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Newport Natural History
Society

From J. M. R. Lenthall

NEWPORT
NATURAL HISTORY
SOCIETY

State of Rhode Island and Providence Plantations.

26

ANNUAL REPORT

OF THE

COMMISSIONERS OF INLAND FISHERIES,

MADE TO THE

GENERAL ASSEMBLY

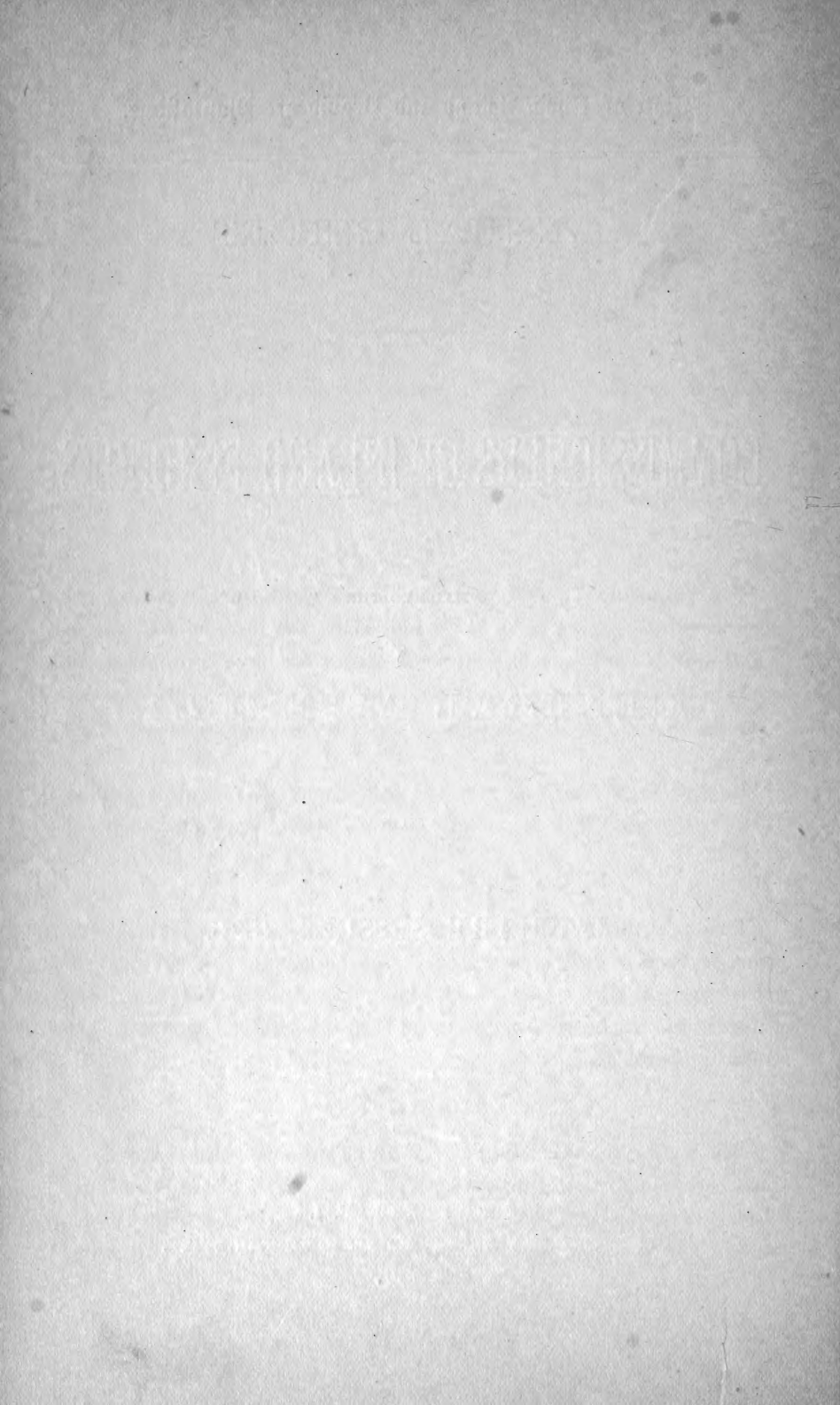
AT ITS

JANUARY SESSION, 1896.

PROVIDENCE, R. I.

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

1896.



REPORT.

To the Honorable the General Assembly of the State of Rhode Island and Providence Plantations, at its January Session, 1896 :

The Commissioners of Inland Fisheries herewith present their report for the year 1895.

TROUT.

Ten thousand (10,000) yearling trout were purchased by the Commissioners, and have been placed in the streams and ponds of the State. More applications for trout fry have been made the past season than for many years, showing an increasing interest as well as a kindly disposition to aid the Commissioners in their work.

Reports from the fishermen the past season show better catches than last year, the water in the streams having been higher.

VON BEHR OR BROWN TROUT.

Through the kindness of the United States Commission we expect to receive in February, 1896, ten thousand (10,000) eggs of this species, which will be hatched, reared until fall, and then distributed in the streams and ponds of the State. This is a very rapid growing fish.

BLACK BASS.

The fishing for this valuable food and game fish the past season has been better than for a number of years. Notably in Watchaug Lake, Moswansicut and Wallum and other ponds, where large catches have been reported throughout the season. Watchaug

Lake has its outlet into the Pawcatuck river, and through this connection this river can now be said to be fairly well stocked with the small-mouthed black bass. It being conceded that the large-mouthed species will thrive even better than the small-mouth in rivers of this character, it is the intention of the Commissioners as soon as practicable, to introduce the former fishes into the larger rivers and many of the ponds of the State.

BAY FISHING.

In the upper waters of the bay the fishing has been very good during the past season. Squiteague, hickory shad, scup and small blue fish were very plentiful from the first of July to October.

The tautog fishing, spring and fall, has been only fair. Small scup appeared in the upper portions of the bay early in July, weighing about twelve or sixteen to the pound, and, as was often reported to us, the river bottom seemed to be paved with them. Later in the season they were taken weighing from one-half to three-quarters of a pound each. Fishing was good from Hope Island to Fox Point.

Squiteague were taken weighing from one and one-half to eleven pounds. At Pawtuxet, in October, squiteague from four to six inches in length were taken very plentifully along the wharves.

The fishing in the lower portions of the bay the past season has been in some respects unique; there has been on the whole a very good season, at times very abundant, then of a sudden would they be gone. This frequent change has been quite a remarkable feature of the last season; the fish were not equally distributed; while some caught very largely, others did not catch the usual amount.

The scup were here in good numbers.

The squiteague were extremely plenty.

Black fish were plenty, the fall catch exceeded any before known.

The bass, the most highly prized of all our game fish, were not

very plenty; from some cause they do not regain their former abundance. We believe that to be due in great measure to the want of access to pure water at the head waters of streams, a trouble that besets all our fresh water spawners.

Account of Fish and Lobsters shipped from Newport by the Old Colony Steamboat Line, during the year 1895:

MONTH.	FISH.	LOBSTERS.
January.....	74 barrels.	20 barrels.
February.....	91 “	1 “
March.....	70 “	1 “
April.....	186 “	41 “
May.....	11,794 “	275 “
June.....	6,291 “	407 “
July.....	3,544 “	833 “
August.....	1,015 “	281 “
September.....	644 “	170 “
October.....	544 “	37 “
November.....	179 “	13 “
December.....	190 “	40 “
Total.....	24,622 “	2,119 “

Approximate estimate of the amount of fish taken from waters west of Point Judith:

	BARRELS.
Porgies.....	3,700
Sea Bass.....	300
Flounders.....	400
Blue Fish.....	325
Smelts.....	225
Herring.....	1,500
Black Fish.....	90
Striped Bass.....	10
Menhaden.....	15,000
Lobsters.....	150

The fishing for porgies is reported as somewhat better than in 1894, but the catch of lobsters has fallen short of past seasons.

The following table shows the amount of Fish and Lobsters shipped over the Old Colony Steamboat and Railroad for the last ten years :

YEAR.	FISH.	LOBSTERS.	TOTAL.
1886.	— barrels.	— barrels.	17,434
1887.	16,657 “	834 “	17,491
1888.	15,033 “	1,161 “	16,194
1889.	19,306 “	2,047 “	21,353
1890.	8,933 “	2,650 “	11,583
1891.	18,032 “	2,204 “	20,236
1892.	26,832 “	2,123 “	28,955
1893.	24,452 “	1,399 “	25,851
1894.	17,769 “	2,392 “	21,161
1895.	24,622 “	2,119 “	26,741
Total.	171,636 “	16,929 “	206,999

MENHADEN.

For an account of these fish we submit the following from Capt. N. B. Church, who has so often kindly furnished us information :

NEW YORK, Dec. 31, 1895.

JAMES M. K. SOUTHWICK, ESQ., Newport, R. I.

MY DEAR SIR: Replying to your favor of Dec. 27th, regarding the menhaden fishery, would say that the catch taken as a whole has been a fair average with the last five years. The fish appeared in Chesapeake Bay later than common owing to very cold weather in that vicinity, and when they did come late in April did not show on the surface so that they could be caught, until about the first of July, when they were caught in large quantities from that time until the close of the season. From the Chesapeake Bay up to and including the Delaware Bay the fishing has been good all of the season, in fact it has been the best on record at the latter place, both in catch of fish and yield of oil. Sandy Hook Bay and tributaries has had plenty of menhaden this year, as has also Fire Island Bay, and the fishermen in these places have had a good season.

You will please notice that these fish have been in the bays, probably owing to the large bodies of blue fish on the coast. In Long Island Sound and vicinity fish have been scarce, no large catches having been made for the season. Rhode Island fishermen have not had good fishing in their waters, except for a few

weeks early in the season when they were fairly plentiful in all the bays and rivers.

There has been a large body of menhaden in Buzzard's Bay all summer.

Few fish have been seen in Cape Cod Bay or Boston Bay this season, but the season in Maine opened in July with very flattering prospects. For a few weeks the fish showed well and the fishermen had all they could do to care for their catch, but after the month of July they sank just below the surface of the waters so they could not be caught. Occasionally they would come to the surface for a few hours. I can give you totals on catch of fish and make of oil later if you want them.

All kinds of food fish have been abundant all along our coast.

Yours, etc.,

N. B. CHURCH.

NEW YORK, January 20th, 1896.

J. M. K. SOUTHWICK, ESQ., Newport, R. I.

DEAR SIR: The following is a report of the menhaden industry for 1895:

Factories in operation.....	42
" not in operation.....	5
Men employed ashore.....	1,064
" " afloat.....	1,212
Sailing vessels in use.....	35
Steamers ".....	48
Pounds in operation.....	24
Fish caught.....	461,747,850
Gallons oil made.....	1,767,754
Tons crude scrap made.....	21,965
" dry " ".....	18,682
Capital invested.....	\$1,543,000

As you desire the result of the Rhode Island fishing, I give you that separately, but it is also included in the above table.

Yours truly,

N. B. CHURCH.

Result of Rhode Island menhaden fishing:

Factories in operation.....	3
" not in operation..	0
Men employed ashore.....	140

Men employed afloat.....	164
Sailing vessels in use.....	1
Steamers ".....	8
Pounds in operation.....	5
Fish caught.....	39,483,600
Gallons oil made.....	344,845
Tons crude scrap made.....	3,637
" dry " ".....	0
Capital invested.....	\$520,000

REPORT OF CHAIRMAN OF COMMISSION ON LOBSTERS.

The constant and increasing demand for lobsters, and the greatly increased efforts to supply the demand have caused much serious inquiry as to their ability of maintaining the stock in the waters.

Although they occupy all the ground of our coast generally fished over, they are subject to so many perils that it sometimes seems a miracle that any survive.

PERILS.

Perils are ever present with them. At no period of their lives are they safe from natural enemies; the codfish, haddock and the black fish prey upon them in every condition of their existence, large or small, hard or soft shell, but their greatest danger is during the moulting period, when they become the most helpless creatures in the world, and are eagerly devoured by all sorts of fish life; and their own cannibalistic propensities justify the belief that they materially aid in the destruction of their own kind regardless of consanguinity. In this the lobsters have no better record than other fishes, and our experience with the young shows them not a whit behind the worst characters among fishes.

The first peril that besets the lobster begins with the eggs; when attached to the mother they are often stolen by some small

predatory fish or eels; the latter is said to be the most guilty party in this, the first menace to their increase. As the eggs hatch, the little fellows rise to the surface and remain free swimmers for several weeks, and during this period they are gobbled up by the million by mackerel and other fish who seem to consider them their normal food. We have seen small schools of mackerel and also butter-fish after them as soon as liberated, and swallow them as a hungry fowl would grain; that made us think, "that since they were so soon done for, that must be what they were begun for."

What escape *this* danger find new ones every time they go to the bottom to moult, which in their early life occur every few days. The period extends as they advance in life. After development to a certain stage they go to bottom and take the chances of life with their progenitors. While they have at this time passed through the most hazardous period of their lives, and have greatly improved chances of reaching maturity, they are still in great danger, and will lose very many of their number before reaching the legal size of ten inches.

As it is a law of nature that animal life must be sustained by nutriment, it appears that the excessive product of eggs and young among fishes is one, if not the chief provision of nature to supply such nutriment. Were it not so none could long exist, and the ocean would be too small for any one of the prolific breeders.

We would not have it understood that the spawn or young of lobsters or other fish is the normal food of their kind. But like the young lobster in confinement without other food, thousands would have but one representative in time. That such destruction would take place under favorable natural conditions where they could spread over a large area, and have a supply of normal food, none can believe. If such conditions could be produced and such food could be supplied as they find in their native waters, then would we have the secret for rearing them, that has so far been found impractical.

The writer has been informed by Prof. A. Agassiz, that he has

retained the young lobsters during the season, to what extent I do not know, but to have kept them at all is accomplishing more than anyone else, so far as we know.

This we trust will point to a successful solution of the artificial propagation of this valuable crustacea at no very distant day.

The effect of human agency in depleting the lobsters by the capture of half-grown, and the egg-bearing, have caused much concern, and led to the enactment of laws limiting the size and prohibiting the catch of those bearing eggs.

To put back into the water all below a fixed limit cannot largely increase the stock, but must have a favorable effect, as it gives those that have passed through the most hazardous period of life a chance to attain to a mature size. While the taking of the egg-bearers is a draft upon future stock, and if they could be returned to the water and allowed to remain there until the eggs were hatched, little more could be accomplished in the way of assisting nature in keeping up the stock.

The efforts made to enforce legal enactments to secure these ends have failed; they have succeeded only in creating a conflict between those charged with the enforcement of the law and the fishermen, and in the expenditure of large sums of the State's money.

The restrictive laws are often evaded, and never effective in accomplishing the purpose expected. While they may restrain a few, the majority will destroy the eggs to avoid the penalty, and retain the lobster for market.

We do not mean here to impute to the fishermen any special lawlessness beyond that of other classes. Most people are willing to escape taxes; very many constantly evade them; and the fishermen look upon anything taken from their catch as a tax. Each egg-lobster means to them about twenty-five cents, and is it a matter of surprise that they don't voluntarily drop overboard an indefinite amount of quarters of dollars.

We make no apology for those who break the law. It is our

wish to point the way to a practical method of dealing with the question.

We have said that the laws were ineffectual; it would be easy to show that they are, but we believe it generally admitted that they are, even where wardens are charged with their execution as their sole duty, and with every facility for their work.

How to secure the end contemplated by the laws, and make practical efforts to sustain or increase the stock, is the question.

We suggest the following as the only possible method that appears practical to us:

The State to purchase every egg-lobster caught, and either replace them in the water, where they would not be recaptured, or retain them until hatched.

To put in effect the plan proposed and carry it to a successful issue, there should be a co-operation of the different States and that of the General Government, and should be on some general and systematic plan.

COST.

We believe the efforts to enforce the laws in some of the States have been at a cost to the State of very much more than enough to purchase every illegal lobster taken. We are without data, but doubt if the estimate of twenty-five cents per pound is too high, while the same might have been bought for six or seven cents per pound.

Besides the evil effects of a continued warfare is very demoralizing. It makes poachers and law-breakers of many otherwise well-disposed citizens, and engenders bitter enmity where good feeling should exist, that would lead to co-operation.

We think that if the fishermen were paid for the egg-lobsters sufficient to compensate for any extra trouble, they would gladly turn them in to the State, and co-operate with officers to enforce the laws limiting size.

Even if it became necessary to purchase the short lobsters, it is a question if the State could not, then, secure the end desired

cheaper than by any other method. This we say would be very much more effective and at less cost to the State, than an army of officers or a flotilla of gunboats.

To secure and return to the water as young life, every egg carried by the lobsters, would promise very much more than has been done heretofore.

We were much gratified that a neighboring State tried, last year, the plan of buying the egg lobsters, although we have not learned how satisfactory they were in hatching them. We are very sure many eggs were returned to the water as young, that would have otherwise been destroyed.

HATCHING.

We believe no method better than that provided by nature, and if practical to place the egg lobster in the water free, where they would not be again captured, in no way could more be done to increase the future stock. Next to this we would retain the lobsters until hatched and thereby secure a young lobster for every egg. By incubation with any process we believe a great waste occurs; first, in stripping the eggs, then in hatching, and again, a loss occurs after hatching, before they are liberated. Besides, this entails considerable labor and expense.

PRESERVES.

That lobster and fish preserves may be established where most of our edible fishes could be kept under nearly natural conditions, and where they could be retained for long periods, and some of them continuously, we verily believe.

The advantages of such a preserve must be obvious to all. The very large catches that glut the market for short periods and are soon followed by a scarcity, need never occur; the bulk of the large catches could be placed in the preserves and used as wanted, or furnish sport for the hook and line fishermen.

Were we not convinced of the feasibility of this method we should hardly have ventured to present it here.

There are along our coast arms of the sea or partially enclosed waters, that furnish every natural condition required for some or other of our fishes. Could entire control be secured of some of them, we believe the results would justify any cost that would be necessary to test them by a fair trial.

We trust that the Fish Commissioners of the Atlantic States and the United States will give this matter an investigation and report as to its practicability.

J. M. K. SOUTHWICK, *Chairman.*

State of Rhode Island in account with Commissioners of Inland Fisheries:

1894.	DR.	
Dec. 31.	To balance due Commissioners.....	\$632 63
1895.		
Mar. 7.	“ paid for trout fry (50,000).....	101 50
Oct. 30.	“ “ “ yearling trout (10,000)	400 00
“	“ “ “ transportation cans.....	24 00
Dec. 31.	“ expenses of Commissioners.....	107 78
“	“ printing, advertising and postage.....	28 75
		<u>\$1,294 66</u>
1895.	CR.	
Mar. 4.	By cash of State Treasurer.....	\$632 63
May 23.	“ “ “ “ “	146 34
Oct. 29.	“ “ “ “ “	442 14
Dec. 31.	“ balance due Commissioners.....	73 55
		<u>\$1,294 66</u>

J. M. K. SOUTHWICK,	} <i>Commissioners</i>
HENRY T. ROOT,	
WILLIAM P. MORTON,	
CHARLES W. WILLARD,	
ADELBERT D. ROBERTS,	
	} <i>of</i>
	} <i>Inland Fisheries.</i>

LIST OF FISH COMMISSIONERS.

THE UNITED STATES.

Commissioner, ——— Brice.

Richard Rathbun, Assistant in Charge of Division of Inquiry respecting Food Fishes.

W. de C. Ravenel, Assistant in Charge of Division of Fish Culture.

Hugh M. Smith, Assistant in Charge of Division of Statistics and Methods of the Fisheries.

Herbert A. Gill, Chief Clerk and Acting Commissioner.

ALABAMA.

Col. D. R. Hundley, Madison.

Hon. Chas S. G. Doster, Prattville.

ARIZONA.

T. W. Otis, Prescott.

John Howard, Prescott.

C. W. Stearns, Phenix.

ARKANSAS.

H. H. Rottaken, President, Little Rock.

W. B. Worthen, Secretary, Little Rock.

This State has never made an appropriation for fish culture.

CALIFORNIA.

H. F. Emeric, President, San Francisco.

William C. Murdoch, San Francisco.

J. M. Morrison, Sacramento.

COLORADO.

Gordon Land, Denver.

CONNECTICUT.

Hubert Williams, President, Salisbury (Lakeville P. O.).
 Abbot C. Collins, Secretary, 291 Main Street, Hartford.
 James A. Bill, Treasurer, Lyme (Bill Hill P. O.).

The Shellfish Commissioners are: George C. Waldo, Bridgeport; Bryant A. Treat, Wallingford.

DELAWARE.

Charles H. Shubert, Odessa.
 Dr. E. G. Shortlidge, Supt. of Hatcheries, Wilmington.

GEORGIA.

R. T. Nesbitt, Atlanta.
 Capt. J. D. Edmondson, La Grange.

ILLINOIS.

Richard Roe, East St. Louis.
 Geo. H. Langford, Havana.
 Henry Schmidt, Elgin.

INDIANA.

P. H. Kirsch, Columbia City.

IOWA.

Geo. E. Delevan, Estherville.
 Ole Bjorenson, Superintendent.

KANSAS.

O. E. Sadler, El Dorado.

MAINE.

Thos. H. Wentworth, Bangor.
 Henry O. Stanley, Dixfield.
 O. B. Whitten, Sea and Shore, Portland.

MARYLAND.

G. W. Delawder, Oakland.
 G. R. Rider, Salisbury.

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I. C. Young,	Wellfleet.
E. D. Buffington,	Worcester.

MICHIGAN.

Herschell Whitaker, President,	Detroit.
H. W. Davis,	. . . . .	Grand Rapids.
Seymour Bower, Superintendent,	Detroit.
Geo. D. Mussey, Secretary,	Detroit.
F. B. Dickerson,	Detroit.

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W. S. Timberlake,	St. Paul.
Wm. Bird,	Fairmount.
W. P. Andrus,	Minneapolis.
A. F. Ferris, Secretary,	Brainerd.
F. von Baumbach,	. . . . .	Alexandria.
S. S. Watkins, Superintendent,	. . . . .	St. Paul.

MISSOURI.

H. M. Garlichs, Chairman,	. . . . .	St. Joseph.
J. L. Smith,	. . . . .	Jefferson.
Edw. Cunningham,	. . . . .	St. Louis.
A. C. Garlichs, Secretary,	. . . . .	St. Joseph.
Philip Kopplin, Jr., Superintendent,	. . . . .	St. Louis.
James W. Day, Superintendent,	. . . . .	St. Joseph.

NEBRASKA.

Joseph H. Blair,	. . . . .	Omaha.
William L. May,	. . . . .	Omaha.
R. H. Oakley,	. . . . .	Lincoln.
M. E. O'Brien, Supt. of Hatcheries,	. . . . .	South Bend.

NEVADA.

Geo. T. Mills,	. . . . .	Carson City.
Ernest Harris, Deputy,	. . . . .	Carson City.

NEW HAMPSHIRE.

W. T. Shurtleff,	Lancaster.
W. H. Griffin,	Manchester.
Nathaniel Wentworth,	Hudson.

NEW JERSEY.

George Pfeiffer, Jr.,	Camden.
Parker W. Page,	Summit.
W. Campbell Clark,	Newark.
Howard P. Frothingham,	Mt. Arlington.

NEW YORK.

Barnet H. Davis, President,	53 Broadway, New York.
Henry H. Lyman,	Oswego.
William R. Weed,	Potsdam.
Charles H. Babcock,	Rochester.
Edward Thompson,	Northport.
F. B. Mitchell, Secretary,	Albany.
Edw. Thompson, Shellfish Commissioner,	53 Broadway, New York.

OHIO.

H. B. Vincent, President,	McConnellsville.
Wm. R. Huntington, Secretary,	Cleveland.
J. W. Owens,	Newark.
B. F. Seitner,	Dayton.
E. B. Shorb,	Van Wert.

OREGON.

H. D. M'Guire, Fish and Game Warden.

PENNSYLVANIA.

Henry C. Ford, President,	1823 Vine Street, Phila.
James A. Dale, Corresponding Secretary,	York.
H. C. Demuth,	Lancaster.
S. B. Stillwell,	Scranton.
Louis Streuber,	Erie.
D. P. Corwin,	Pittsburg.

RHODE ISLAND.

J. M. K. Southwick,	. . . . .	Newport.
William P. Morton, Secretary,	. . . . .	Johnston.
Henry T. Root, Treasurer,	. . . . .	Providence.
Chas. W. Willard,	Westerly.
A. D. Roberts,	Woonsocket.

SOUTH CAROLINA.

Hon. A. P. Butler,	Columbia.
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TENNESSEE.

W. W. McDowell,	Memphis.
H. H. Sneed,	Chattanooga.
Edward D. Hick,	Nashville.

UTAH.

A. Milton Musser,	Salt Lake City.
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VERMONT.

John W. Titcomb,	St. Johnsbury.
Horace W. Bailey,	Newbury.

VIRGINIA.

Dr. J. T. Wilkins,	Bridgetown.
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WASHINGTON.

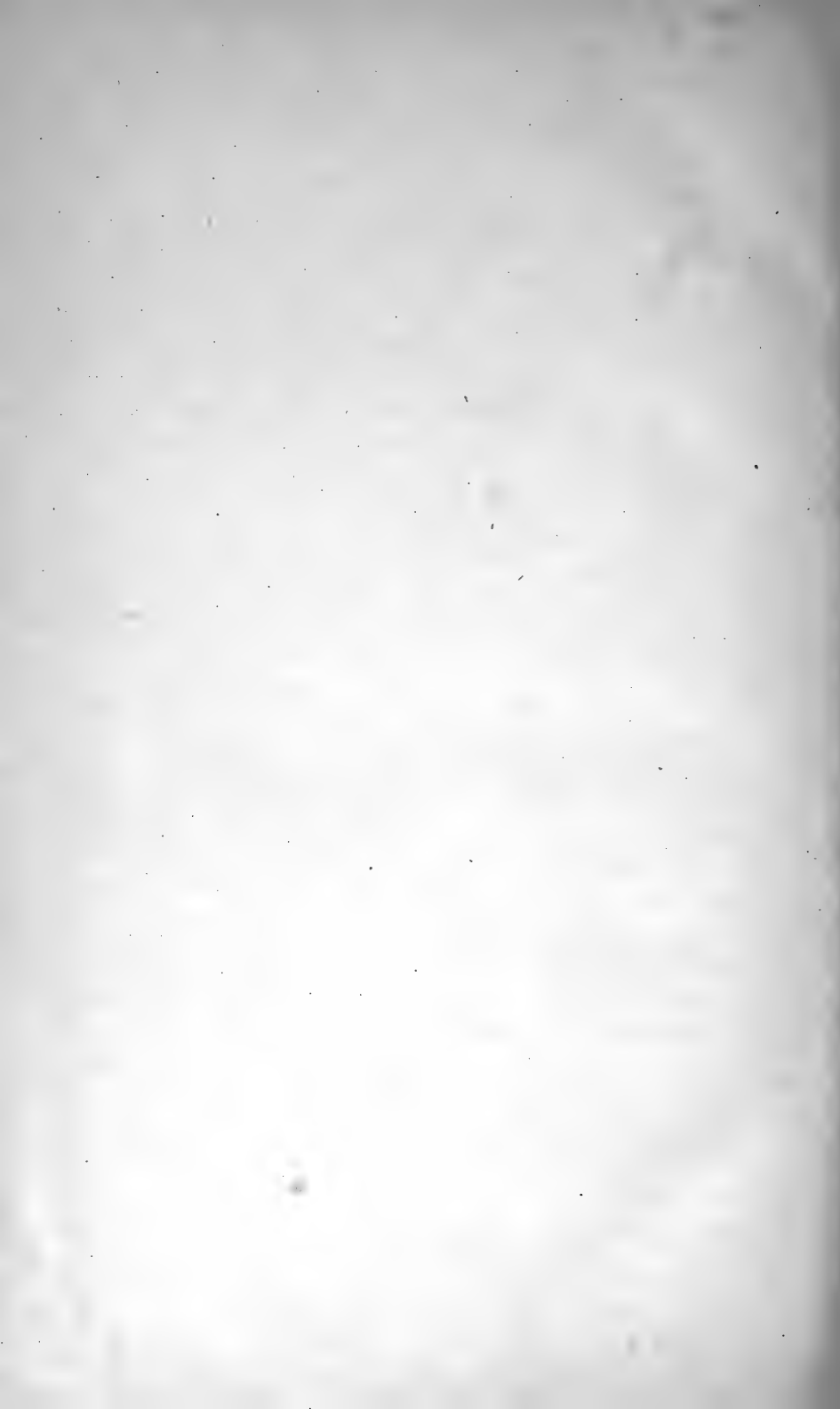
James Crawford,	Vancouver.
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WISCONSIN.

Edwin E. Bryant, President,	Madison.
Calvert Spensley, Treasurer,	Mineral Point.
William J. Starr,	. . . . .	Eau Claire.
Prof. E. A. Birge,	. . . . .	Madison.
Jas. J. Hogan,	. . . . .	La Crosse.
Geo. F. Peabody,	. . . . .	Appleton.
Currie G. Bell,	. . . . .	Bayfield.
Jas. T. Ellarson, Secretary, Fish and Game Warden,	Madison.

WYOMING TERRITORY.

Louis Miller,	Laramie.
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