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BIENNIAL REPORT

OF THE

FISH COMMISSIONER

OF THE

STATE OF COLORADO,

FOR THE

TWO YEARS 1881 AND 1882.



DENVER, COLO.:

TRIBUNE PUBLISHING COMPANY, STATE PRINTERS.

1882.

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# FISH COMMISSIONER'S REPORT.

STATE OF COLORADO,  
OFFICE OF FISH COMMISSIONER, }  
DENVER, *December 1, 1882.*

*To His Excellency Frederick W. Pitkin, Governor of Colorado:*

SIR: I hereby submit to you my fifth report as State Fish Commissioner of Colorado. The report includes a record of the progress of pisciculture in this State during the past two years. It will be found more satisfactory than any previous report, because more satisfactory means have been furnished to advance the interests of this important and useful work. Fish culture has been in no sense experimental for a number of years. It has reached the dignity of a science. Given certain material and certain conditions, there is an absolute assurance of results which may be confidently predicted. Since I made my last report to you, I have had some advantages in both facilities and conditions which have borne fruit, as the figures to be given will show. At the last session of the General Assembly an act was passed providing for the creation of a Board, consisting of the Governor, the Fish Commissioner and a third person to be appointed by the Governor, whose duty it was to select and purchase a suitable site for the location of a State establishment for the breeding and the propagation of the better class of food fish. The act further appropriated the sum of twenty-seven hundred and fifty (\$2,750) dollars, for the payment of the necessary expenses in the purchase of a site and the erection of a building. The additional member of the Board, by appointment of the Governor, was R. Borchard, Esq. Several sites were inspected and, as a result of the careful judgment of the

Board, a plat of eleven acres, eight and a half miles from Denver, was chosen. The land in question was owned by Mr. Wilson Waddingham, who kindly donated it to the State for the purposes intended. The land is excellently located, has numerous springs and is in all respects the best place which could be found. In November, 1881, the work of erecting the hatchery was begun, and about the middle of December of the same year the first lot of ova, consisting of a hundred thousand Eastern brook trout eggs, was received from Plymouth, Massachusetts, and placed in the hatching troughs. In about ten days another lot of a hundred thousand was sent on, and shortly afterwards still a hundred thousand more were received. About the same time I also received ten thousand eggs of the California brook trout, which were also placed in the waters.

The success in hatching these was extraordinary, about ninety-nine and one-eighth ( $99\frac{1}{8}$ ) per cent. of the eggs being hatched out. In April of this year the fish were large enough for distribution, and two hundred and forty thousand (240,000) of them were distributed to the various streams of Colorado and forty-three thousand (43,000) sold to private individuals. There are still two thousand (2,000) on hand for the use of the State. A serious illness at the time the distribution of the fish was made prevented me from keeping more than a general supervision of it, but I am glad to say that the interest in it was quite marked, and that all the principal streams of the State received their quota.

Late reports from them indicate that they have done very well, and if the condition of those at the State ponds may be taken as a basis from which to judge, the success of the efforts put forth has been most gratifying. Those distributed have grown to an average in length of eight (8) inches and their weight ranges from a quarter to a half a pound.

The addition of nearly three hundred thousand (300,000) of these splendid food fish to the waters of Colorado is in

itself a sufficient return for the comparatively small expenditure which the State has made.

In November of the present year I received twenty (20) mirror carp from Professor Spencer F. Baird, United States Fish Commissioner.

The carp which I had obtained before and to which allusion was made in my last report, did not spawn this year, as it was believed they would, doubtless because they were moved from place to place so often. Next year there will unquestionably be some for distribution, however. Those now in the ponds are fully a foot in length.

I also received from Eastern Kansas forty-one (41) black bass and one hundred (100) croppy, which were placed in the lake which is formed by the springs on the hatchery grounds. These will undoubtedly do well.

It may be well to state in this connection that I have contracted for three hundred thousand (300,000) more Eastern brook trout eggs, which will be hatched in January and February. I am now engaged in building some nursery ponds for the reception of these fish when they are hatched.

The next distribution of the young fish should take place in April and May next, and if the same percentage is hatched as last time, the distribution will be a very important and valuable one.

During the last session of the Legislature the laws for the protection and preservation of fish were made much stricter, and the results have, as a consequence, been more satisfactory. The Fish Commissioner was given the authority to appoint Deputy Commissioners throughout the State, who were clothed with full power and authority to enforce the fish laws.

This he has done, but in spite of the closest watch there are still many violations of the laws. The most flagrant and outrageous of these is the use of explosives. Explosives are not only cruel and barbarous, but they work a very serious injury to the fish interests of the State. They

secure a wholesale destruction without giving any adequate return to those using them. At this time, when there have been so many young fish planted in the streams, the practice should be especially guarded against. Under the law alluded to before, I have appointed fourteen (14) Deputy Commissioners in various parts of the State, whose duty it is to see that the provisions of the act for the protection of fish are carried out. They need the assistance of the citizens, though, and the matter is of such importance that I hope that the people of Colorado will sustain the Commissioners in their efforts to secure the enforcement of the laws and furnish them with the names of any violators of the just legislation which has been enacted. The fines collected from transgressors aggregate one hundred and twenty-three (\$123) dollars.

Since the erection of the hatchery there have been excavated and built several nursery ponds—two more of these are now in process of construction. One pond contains two thousand (2,000) trout for State uses and another contains thirty-five (35) carp. As fast as possible additional improvements will be made. The first of these should be the erection of a fence about the grounds, at present they are unenclosed. The board floor originally put in the hatchery has been taken out and one of cement substituted, which is a decided improvement.

A horse and wagon should be purchased for the use of the hatchery; it will be a measure of economy.

The financial affairs of the institution are, I am glad to say, in very good condition, as the figures to follow will show:

|  |            |
|--|------------|
| Appropriated for building . . . . .          | \$2,750 00 |
| Expended for building. . . . .               | 1,890 00   |
|  | <hr/>      |
| Balance to credit of building fund . . . . . | \$ 860 00  |

For the salary of the Commissioner and general expenses of maintaining the hatchery, paying for ova, etc., the sum of thirty-five hundred (\$3,500) dollars was appro-

apropriated for the first year and three thousand (\$3,000) dollars for the second. The account stands as follows:

|                               |            |
|-------------------------------|------------|
| Amount appropriated . . . . . | \$6,500 00 |
| Amount expended . . . . .     | 3,380 69   |
|                               | <hr/>      |
| Balance . . . . .             | \$3,119 31 |

I have received in fines for violations of the fish laws one hundred and twenty-three (\$123) dollars, and from the sale of fish to private individuals at three dollars and fifty cents (\$3.50) per thousand, one hundred and fifty dollars and fifty cents (\$150.50). The sum, therefore, in the hands of the Treasurer to the credit of the hatchery is as follows:

|  |            |
|--|------------|
| Balance to credit of building fund . . . . .       | \$ 860 00  |
| Balance to credit of general expense appropriation | 3,119 31   |
| Fines received . . . . .                           | 123 00     |
|  | <hr/>      |
| Total . . . . .                                    | \$4,102 31 |

In addition to this, I have in my hands \$150.50 from the sale of fish, making a total of \$4,252.81 on hand. Not having a list of Fish Commissioners for 1882, I herewith present to the Fish Commissioners of North America a list revised and corrected to September 1, 1881, by F. Mather, of *Forest and Stream*.

CANADA.

W. F. Witcher . . . . . Ottawa, Ontario.

NEW BRUNSWICK.

W. H. Venning, Inspector of Fisheries . . . . . St. John.

NOVA SCOTIA.

W. H. Rogers, Inspector of Fisheries . . . . . Amherst.

PRINCE EDWARD ISLAND.

J. H. Duvar, Inspector of Fisheries . . . . . Alberton.

BRITISH COLUMBIA.

Alex. C. Anderson, Inspector of Fisheries. . . . . Victoria.

UNITED STATES.

Prof. Spencer F. Baird . . . . . Washington, District of Columbia.

## FISH COMMISSIONER'S REPORT.

## ALABAMA.

C. S. G. Doster . . . . . Prattville.  
 D. B. Huntley . . . . . Courtland.

## ARIZONA.

Jno. J. Gosper . . . . . Prescott.  
 Richard Rule . . . . . Tombstone.  
 Dr. J. H. Taggart . . . . . Yuma.

## ARKANSAS.

N. B. Pearce . . . . . Osage Mills.  
 James Hornibrook . . . . . Little Rock.  
 John E. Reardon . . . . . Little Rock.

## CALIFORNIA.

S. R. Throckmorton . . . . . San Francisco.  
 B. B. Redding . . . . . San Francisco.  
 J. D. Farwell . . . . . Niles, Alameda County.

## COLORADO.

Wilson E. Sisty . . . . . Denver.

## CONNECTICUT.

Dr. W. M. Hudson . . . . . Hartford.  
 Robert G. Pike . . . . . Middletown.  
 G. N. Woodruff . . . . . Sherman.

## GEORGIA.

J. T. Henderson, Commissioner of Agriculture and ex-officio Commissioner of  
 Fisheries . . . . . Atlanta.  
 Dr. H. H. Cary, Superintendent of Fisheries . . . . . La Grange.

## ILLINOIS.

N. K. Fairbank, President . . . . . Chicago.  
 S. P. Bartlett . . . . . Quincy.  
 S. P. McDoel . . . . . Aurora.

## INDIANA.

Calvin Fletcher . . . . . Spencer, Owen County.

## IOWA.

B. F. Shaw . . . . . Anamosa.  
 A. A. Mosher, Assistant for Northwestern portion . . . . . Spirit Lake.

## KANSAS.

D. B. Long . . . . . Ellsworth.

## KENTUCKY.

William Griffiths, President . . . . . Louisville.  
 Dr. S. W. Coombs, Secretary . . . . . Bowling Green.



|                               |                              |
|-------------------------------|------------------------------|
| P. H. Darby . . . . .         | Princeton.                   |
| Jno. B. Walker . . . . .      | Madisonville.                |
| Hon. C. J. Walton . . . . .   | Munfordville.                |
| Hon. J. A. Steele . . . . .   | Versailles.                  |
| W. C. Price . . . . .         | Danville.                    |
| Dr. W. Van Antwerp . . . . .  | Mount Sterling.              |
| Hon. J. M. Chambers . . . . . | Independence, Kenton County. |
| A. H. Goble . . . . .         | Catlettsburg.                |

## MAINE.

|  |           |
|--|-----------|
| Henry O. Stanley . . . . .                       | Dixfield. |
| E. M. Stilwell, Assistant Commissioner . . . . . | Bangor.   |

## MARYLAND.

|   |            |
|---|------------|
| T. B. Ferguson . . . . .                          | Baltimore. |
| (Address Massachusetts Avenue, Washington, D. C.) |            |
| Thomas Hughlett . . . . .                         | Easton.    |

## MASSACHUSETTS.

|                          |                  |
|--------------------------|------------------|
| Theodore Lyman . . . . . | Brookline.       |
| E. A. Brackett . . . . . | Winchester.      |
| Asa French . . . . .     | South Braintree. |

## MICHIGAN.

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

## MINNESOTA.

|  |              |
|--|--------------|
| First District—Daniel Cameron . . . . .                  | La Crescent. |
| Second District—Wm. W. Sweney, M. D. . . . .             | Red Wing.    |
| Third District—Robert Ormsby Sweeny, President . . . . . | St. Paul.    |

## MISSOURI.

|                              |                              |
|------------------------------|------------------------------|
| Hon. Silas Woodson . . . . . | St. Joseph.                  |
| John Reid . . . . .          | Lexington.                   |
| J. G. W. Steedman . . . . .  | 2803 Pine Street, St. Louis. |

## NEBRASKA.

|                            |              |
|----------------------------|--------------|
| W. L. May . . . . .        | Fremont.     |
| R. R. Livingston . . . . . | Plattsmouth. |

## NEVADA.

|                        |              |
|------------------------|--------------|
| H. G. Parker . . . . . | Carson City. |
|------------------------|--------------|

## NEW HAMPSHIRE.

|                                |           |
|--------------------------------|-----------|
| Albina H. Powers . . . . .     | Plymouth. |
| Luther Hayes . . . . .         | Milton.   |
| Dr. Edward Spaulding . . . . . | Nashua.   |

## NEW JERSEY.

Dr. B. P. Howell . . . . . Woodbury, Gloucester County.  
 Major E. G. Anderson . . . . . Trenton.  
 Theo. Morford . . . . . Newton, Sussex County.

## NEW YORK.

Hon. R. Barnwell Roosevelt . . . . . 76 Chambers Street, New York.  
 Edward M. Smith . . . . . Rochester.  
 Richard U. Sherman . . . . . New Hartford, Oneida County.  
 Eugene G. Blackford (Fulton Market, New York City)  
 . . . . . 809 Bedford Avenue, Brooklyn.

## NORTH CAROLINA.

S. G. Worth (Acting Commissioner) . . . . . Morgantown.

## OHIO.

A. L. Harris . . . . . Cincinnati.  
 C. W. Bond . . . . . Toledo.  
 H. C. Post . . . . . Sandusky.

## PENNSYLVANIA.

Hon. H. J. Reeder . . . . . Easton, Northampton County.  
 Hon. Benj. L. Hewit . . . . . Hollidaysburg, Blair County.  
 James Duffy . . . . . Marietta, Lanchaster County.  
 John Hummel . . . . . Selingsgrove, Snyder County.  
 Robert Dazell . . . . . Pittsburgh.  
 G. M. Miller . . . . . Wilkesbarre.

## RHODE ISLAND.

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

## SOUTH CAROLINA.

A. P. Butler . . . . . Columbia.  
 Commissioner of Agriculture and ex-officio Commissioner of Fisheries.

## TENNESSEE.

W. W. McDowell . . . . . Memphis.  
 Geo. F. Akers . . . . . Nashville.  
 H. H. Sneed . . . . . Chattanooga.

## TEXAS.

R. R. Robertson . . . . . Austin.

## UTAH.

Prof. J. L. Barfoot, Curator Deseret Museum . . . . . Salt Lake.

## VERMONT.

Dr. M. Goldsmith . . . . . Rutland.  
 Charles Barrett . . . . . Grafton.

## VIRGINIA.

Col. M. McDonald . . . . . Berryville.

## WEST VIRGINIA.

H. B. Miller . . . . . Wheeling.

C. S. White . . . . . Romney.

N. M. Lowry . . . . . Hinton.

## WISCONSIN.

The Governor, ex-officio . . . . . Madison.

Philo Dunning, President . . . . . Madison.

C. L. Valentine, Secretary and Treasurer . . . . . Janesville.

J. V. Jones . . . . . Oshkosh.

Jno. F. Antisdal . . . . . Milwaukee.

Mark Douglas . . . . . Melrose.

C. Hutchinson . . . . . Beetown.

## WYOMING TERRITORY.

Henry B. Rumsey . . . . . Red Buttes, Albany County.

Deputies—Dr. M. C. Brackwell . . . . . Cheyenne.

Otto Gramm . . . . . Laramie.

I would suggest that the appropriation for the hatchery be placed at \$3,500 a year. The success which has attended it thus far has been so great that its usefulness can no longer be questioned. This usefulness should be extended. There are many improvements which ought to be made, and they ought to be made at once. The grounds should be made more presentable than they are now, and the nursery pond should be increased. An appropriation of thirty-five hundred (\$3,500) dollars will be sufficient, but it will not be too much.

WILSON E. SISTY,  
*Commissioner.*