

H. BATHBUN

State of Rhode Island and Providence Plantations.

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ANNUAL REPORT

OF THE

COMMISSIONERS OF INLAND FISHERIES,

MADE TO THE

GENERAL ASSEMBLY,

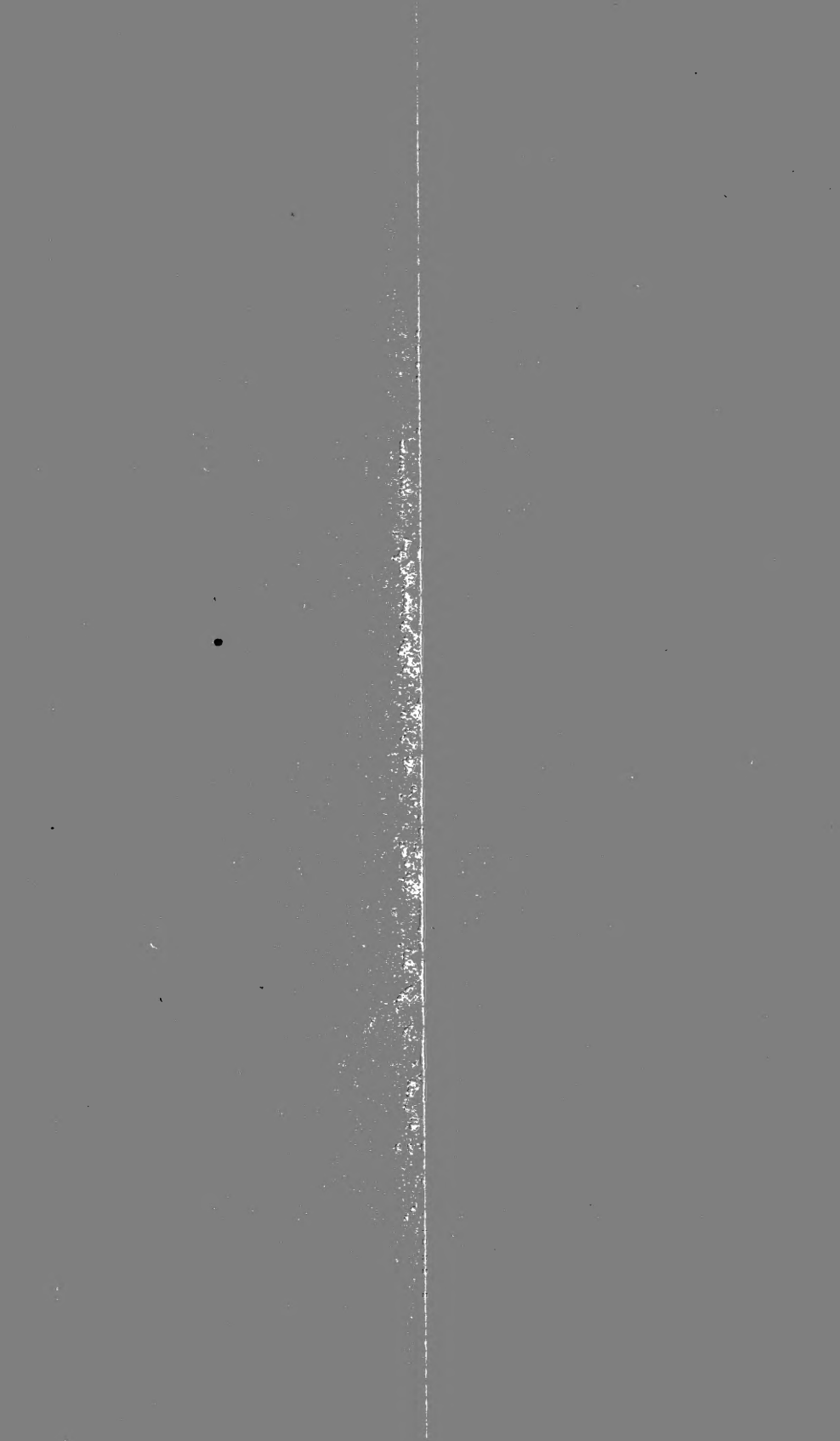
AT ITS

SMITHSONIAN  
MAR 28 1888

JANUARY SESSION, 1889.

PROVIDENCE:

E. L. FREEMAN & SON, STATE PRINTERS,  
1889.



*State of Rhode Island and Providence Plantations.*

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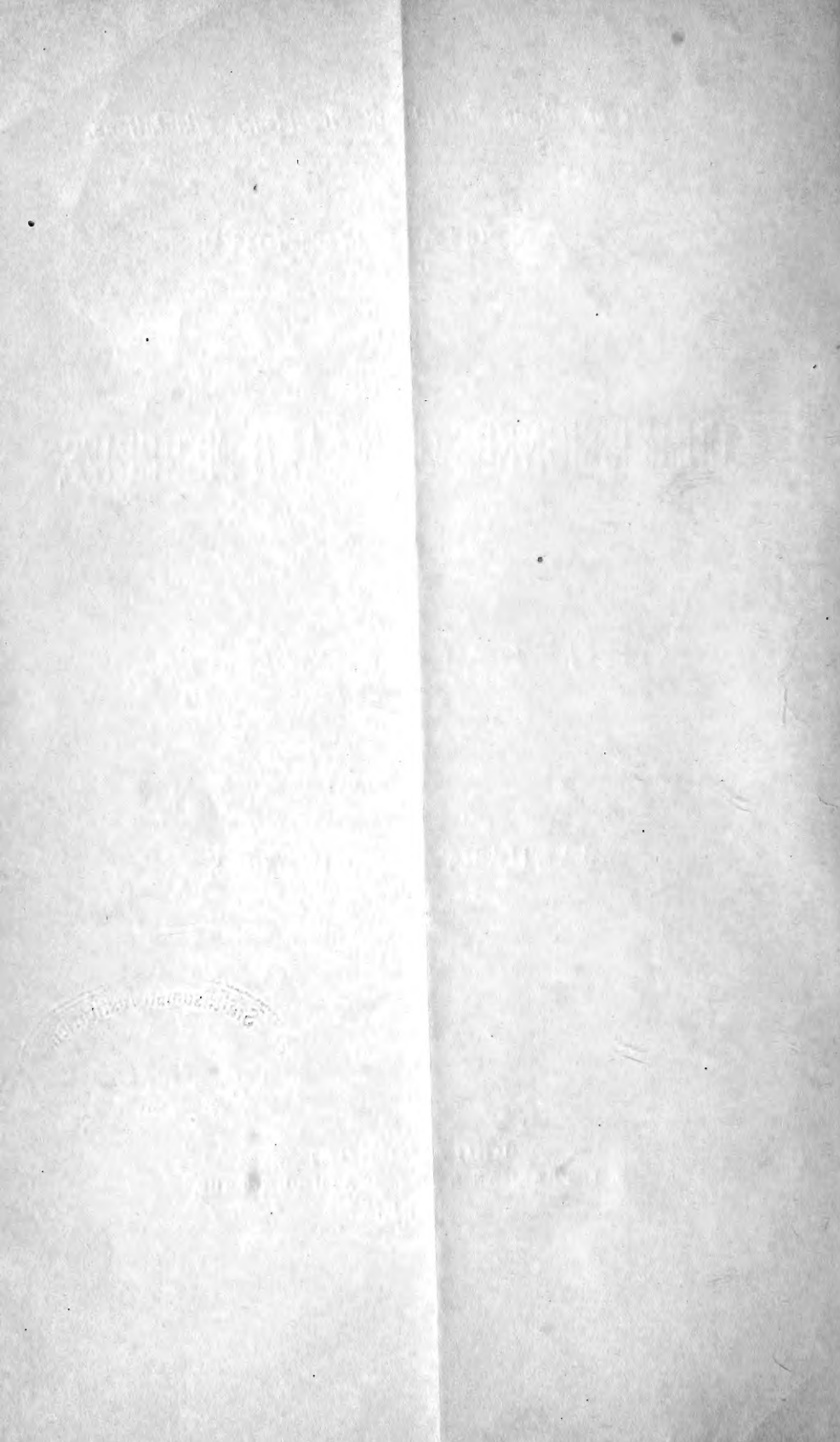
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## REPORT.

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*To the Honorable General Assembly of the State of Rhode Island,  
etc., at its January Session, 1889:*

The Commissioners of Inland Fisheries herewith present their Annual Report for the year 1888.

### SALMON.

February 8, 1888, the Commissioners received fifty thousand (50,000) salmon eggs from the United States Fish Commission, which were very successfully hatched with a loss of two per cent., by Mr. C. A. Hoxie, at his hatchery at Carolina, R. I.

These were placed in the head-waters of the Pawcatuck river and Warwick brook in Warwick, with a small loss in transportation.

The ten thousand land locked salmon eggs received from the United States Fish Commission the previous year were hatched at the same place. The experiment of raising the fry artificially until they were more than a year old proved decidedly successful. All previous efforts to stock our ponds with this valuable fish proving failures, we believe that our experience with this lot justifies us in the belief that we can succeed in stocking our largest and deepest ponds.

They were put in Long and White ponds in South Kingstown, and Carr's pond in West Greenwich, these waters being in the opinion of the Commissioners best adapted to their habits.

### TROUT.

The Commissioners purchased thirty-seven thousand (37,000) trout

fry from Mr. C. A. Hoxie. These were distributed by us and parties applying to us for them, in the various streams of the State at Westerly, Wickford, Newport, Pascoag, North, South and West Kingston. Each year we receive more applications for trout fry, showing an increasing interest in the State's efforts at restocking its waters with valuable food fishes.

#### BLACK BASS.

This excellent fish with which we have had the best of success in stocking the ponds in our State is gradually growing in favor. The many objections advanced against it as a food fish and as being destructive to our ordinary pond fish are being fast dissipated. In this connection we quote the following from *Shooting and Fishing*.

"This distinctly American fish was first classified on foreign soil by foreign godfathers, and the French naturalist, Lacépède, builded better perhaps than he knew when, through the mistake in its local name, he called the Black Bass 'trout-like.' It certainly is not like a trout in form or color, but like the trout it has taken firm hold of the affections of anglers who admire its superlative game qualities on the hook, and its gastronomical qualities when hot from the broiler.

There is little doubt that, if it is not already, the Black Bass will be in the future the popular game fish of this country. Dr. Henshall speaks with no uncertain sound when he declares it is to be 'the best game fish of America.' Unlike the Brook Trout, the Black Bass is neither timid nor retiring in its habits; it is a fish of civilization and not of the forests and remote mountain streams; one finds it in the lakes and rivers, and even canals, which float on their surface our vessels of commerce, and it is a fish accessible to the great body of anglers. The original distribution of the Black Bass we believe to have been only in large bodies of water, lakes and rivers, where they found wide range and an abundance of food. The disappointments attending the transplanting of this fish have come largely, if not entirely, from planting them in ponds and streams too small for them, and affording insufficient food.

The most serious charges that have been brought against the Black Bass are that they destroy other species of fish and kill for the love of killing. The latter charge never has been proven, and as to the former let Dr. Henshall testify: 'I wish to say a word in this connection in reference to objections heretofore urged against the introduction of the Black Bass into Eastern waters, upon the theory

that the presence of the 'voracious' Bass would militate against the increase of shad or salmon. The objections are not valid, or founded on fact, for the Black Bass prefers a diet of crawfish, when he can get it, varying it with minnows, insects, larvæ and frogs, and in Eastern waters he would not object to young eels. The pike, pickerel, pike-perch and gar-fish, are almost entirely piscivorous in their habits, which might be expected from the character of their teeth, and their sins have no doubt been charged to Black Bass. But, while the Bass will take in a young shad or salmon if it comes in his way when hungry, he will not make them special objects of his pursuit like the canine-teethed fishes above named.

The failure to restock such streams, if any such failure exists, must be attributed to other causes than the introduction of the Black Bass, prominent among which is the unrelenting pursuit of the young fry by the predatory fishes mentioned. . . . In your just and righteous indignation do not make a scapegoat of so good a fellow as the Black Bass.

In western waters where the Bass exists with the usual varieties of fishes, there is no perceptible decrease in the numbers of either. If any species suffers, it is always the Black Bass, on account of over-fishing, spearing, etc. I know of isolated lakes in Wisconsin where the Black Bass has co-existed with the Cisco (one of the salmon family) longer than the memory of man runneth to the contrary, without a decrease of the latter fish. If, then, the Bass cannot 'get away with' the Cisco in confined waters, how can he clean out the shad or salmon in large flowing streams? Moreover, I know of a small stream that abounded in Black Bass and crawfish, into which brook trout were introduced to the discomfiture of the former fish for the trout increased while the numbers of the Bass grew smaller by degrees and beautifully less.

If, then, there are waters in which the brook trout or the rainbow trout will not thrive, do not hesitate to aid in the further distribution of the black bass, by introducing that desirable species. It is easily done, and success is already assured. You have only to look at the Potomac, the Susquehanna, the Delaware, and many other streams for evidence of its rapid increase in new waters. The black bass is excelled by no other fish that swims for gameness, and among fresh water species by but one, the whitefish, for the table. And, furthermore, he will not eat the spawn of his mate, nor that of his fellows' mates. His natural food is the crawfish and the minnow; he prefers these, and they are easily procured. On them he will wax and grow fat, increase and multiply. The man who alleges that he depopulates the streams of valuable food fishes, or asserts that 'he kills for the love of it,' has never looked into the mouth of the bass with his eyes open.'



Dr. Henshall quotes from observations made by Major Isaac Arnold, Jr., U. S. Army, who kept Black Bass in an artificial pond for several years, and witnessed their spawning operations. 'When the spawning is over, the male disappears from the scene, and the female remains upon the nest extremely pugnacious, allowing nothing to approach until the eggs are hatched, and the young are a week or ten days old.' The implication is that when the young are ten days old they are left to themselves. We do not know how this may be in confinement, but in a wild state the female Black Bass remains much longer with her young, six weeks in one instance that came under the observation of the writer, and two months has been recorded by another observer."

## SHAD.

Favorable reports continue to be received of the increased catches of this valuable fish. Application has been made by us to the U. S. Fish Commission for another consignment of shad fry for distribution in our waters.

## BAY AND COAST FISHERIES.

A portion of the season, fishing in the waters of the bay has been very fair. Small blue fish and squiteague weighing from one to four pounds have been taken in the rivers between the Wilksbarre Pier and and Field's Point as well as below these points, showing that it is not the sewage that drives fish out of the bay.

The Commissioners feel with a more liberal appropriation they could extend their labors with good results.

Herewith find our financial report for the year 1888.

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*State of Rhode Island in account with Commissioners of Inland Fisheries.*

1888.	DR.	
Feb. 8.	To paid expenses on 50,000 salmon eggs .....	\$4 84
May 18.	“ “ distributing salmon fry.....	9 22
	“ “ “ land-locked salmon fry.....	6 00
	“ “ “ hatching and raising land-locked salmon .....	20 00



May 18.	To paid travelling expenses, Commissioners .....	4 92
	“ envelopes, stamps and paper .....	14 50
	“ C. A. Hoxie, 37,000 trout fry .....	55 50
		<hr/>
		\$114 98
1888.	CR.	
July 2.	By cash received of State of Rhode Island .....	\$114 98

JOHN H. BARDEN, } *Commissioners*  
 HENRY T. ROOT, } *of*  
 WILLIAM P. MORTON, } *Inland Fisheries.*

## LIST OF FISH COMMISSIONERS.

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*Forest and Stream* presents its annual list of the Commissioners of Fisheries and fishery officers of the different Provinces, States and Territories of North America, revised and corrected to Oct. 15, from direct correspondence. Those marked with a \* have failed to answer, and the States so marked are taken from last year's list:

### THE UNITED STATES.

Col. Marshall McDonald, Commissioner ..... Washington, D. C.  
Capt. J. W. Collins, Assistant in Charge of Fisheries Division.  
Richard Rathbun, Assistant in Charge of Scientific Inquiry.

### ALABAMA.

Col. D. R. Hundley.....Madison.  
Hon. Chas. S. G. Doster .....Prattville.

### ARIZONA.

J. J. Gosper.....Prescott.  
Richard Rule.....Tombstone.  
J. H. Taggart, Business Manager.....Yuma.

### ARKANSAS.

H. H. Rottaken, President.....Little Rock.  
W. B. Worthen, Secretary .....Little Rock.  
J. W. Calloway.....Little Rock.

(This State has never made an appropriation for fish-culture.)

### DOMINION OF CANADA.

Hon. John Tilton, Deputy Minister of Fisheries .....Ottawa.

*Inspectors of Fisheries for the Dominion of Canada, 1888.*

W. H. Rogers .....	Amherst, N. S.
A. C. Bertram.....	North Sydney, C. B. N. S.
W. H. Venning.....	St. John, N. B.
William Wakeham .....	Gaspé Basin, P. Q.
J. H. Duvar.....	Alberton, P. E. I.
Thomas Mowat.....	New Westminster, B. C.
Alex McQueen.....	Winnipeg, Man.

*Officers in Charge of Fish Breeding Establishments.*

S. Wilmot, Superintendent of Fishculture.....	Newcastle, Ont.
Charles Wilmot.....	Officer in charge Newcastle hatchery, Ont.
William Parker .....	Sandwich, Ont.
L. N. Catellier .....	Tadoussac, Q.
Philip Vibert.....	Gaspé, Q.
A. H. Moore .....	Magog, Q.
Alex Mowat .....	Ristigouche, Matapedia, P. Q.
A. B. Wilmot.....	Bedford, N. S.
C. A. Farquarson.....	Sydney, N. S.
Isaac Sheasgreen.....	Miramichi, N. B.
Charles McCluskey.....	St. John River, Grand Falls, N. B.
Henry Clark.....	Dunk River, P. E. I.
Thomas Mowat.....	B. C. hatchery, New Westminster, B. C.

## CALIFORNIA.

Joseph Routier.....	Sacramento.
J. D. Harvey .....	Los Angeles.

(Commissioner T. J. Sherwood resigned March 15, 1888.)

## COLORADO.

G. F. Whitehead .....	Denver.
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## CONNECTICUT.

Dr. William M. Hudson.....	Hartford.
Robert G. Pike.....	Middletown.
James A. Bill.....	Lyme.

(The State has no official superintendent, most of the hatching being done by Henry J. Fenton, Poquonnock.)

DELAWARE.

Charles Schubert.....Odessa.

GEORGIA.

J. H. Henderson .. .Atlanta.

Dr. H. H. Cary, Superintendent.....La Grange.

ILLINOIS.

N. K. Fairbank, President.....Chicago.

S. P. Bartlett.....Quincy.

George Breuning.....Centralia.

INDIANA.

Enos B. Reed.....Indianapolis.

IOWA.

E. D. Carlton.....Spirit Lake.  
(Superintendent, Ole Bjorenson.)

KANSAS.

S. Fee.....Wamego.

KENTUCKY.

William Griffith, President.....Louisville.

P. H. Darby.....Princeton.

John B. Walker.....Madisonville.

Hon. C. J. Walton.....Munfordville.

Hon. John A. Steele.....Midway.

W. C. Price.....Danville.

Hon. J. M. Chambers.....Independence.

A. H. Goble.....Catlettsburg.

J. H. Mallory.....Bowling Green.

MAINE.

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

Henry O. Stanley.....Dixfield.

B. W. Counce, Sea and Shore Fisheries.....Thomaston.

MARYLAND.

Dr. E. W. Humphries.....Salisbury.

G. W. Delawder.....Oakland.

## MASSACHUSETTS.

E. A. Brackett.....	Winchester.
F. W. Putnam.....	Cambridge.
E. H. Lathrop.....	Springfield.

## MICHIGAN.

John H. Bissell, (term expires Jan. 1, 1889).....	Detroit.
Herschel Whitaker, (term expires Jan. 1, 1891).....	Detroit.
Joel C. Parker, M. D., (term expires Jan. 1, 1893).....	Grand Rapids.
Walter D. Marks, Superintendent.....	Paris.
George D. Mussey, Secretary.....	Detroit.
William A. Butler, Jr., Treasurer.....	Detroit.

## MINNESOTA.

William Bird.....	Fairmount.
Niles Carpenter.....	Rushford.
Robert Ormsby Sweeny, President.....	St. Paul.
S. S. Watkins, Superintendent.....	Willow Brook, St. Paul.

## MISSOURI.

H. M. Garlichs, Chairman.....	St. Joseph.
J. L. Smith.....	Jefferson City.
H. C. West.....	St. Louis.
A. P. Campbell, Secretary.....	St. Joseph.

*Superintendents.*

Philip Kopplin, Jr.....	St. Louis.
Elias Cottrill.....	St. Joseph.

## NEBRASKA.

William L. May.....	Fremont.
R. R. Livingston.....	Plattsmouth.
B. E. B. Kennedy.....	Omaha.
M. E. O'Brien, Superintendent.....	South Bend.

## \*NEVADA.

W. M. Cary.....	Carson City.
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## NEW HAMPSHIRE.

George W. Riddle.....	Manchester.
Elliott B. Hodge.....	Plymouth.

John H. Kimball.....Marlborough.  
Com. E. B. Hodge..... Superintendent of Plymouth and Sunapee hatcheries.

## NEW JERSEY.

William Wright.....Newark.  
Frank M. Ward.....Newton.  
J. R. Elkinton.....Pennsgrove.

## NEW YORK.

E. G. Blackford, President.....New York.  
Gen. R. U. Sherman.....New Hartford.  
William H. Bowman.....Rochester.  
A. S. Joline.....Tottenville.  
Henry Burden.....Troy.  
E. P. Doyle, Secretary.....Room 311, Potter Building, New York City.

*Superintendents.*

Fred Mather.....Cold Spring Harbor.  
Monroe A. Green.....Caledonia.  
James H. Marks.....Bloomingdale.  
E. L. Marks, Fulton Chain and E. F. Boehm...Mill Creek.

*Shellfish Commission.*

E. G. Blackwood, Commissioner; William G. Ford, Engineer; J. W. Merserau,  
Oyster Protector, 80 Fulton Market, New York.

## NORTH CAROLINA.

William J. Griffin, Chairman.....Elizabeth City.  
J. B. Watson.....Englehard.  
William T. Cahoon.....Bayboro.

## OHIO.

C. V. Osborn, President.....Dayton.  
A. C. Williams, Secretary.....Chagrin Falls.  
J. C. Hofer.....Bellaire.  
John H. Law.....Cincinnati.  
Hon. Emory D. Potter.....Toledo.  
Henry Douglass, Superintendent.....Sandusky.  
L. K. Buntain, Chief Warden.....Dayton.

## OREGON.

F. C. Reed, President .....	Clackamas.
E. P. Thompson .....	Portland.
R. C. Campbell .....	Ranier.

(Terms expire in February, 1889.)

## PENNSYLVANIA.

Henry C. Ford, President .....	524 Walnut street, Philadelphia.
James V. Long, Cor. Secretary .....	75 Fifth avenue, Pittsburgh.
H. C. Demuth, Secretary of Board .....	Lancaster.
S. B. Stilwell .....	Scranton.
A. S. Dickson .....	Meadville.
W. L. Powell, Treasurer .....	Harrisburg.

*Superintendents.*

John P. Creveling .....	Allentown.
William Buller .....	Corry.

## RHODE ISLAND.

John H. Barden, President .....	Rockland.
Henry T. Root, Treasurer .....	Providence.
William P. Morton, Secretary .....	Johnston.

## SOUTH CAROLINA.

Hon. A. P. Butler .....	Columbia.
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## \*TENNESSEE.

W. W. McDowell .....	Memphis.
H. H. Sneed .....	Chattanooga.
Edward D. Hicks .....	Nashville.

## UTAH.

A. Milton Musser .....	Salt Lake City.
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## VERMONT.

Herbert Brainard .....	St. Albans.
F. H. Atherton .....	Waterbury.

## VIRGINIA.

Dr. J. T. Wilkins .....	Bridgetown.
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## WEST VIRGINIA.

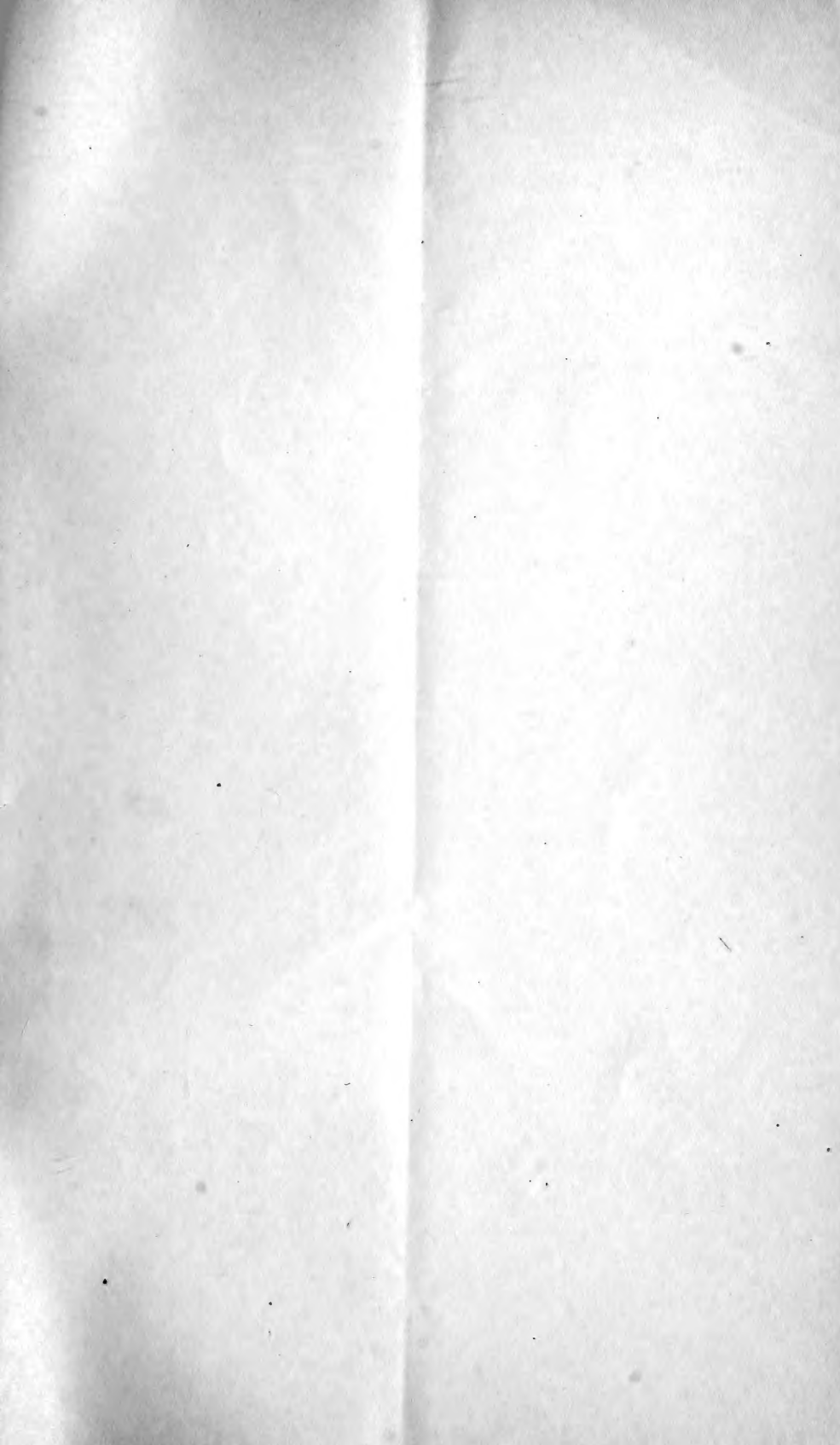
C. S. White, President.....	Romney.
F. J. Baxter, Treasurer.....	Sutton.
James H. Miller, Secretary.....	Hinton.

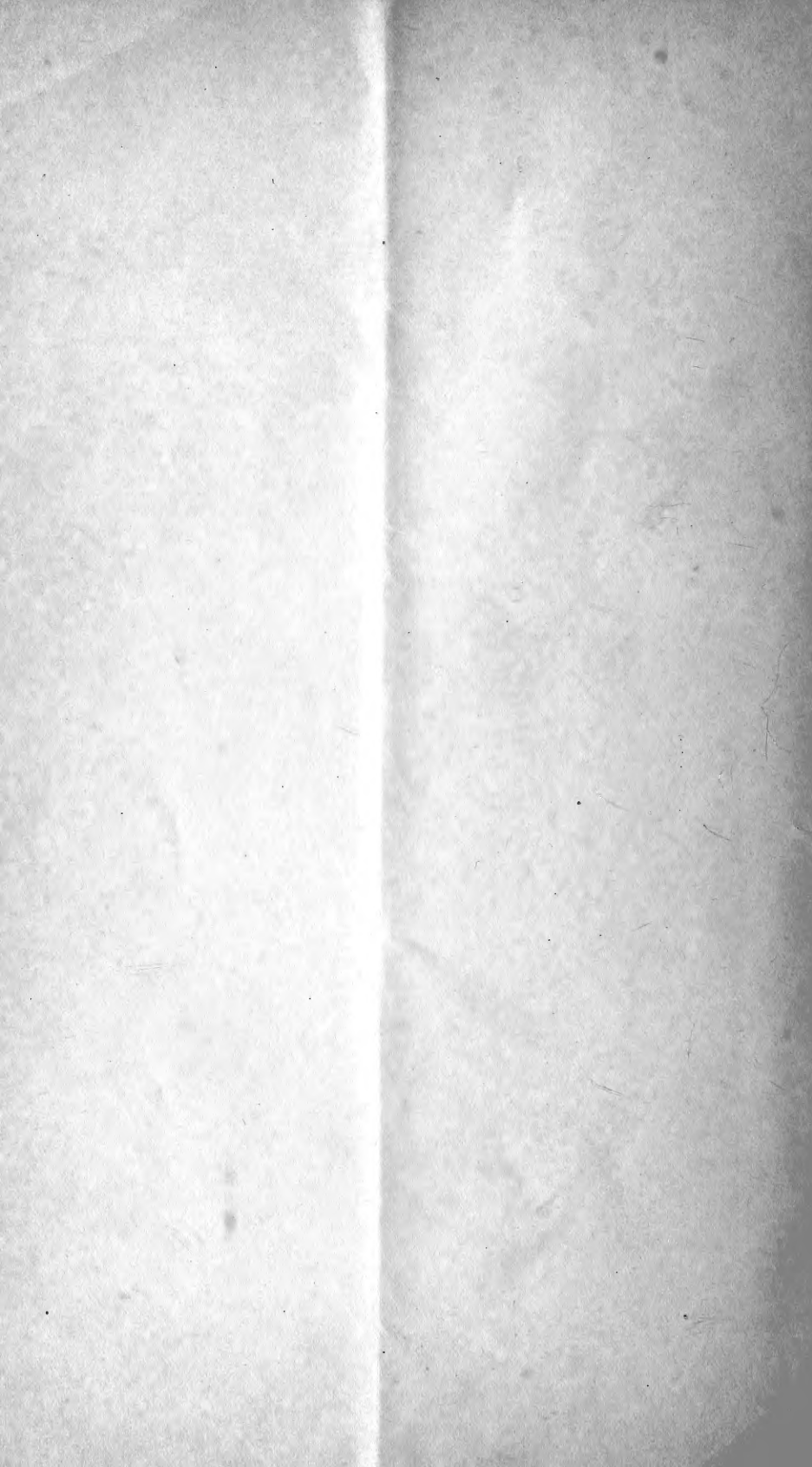
## WISCONSIN.

The Governor, <i>ex-officio</i> .	
Philo Dunning, President.....	Madison.
C. L. Valentine, Secretary and Treasurer.....	Janesville.
Mark Douglas.....	Melrose.
A. V. H. Carpenter.....	Milwaukee.
Calvert Spensley.....	Mineral Point.
E. S. Miner.....	Sturgeon Bay.
Jas. Nevin, Superintendent.....	Madison.

## WYOMING TERRITORY.

Louis Miller.....	Laramie.
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