The argument has been a bitter one, and neither side have been at all disposed to listen to reason. The trappers have fought a hard fight with a bold front and have never failed to appear when called upon to assert their position, backing it up year after year with the same arguments by the same parties. One wiseacre asserts that the pollution of the water from sewerage of the City of Providence has ruined the bay fisheries, an opponent takes the floor and proves exactly the contrary, and so statements are followed by denials as fast as made and nothing is proven. Some things can be shown, however, not to be disputed. Do the traps at Seaconnet interfere with the fish entering the bay, let us examine the locality and see. The distance from Seaconnet Point to Sachuest Neck is about two and a half miles, the average length of the leaders of the traps is about six hundred feet or about one twenty-second part of this distance, a glance at the map shows that the traps are so set as to take the fish as they go out and not as they come in, and this year the most southern and eastward one at West Island took more than any other, showing that the fish so taken were bound still farther east. In proof of this, it is a fact that the trappers at Buzzard's Bay have found that their business has come to an end since trap fishing has become systematized and carried on so large a scale at Seaconnet. It would seem as far as our present knowledge permits us to judge, that the great shoals of scup leave the deeper waters of the ocean where they have wintered and strike the shoal water of the coast about the eastern end of Long Island, passing east they follow the Rhode Island shore and are taken in the traps to the *westward* of Point Judith before any are observed at the south end

10.2.



RIVER



MAP SHOWING TRAPS SET OFF SOUTH END OF ISLAND OF RHODE ISLAND, SPRING, 1879. FIGURES IN RED ARE SOUNDINGS IN FEET.

of the Island of Rhode Island or at Seaconnet. All the traps are so set as to take the fish as they come from the west in every instance. Now it would seem as if we must depend on the fish to stock Narragansett Bay, to find their way thereto by the east and west passages so called; that is on both sides of the island of Conanicut, the west passage being one and three-quarter miles wide, and the east upwards of two. Passing east of Brenton's Reef their only chance to reach our bay is through the draws of the old stone bridge at Tiverton and the railroad bridge a mile above, said draws being about forty feet wide with a terrible tide save at slack water. All this seems to prove that the tend of the scup along our coast in the spring is from west to east, for in brief the traps west of Point Judith take them first, those near Newport next, and those at Seaconnet last.

That the number of fish has decreased in the bay for the past twenty years is a fact admitted by every one unless entirely prejudiced, and which branch of wholesale fishing (traps and heart nets) is the most to blame for, this we shall endeavor to point out.

As stated previously the trapping season lasts from, say the 1st of May to the 20th of June, during that time not only scup are taken but large quantities of tautog and rock bass. All these fish come in from the deeper and warmer water off the coast where they have wintered, to deposit their spawn in the shoaler water as soon as the temperature of this shoal water is proper in early summer, and for every fish taken before the spawn is deposited tens of thousands are destroyed. So far as the scup are concerned, if they are to be taken in a wholesale manner they must be taken at this time, for the great shoals break up and scatter as soon as the actual spawning time arrives and can only be taken with hook and line thereafter. A careful record kept of the spawn of scup, as it was developed last season, shows that none was found in fish taken after the 27th of June, and we may assume as a fact after July 1st the spawning season is over; the same may be said to apply to a very large percentage of the tautog. Now the cry has been raised that the trappers take the tautog in the spawning season, so in truth they do, and so do the hook and line

fishermen, and after running the gauntlet of the traps and leaving a goodly portion of their numbers there, the splendid fish are farther and perhaps more fatally decimated by the hook and liners, who swarm at every rock and mussel bed in the bay where the fish are known to congregate. The time will come, we feel sure, let us hope in our own day when all this will be stopped, and a close time established for bay fishes as well as those of inland waters and a chance afforded them to carry out the law of reproduction as nature intended they should. Not until then will they swarm in our bay as of yore. Nature, we may be sure will provide against over production, and man may help himself in a legitimate manner and no harm be done. "The fishes in the sea can never be exhausted," applies only to those who stay and reproduce in the sea; those that are obliged to come into shoal water to spawn must have some mercy shown them, or our children's children (if we are so fortunate as to have any) will have no fish, and may with good reason dispute the theory of the late lamented Agassiz, at least as applied to their forefathers, "that a fish diet produces brains."

The length of time required to hatch the spawn of scup and tautog after it leaves the parent fish has never been ascertained, but probably not more than from two to four weeks and perhaps much less. It is an interesting question and will no doubt be soon settled, through the thorough and complete investigations made each year by Prof. Baird, the United States Commissioner.

It has been proposed by some of those most violently opposed to the trappers, that a summary stop shall be put to the business, probably not reflecting on the injustice of such a course, and the loss it would entail upon the men who have their money invested in trapping gear, and who have pursued the business with more or less profit for twenty years and upwards, not to speak of the possible unconstitutionality of such a course. We are, all of us, legislators, commissioners, fishermen, and arguers, pro. and con. unfortunately very ignorant of what goes on under water, it is an element that offers many difficulties to the student and we must then submit to learn what we do of nature's work slowly if we would learn surely, and avoid jumping at conclusions.

We have the testimony of the experts appointed by the English government to examine into the subject in their own waters that trapping does no harm. Prof. Baird who has devoted a first-class intellect to the study for some years, and who has had comparatively vast opportunities for observation leans to the same conclusion, and it certainly behooves individuals unless endowed with the rare faculty of never making any mistakes, to be very cautious in their statements when the subject is one that demands such close observation and long study. Men who have their money invested in any business are somewhat prone to look upon a matter in the light of their own interests, therefore their arguments are not entirely convincing to the minds of those who are trying in an unprejudiced way to throw some light on the subject, and the trappers can hardly be blamed if they dispute the fact that their business has injured the bay fisheries. Again the statements of parties who are entirely ignorant of what they are talking about cannot be considered to have any great weight, and to come to a just conclusion amidst such bewildering testimony requires to say the least, great forethought. Therefore the Commissioners of Inland Fisheries, aware of the proneness of humanity to error, are desirous in their official capacity to avoid acrimonious dispute, and in their present and future reports on this subject (should their duties in this direction be continued) will only present facts, and such suggestions as in their humble opinion may be entitled to weight from those who have made a study of the matter.

Some system in the management of the bay fisheries is of the utmost importance, and we beg to recommend the following plan in regard to the traps, presupposing a right on the part of the State to legislate in the matter. Let the whole affair be in the hands of one officer who shall have full and entire control, with power to appoint deputies and a sufficient salary to ensure his attention, his expenses to be paid. Let each trap be licensed in such a sum as the Legislature deems fit, (say \$50.00,) each captain of a trapping gang to take out this license and make return under oath to the Commissioner as to catch during the season, prices, &c. Any evasion which can be proved

against such individual to merit a fine of not less than \$500.00 or imprisonment for not less than one year.

We further recommend that the line drawn from Narragansett lower pier be abolished (in Sec. 1st) and the whole shore of the State put in charge of the commissioner, for the reason that scup taken to the westward of Point Judith are vastly more liable to enter the bay to spawn than those that have passed Brenton's Reef.

Heart nets or pounds.—Map No. 1, shows that no less than thirty-one of these infernal machines were set in the bay the past season. What amount of fish were taken in them it is impossible to say. The good people of Rhode Island saw very few of them as most of the catch is shipped to New York. Those set in Newport harbor caught vast quantities of young mackerel the past summer, about sixteen to the pound and of no possible value. We have but one word to say about heart nets, and that is, abolish them, or if we cannot do that, make them pay a heavy license and come under the wing of the Commissioner and report. They are as much more destructive to fish that frequent our bay than the much decried traps, as it is possible to conceive for they are set all the season through and if an unfortunate fish escapes them one day he is pretty sure to find his way in the next, and if he misses one he will find another awaiting him at the next corner. It cost the State the larger part of the money expended by the Commissioners the past season to enforce the law in regard to these same heart nets, and save to the parties who own them and reap the profits they are vastly unpopular.

In conclusion we would add that our bay fisheries have been neglected too long. Every one who has given the subject a thought is aware of its importance, and we hope the wisdom of the Legislature will devise some plan for their future supervision and protection.

“Fishermen as a class look only to their present profit,” says the California commissioner, and truer words were never spoken. We have endeavored in as few words as possible to point out such facts as our past observation warrants; future study will develop many more. The United States Government through Prof. Baird are hard at work

on the subject of the coast fisheries, and this year the Professor's report which includes 1877, gives a very thorough and exhaustive account of the menhaden fisheries. Meantime we must do what we can to protect ourselves, and bear in mind that abundance can only come from judicious protection.

INLAND FISHERIES.

The Commissioners have to report that this department remains unchanged the past year. Black Bass have multiplied throughout the State and are now a comparatively abundant fish where they were entirely unknown ten years ago. They are even reported in numbers in the Hope street reservoir, City of Providence, where they have made their way through the main water pipes from the Soockanosset reservoir a distance of six miles, having been pumped into that from the Pawtuxet River, together with yellow perch, roach, shiners, &c. We have had an application to stock the Georgiaville reservoir with them which will be done this spring.

No young shad were distributed this year owing to the failure of obtaining them from the Connecticut River fishery, but the coming summer we hope to be able to do our own hatching in our own waters; the cost will be small.

We anticipate soon to be able to introduce some of the European carp, now in process of propagation and growth at Washington, into such of our waters as are suited to them. A fine table fish, quick of growth, and thriving in stagnant waters where other fish will not do well. A vegetable feeder entirely. When these fish will be ready for distribution in limited numbers we are not advised, but the Commissioners will be glad to receive applications for them and when the time arrives will place them in such localities as in their judgment seems best for them.

We append our financial report for the year 1879, which will be found to contain a record of our expenditures in carrying out the provisions of Chapter 751.

NEWTON DEXTER,	}	Commissioners of Inland Fisheries.
J. H. BARDEN,		
A. A. REED, JR.,		

Expenses of Inland Fishery Commissioners in carrying out provisions of Chapter 751.

1879.	To amount paid the Deputies for watching Traps and Pounds from May 1st to August 1st, 1879.....	\$424 70
	Paid for printing.....	79 76
	Paid expenses of Commissioners for inspecting Traps and Pounds at various times.....	139 21
	Paid for obtaining evidence.....	5 00
		—————\$648 67
	Providence Journal for printing.....	24 93
		—————
		\$673 60

State of Rhode Island in account with the Commissioners on Inland Fisheries.

Dr.

1878.		
July 30.	To amount paid for labor and travelling expenses for stocking ponds.....	\$27 85
1879.		
April 1.	“ “ “ Geo. A. Atwood, for 3 years services watching Moswansicut pond.....	45 00
May 10.	“ “ “ Abel Slocum removing plank from Pawtuxet dam.....	5 00
July 23.	“ “ “ Abel Slocum for replacing plank on Pawtuxet dam per order from Water Commissioners.....	4 00
“ 31.	“ “ “ Travelling expenses.....	1 95
		————— 83 80
	“ Balance cash on hand carried forward.....	242 82
		—————
		\$326 62

Cr.

1878.	
April 9.	By balance on hand.....\$326 62

A. A. REED, JR.,
 J. H. BARDEN,
 NEWTON DEXTER, } Commissioners.

APPENDIX.

The following list of Fish Commissioners is taken from the *Chicago Field*, the manager of which paper has taken great pains to insure accuracy :

LIST OF FISH COMMISSIONERS.

United States.

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

Alabama.

Charles S. G. Doster, Prattville, Autauga Co.

California.

S. R. Throckmorton, San Francisco.

B. B. Redding, San Francisco.

J. D. Farwell, Alameda.

Colorado.

W. E. Sisty, Brookvale.

Connecticut.

W. M. Hudson, Hartford.

Robert G. Pike, Middletown.

James A. Bill, Lyme.

Georgia.

Thomas P. James, (Comr. of Agriculture and
ex-officio Comr. of Fisheries), Atlanta,

Illinois.

N. K. Fairbank,	Chicago.
S. P. Bartlett,	Quincy.
J. Smith Briggs,	Kankakee.

Iowa.

B. F. Shaw,	Anamosa, Jones Co.
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Kansas.

D. B. Long,	Ellsworth.
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Kentucky.

Wm. Griffith, Pres., 166 W. Main St.,	Louisville.
John B. Walker,	Madisonville.
Hon. C. J. Walton,	Munfordville.
Hon. John A. Steele,	Versailles.
Hon. J. H. Bruce,	Lancaster.
P. H. Darby,	Princeton.
Dr. S. W. Coombs,	Bowling Green.
Hon. James B. Casey,	Covington.
Gen. T. T. Garrard,	Manchester.
Hon. W. C. Allen,	Owingsville.

Maine.

E. M. Stilwell,	Bangor.
Everett Smith,	Portland.

Maryland.

T. B. Ferguson,	of Baltimore.
(Address 1327 Main St., Washington, D. C.)	
Thomas Hughlett,	Easton.

Massachusetts.

Theodore Lyman,	Brookline.
E. A. Brackett,	Winchester.
Asa French,	Boston.

Michigan.

Eli R. Miller,	Richland.
A. J. Kellogg,	Detroit.
Dr. J. C. Parker,	Grand Rapids.

Minnesota.

1st District—Daniel Cameron,	La Crescent
2d District—Wm. W. Sweeney, M. D.,	Red Wing.
3d District—R. Ormsby Sweeny, Chm.,	St. Paul.

Missouri.

I. G. W. Steedman, Chairman,	2803 Pine St., St. Louis.
John Reid,	Lexington.
Silas Woodson,	St. Joseph.

Rhode Island.

Alfred A. Reed, Jr.,	Providence.
John H. Barden,	Rockland.
Newton Dexter,	Providence.

South Carolina.

A. P. Butler,	Hamburg.
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Tennessee.

W. W. McDowell,	Memphis.
Geo. F. Akers,	Nashville.
W. T. Turley,	Knoxville.

Utah.

A. P. Rockwood,	Salt Lake City.
(Absent; information from Prof. J. L. Barfoot, curator Deseret Museum.)	

Vermont.

M. Goldsmith,	Rutland.
Charles Barrett,	Grafton.

Virginia.

Col. Marshall McDonald,	Lexington.
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West Virginia.

Henry B. Miller,	Wheeling.
Christian S. White,	Romney.
N. M. Lowry,	Hinton.

Wisconsin.

Gov. William E. Smith, <i>ex-officio</i> ,	Madison.
Philo Dunning, President,	Madison.
J. V. Jones,	Oshkosh.
C. L. Valentine, Secy., and 'Treas.,	Janesville.
Mark Douglas,	Melrose, Jackson Co.
John F. Antisdell,	Milwaukee.
Christopher Hutchinson,	Bectown, Grant Co.
H. W. Welsber, Superintendent,	Madison.

Nevada.

H. G. Parker,	Carson City.
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New Hampshire.

Samuel Webber,	Manchester.
Luther Hayes,	South Milton.
Albina H. Powers,	Plymouth.

New Jersey.

Dr. B. P. Howell,	Woodbury.
Col. E. J. Anderson,	Trenton.
Theodore Morford,	Newton.

New York.

R. Barnwell Roosevelt, 76 Chambers St.,	New York.
Edwin M. Smith,	Rochester.
Richard U. Sherman,	New H'rtfd, Oneida Co.
Eugene G. Blackford, 809 Bedford Ave.,	Brooklyn.

North Carolina.

L. L. Polk (Comr. of Agriculture),	Raleigh.
S. G. Worth (Supt. of Fisheries),	Morg'twn, Burke Co.

Nebraska.

R. R. Livingston,.....	Plattsmouth.
H. S. Kaley,.....	Red Cloud.
W. L. May,.....	Fremont.

Ohio.

J. C. Fisher, Prest.,.....	Coshocton.
R. Cummings, Treas.,.....	Toledo.
L. A. Harris, Secy,.....	Cincinnati.

Pennsylvania.

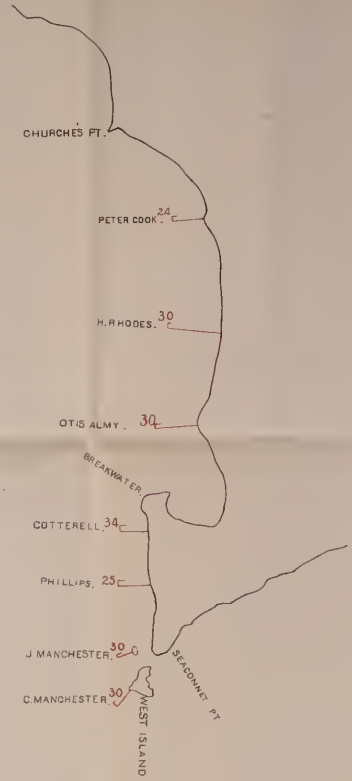
H. J. Reeder,.....	Easton.
Benj. L. Hewit,.....	Hollidaysburg.
James Duffy,.....	Marietta.
John Hummel,.....	Selinsgrove.
Robert Dalzell,.....	Pittsburgh.
G. M. Miller,.....	Wilkesbarre.

NO. 3.

NO. 3.



SEACONNET RIVER.



MAP SHOWING TRAPS AT SEACONNET, SPRING, 1873.

FIGURES IN RED ARE SOUNDINGS IN FEET



