STATE OF MICHIGAN.

FIFTH BIENNIAL REPORT

—OF THE—

State Board of Fish Commissioners

To the Hon. Josiah W. Begole, Governor of Michigan:

The fourth biennial report, 1879–1880, closed with an account of the condition of affairs at Pokagon, and some account of the success which had attended the work of this commission in stocking barren or depleted waters.

The amount of property then on hand was shown to be—

At Pokagon	$2,289.47
" Detroit	1,290.00
" Boyne Falls	197.46
Total	$3,776.93

With this amount of property, and an appropriation of $5,000 for the year 1880, the number of fish hatched and planted was—

Whitefish	10,695,000
Brook Trout (110,000 ova and young fry lost at Pokagon)	50,400
Lake Trout	26,500
Black Bass	3,500
Land-Locked Salmon	20,000

These figures are repeated briefly here, in order that any one desiring to follow the progress of the work from year to year may compare the figures of 1881–2 and 1882–3 with the foregoing.

The present report covers the ground from December 1st, 1880, to and including the condition of the work in April, 1883.

The attempt to gather whitefish ova at Petoskey, in 1880, failed of results, except about 800,000. Only about 3,000,000 in all were gathered that year and hatched in Detroit.

The tables in the appendix show the number and localities of distribution.

For whitefish, see "A."

Better and safer methods for securing whitefish ova have been adopted, upon the suggestion and experiments of Mr. O. M. Chase, then in charge of the Detroit hatching house, he having demonstrated that the fish can be taken from the seines or pounds where they are caught, and placed in convenient crates or small pens, whence they may be taken and handled as the ova are ripe, thus making a great saving of the eggs, because only those sufficiently ripened to flow readily are taken, and it is also attended with less injury to, and loss of, the adult fish. The expense and labor are thus materially reduced, and the total number of properly impregnated eggs is increased in proportion.

During that winter (1880–81), 435,500 brook trout ova were purchased, 64,500 being reported as the product of the stock fish belonging to the State, from which the Superintendent reported a hatch and distribution of 388,500 fry.

See table "B."

Twenty thousand ova of the land-locked salmon which were received in February, 1881, sent by Prof. Baird, United States Fish Commissioner, were all lost. The Superintendent attributed the disaster to the increased flow from the springs, consequent upon the spring thaw.

In April the Board determined to make as large a distribution of the silver eel as their means would permit, and sent O. M. Chase and E. O. Chase to Troy, New York, to procure the young eels from the Hudson river. This work occupied from May 25th to June 20th. About 440,000 eels were procured, and table "D." shows the distribution. About 50,000 were lost by inexperienced handling. Mr. Chase, by experiments, discovered that young eels can be very safely and conveniently transported by packing them closely in a small box on wet Canton flannel, sufficient apertures for air being made, and the contents of the boxes being moistened once in two or three hours.

The remainder of June and July were spent by the Superintendent and Mr. Chase in searching for a new location for a trout hatching station. It having been determined to abandon Pokagon. Late in July Cheeney Creek, Green township, Mecosta county, one mile north of the depot of the Grand Rapids and Indiana Railroad at Paris was selected, and 38 $\frac{7}{10}$ acres of land, lying between the highway and the Muskegon river, was purchased by the Superintendent for the Board, and also a strip of land fifteen rods wide meandering the creek across 120 acres. Here in the early fall of 1881 a dwelling house was erected for the person in charge of the station, and also a barn and hatching-house. The total cost was $5,000 for the land, improvement and apparatus. The estimated capacity of the hatching-house is 1,000,000 fry. The property is now in very good condition, but requires some additional room in the way of ponds and races, which will require about $175 worth of

lumber, and the work will all be performed by the employes of the Commission during the summer months. There is an abundant water supply here to enable the Board to carry and raise a large stock of brook trout and California trout, and perhaps of grayling and land-locked salmon.

Since 9th March, 1883, this property has been in charge of Mr. Walter D. Marks, a very competent and thoroughly trained fish culturist in whom the Board have entire confidence.

For the whitefish hatch and plant in the spring of 1882 see table *H*. The total was 18,170,000.

The take of whitefish eggs in the fall of 1882 was the largest ever made, reaching nearly 40,000,000. Estimating the loss by immaturity, failure of impregnation, and all other accidents, at 15 per cent., which is deemed ample, the hatch will be about 34,000,000, being almost double the amount ever before produced by the Board in any one year.

THE NECESSITY OF THE WORK.

The valuable information gathered and published by the U. S. Fisheries Commission, together with what we have been able to get, bearing upon the decrease in the fish product of the Great Lakes, and of our own State, is of sufficient importance to challenge earnest consideration and to demand prompt and effective measures to arrest the depletion of our waters.

Michigan stands *first* among the States of the Union in the product of fresh-water fisheries; and the fisheries of this State rank *fifth* in the value of its *natural products*. But while the product has increased to some extent each year, the average size of the fish has greatly decreased and the effectiveness of the appliances for catching fish have vastly increased; and in many localities the yield has partially or wholly failed, and to keep up the product the range of waters fished over has been very greatly extended, and the size of the mesh of gill nets and trap or pound nets has also been materially diminished. These facts point to one conclusion, that the time is speedily coming when the fisheries will of necessity be abandoned.

That calamity may be averted by:

1st. Reasonable restrictions as to the times and methods of taking fish; and,

2d. By increased artificial propagation and re-stocking of the waters.

Nor should attention to the Great Lakes, which are the sources of our great commercial fisheries, draw our attention from the vast number of inland lakes, which are capable of furnishing far greater supplies of excellent fish-food than ever yet realized from them. The sources of supply to both kinds of waters can be most economically and conveniently cultivated and conducted together.

To the first of the considerations above suggested for preventing the depletion of the fisheries, this Board is not now prepared to submit full and entirely satisfactory recommendations, because it has

never had sufficient means to gather the data indispensable to a just and intelligent examination of the questions involved. We can, however, safely say that the law should prohibit the capture of whitefish and lake trout with nets below one and one-half pounds in weight; and where whitefish are moving to their spawning grounds in October and November, fishing should be prohibited during two days in each week; and the size of the mesh in gill nets and pound or trap nets should be enlarged to some extent over the present regulation. The length of pound and gill nets and seines, and the distances from the banks at which the former should be placed, also require regulation. These and all other precautions, however, to be at all effective in repressing the infraction of the laws by the malevolent, must be diligently and zealously enforced. To secure that, a Game and Fish Warden should be employed by the State, who, so far as the Fisheries laws are concerned, should have some connection with this Board.

Upon the other point we are in a position to speak. In some localities, notably Lake St. Clair, the fisheries have been restored after years of exhaustion; in others the product has been increased many times, the direct result of the stocking done under the direction of this Board. This work has but just begun. The experiments of the past ten years have increased our facilities so that, with but comparatively little increase in appropriations the work can be extended to properly stocking *all* suitable inland lakes and more than making good the supply in the great lakes, thus augmenting the commercial industry of fishing to return wealth to the State, and increasing and cheapening this important food supply to the people of this State. Instead of hatching and planting 40,000,000, we should be able to distribute 200,000,000 of white fish each year. This number is none too large to meet the requirements of the case. We are not under-estimating the difficulty of gathering the ova and of making the plants. It should be borne in mind that by such increase the proportionate cost of producing the young fry is greatly reduced. The cost to the State of raising and planting 1,000 fish (taking whitefish and trout, and excluding from the figures other kinds usually denoted as special work, as grayling, black bass, carp and eels), with the present number, 1883, is about $1.85 per 1,000—the appropriation being $15,000 for two years. With an appropriation of $30,000 for the two years, about $11,000 of which will be needed for new hatching stations, the product will be so increased as to reduce the cost per 1,000 fish hatched and planted to less than 10 cents, and that degree of efficiency can be maintained at an annual cost of $10,000, or a little under.

THE NEEDS OF COMMISSION.

The hatching house at Detroit is worn out, and entirely inadequate for the demands made upon it. A new building and additional equipment are urgently needed. These can be procured at a cost of about $3,000, the improvement being placed upon leased

ground. It will be time enough to ask for additional means to purchase land when other more necessary things have been secured. An additional station near the Straits of Mackinaw, or on the Upper Peninsula, is required to supply the waters of, and near the Straits, and Lake Superior, with a capacity of 100,000,000 whitefish and from two to four millions of brook and salmon trout. To build and equip such a station will require about $5,500.

We need also a suitable car in which to transport the fish. The planting of large numbers of young fish is a difficult and hazardous operation, and without suitable facilities for doing it safely, the results of all other expenditure to secure the eggs and hatch them, will be lost. While the railways of this State have been, and still are, extending to us without cost, most valuable aid, it is neither safe nor convenient—even possible—to transport the young fish in the numbers we are now speaking of, without a properly equipped car of our own. Such a car will cost from $1,500 to $1,800.

Another pressing necessity, and one which every business man will readily appreciate, is office facilities and a competent secretary. The correspondence of the Commission has grown to such proportions that a Superintendent cannot manage it, his entire time being required for the more important practical duties for which he was engaged. We further require a safe place for our records and files. This is emphasized by the loss of many valuable reports and letters by the burning of Mr. Eli R. Miller's house, at Richland, this past winter.

It has been said above that good work has been done by the Commission. We know facts enough to warrant that assertion, and yet we are not, and the people of the State are not, sufficiently informed on this subject by extended and accurate examination into the results of the Board's work to be able to pass final judgment upon this work. Such examination can only be made by competent persons, with proper apparatus. One of the things which the Board hopes to accomplish, with the increased appropriation asked, is to make such examination of the results of work, and examine new waters, for the purpose of determining whether they are suitable, in temperature, depth, and kinds of fish food, to be stocked with any, and what kinds of fish, in advance of attempting to plant them.

While we have spoken mainly of whitefish and trout above, it must be remembered that with increased appropriation we will be able to accomplish a much larger work with eels, grayling, carp, black bass, and other varieties, proportionally, than has ever been done before. It will also be done at a reduced proportionate cost, as well as more safely, because each year we shall have a wider experience, and a larger force of skillful men.

There will be found in the appendix a copy of the regulations adopted by the Board upon its organization this year.

Respectfully submitted,

JOEL C. PARKER,
ANDREW J. KELLOGG,
JOHN H. BISSELL,
Commissioners.

WHITEFISH (*Corregonus albus*).

TABLE A.—Showing the Plant of the Hatch of 1880–1.

March and April, Detroit River	1,000,000
March and April, Lake St. Clair	1,700,000
March, Lake Michigan	300,000
Total	3,000,000

(*Salmo fontainalis.*)

TABLE B.—Showing Deposits of Brook Trout for 1881.

County.	Depositors.	Where Made.	No. of Fish.
Allegan	W. R. Delano	Delano's brook	3,000
Allegan	H. B. Peck	Streams near Allegan	4,500
Berrien	W. H. Edwards	Blue creek	4,000
Berrien	H. J. Ray	Tributaries to Mill creek	6,000
Berrien	E. J. Bonine	Streams around Niles	5,000
Cass	A. Garwood	Young's creek	4,000
Cass	F. Ernst	East branch Pokagon Creek	6,000
Cass	E. Walters	Walter's brook	1,500
Cass	J. G. Portman	Mendenhall brook	3,000
Cass	J. G. Portman	Burke's brook	5,000
Cass	J. Haines	West branch Pokagon creek	3,000
Cass	H. H. Taylor	Tributaries to Taylor's lake	2,000
Cass	W. Wells	Tributaries to Dowagiac creek	5,000
Calhoun	N. A. Osgood	Streams near Battle Creek	6,000
Kalamazoo	E. R. Miller	Spring brook	20,000
Kent	H. W. Davis	Streams not given	31,000
Kent	J. C. Parker	Streams not given	10,000
Kent	H. V. Ward	Streams not given	12,000
Kent	S. C. Ford	Near Cedar Springs	5,000
Mecosta	G. W. Reed	Streams near Stanwood	5,000
Mecosta	C. T. Davenport	Paris and Buckhorn creeks	10,000
Newaygo	E. O. Shaw	Orton creek	10,000
Newaygo	D. Patterson	Branches of White river	31,000
Newaygo	Rand & Jennings	Cold Spring brook	5,000
Oceana	Hart, fish and game c.	Different streams	71,000
Oceana		Tributaries of Pentwater river	
Oceana	A. T. Linderman	Lawford creek	3,000
Oceana		Silver creek	
Oceana		Thomson's creek	
Oceana	W. D. Ackerson	Flower creek	2,500
Osceola	Geo. M. Bivins	Tustin creek	5,000
Osceola	J. E. Bivins	Branch of Pine river	5,000
Ogemaw	Thomas White	Branches of Deep river	10,000
Ogemaw	Jay Allen	Branches of West Branch	10,000
Ogemaw	F. Ernst	Ogemaw Springs	5,000
Ogemaw	E. B. Morehouse	Streams near Stirling	10,000
Van Buren	C. Engle	Tributaries of Paw Paw river	42,000
Van Buren	F. Stow	Stream east of Hartford	2,000
Wexford	J. H. Marqueston	Streams near Sherman	3,000
Wexford	S. W. Baldwin	Blaisdell's creek	3,000
Wexford	W. H. Marsh	Branches of Pine river	5,000
Wexford	E. L. Metheany	Branches of Pine river	5,000
Wexford	H. J. Ogden	Slago creek	5,000
Wexford	M. S. Gilbert	Cedar creek	5,000
Total			388,500

(*Grystes nigricans.*)

TABLE C.—Showing the Plant of Black Bass for 1881.

Names of Depositors.	Where Deposited.	No. of Fish.
N. A. Osgood	Goguac lake	3,000
E. L. Metheany	Clam lake	4,000

(*Anguilla communis.*)

TABLE D.—Showing the Plant of Eels for 1881.

County.	Name of Depositor.	Where Planted.	No. of Fish.
Allegan	A. B. Nourse	Drane lake	5,000
Allegan		Geneva lake	5,000
Allegan	W. H. Mills	Kalamazoo river and Pine lake	32,000
Allegan	J. Knowlton	Allegan	5,000
Allegan	T. Parks	Allegan	5,000
Allegan	Wm. Williams	Allegan	5,000
Allegan	A. J. Kellogg	Mill pond	10,000
Allegan	J. H. B. Boulter	Pine lake	10,000
Berrien	H. J. Ray	Paw Paw lake	20,000
Barry	Badger & Trowbridge	Gun lake	10,000
Barry	G. R. Main	Banfield	10,000
Cass	A. Garwood	Lafferty and Stone lakes	6,000
Cass	E. Hurd	Pokagon mill pond	5,000
Calhoun	A. J. Rowley	Lakes in vicinity of Marshall	52,000
Calhoun	M. O. Robertson	Spectacle lake	10,000
Calhoun	A. D. Eldred	Not reported	5,000
Kalamazoo	Jessie Earl	Lakes near Schoolcraft	16,000
Kent	S. C. Ford	Lakes near Cedar Springs	10,000
Lenawee	Birdsell & Plimpton	Devil's and Round lakes	25,000
Lenawee	E. Ames	Not reported	15,000
Lenawee	N. Osborn	Goose and Silver lakes	6,000
Livingston	Halsted Gregory	Joslin, Linden and Williams lakes	6,000
Lapeer	J. C. Decker	Mill pond at Flint	8,000
Lapeer	A. Killrage	Not reported	6,000
Oakland	E. A. Botsford	Not reported	10,000
Oakland	Martin Brineger	Tan lake	5,000
Oakland	John Day	Not reported	10,000
Oakland	Giles Ross	Not reported	6,000
Oakland	R. Cuff	White lake	7,000
St. Joseph	Fred. Hull	Not reported	20,000
Saginaw	H. B. Roney	Crooked lake	7,000
Shiawassee	J. E. Martin	Mill pond at Byron	10,000
Van Buren	E. Pardee	Round lake	10,000
Van Buren	A. H. Young	Rush lake	10,000
Van Buren	Geo. Foster	Bangor mill pond	10,000
		Detroit river (estimated)	50,000
Total			390,000

(*Cyprinus carpia.*)

TABLE E.—Showing the distribution of Carp for the year 1881.

Name of Party.	P. O. Address.	No. of Fish.
Charles Motz	Berrien Springs	7
Robert Walton	Niles	7
A. Garwood, M. D	Cassopolis	7
Willard Wells	Glenwood	6
*B. Ames	Pokagon	22
B. Hoover	Pokagon	7
*Halsted Gregory	Unadilla	100
*Charles G. Jewett	Howell	60
*P. L. Reed	Howell	40
*N. A. Osgood	Battle Creek	100
*F. Laberteaux	Marshall	100
H. T. Wing	Mendon	111
*M. Badger	Kalamazoo	126
Dr. James	Kalamazoo	20
*Wm. H. White	Allegan	70
Dr. Upjohn	Kalamazoo	12
*E. R. Miller	Richland	158
*S. C. Ford, M. D	Cedar Springs	40
*J. G. Portman	Paris	20
*J. G. Portman	Paris	20
*M. Whitcomb	Pinckney	20
*Station agent	Notawa	20
C. F. Holt	Cascade	12
J. Tuttle	Niles	8
Total		1,093

*Planted in public waters.

(*Salmo fontainalis.*)

TABLE F.—Showing the Plant of Brook Trout for 1882.

County.	Place Where.	By Whom.	Date.	No. of Fish.
Cheboygan	Niger creek	C. Ogden	April 25	6,000
Cheboygan	Stewart's creek	C. Ogden	April 25	4,000
Charlevoix	Bear creek	C. Ogden	April 20	20,000
Emmet	Town Line creek	C. Ogden	April 21	3,000
Emmet	Green creek	C. Ogden	April 21	2,000
Emmet	Two-Mile creek	C. Ogden	April 21	5,000
Ionia	Worden's brook	C. Chadwick	Feb. 24	3,000
Ionia	Miller's brook	C. Chadwick	Feb. 24	3,000
Kent	Big brook	D. E. Hill	Feb. 14	6,000
Kent	Burn creek	D. E. Hill	Feb. 14	6,000
Kent	Leach creek	D. E. Hill	Feb. 14	6,000
Kent	Unknown streams	H. W. Davis	Feb. 14	10,000
Kent	Burk creek	Taggart & Walcott	March 1	6,000
Kent	Name not given	Gardner Post	March 5	3,000
Kent	Dargie's brook	A. Dargie	March 5	1,000
Kalamazoo	Axtell's brook	R. A. Axtell	March 1	3,000
Kalamazoo	Frake's brook	L. Portman	March 5	3,000
Livingston	Branch Shiawassee river	J. Holt	April 25	3,000
Livingston	Dibble creek	J. Dibble	April 25	3,000
Livingston	Not reported	H. Gregory	April 25	6,000
Lake	Sweetwater creek	H. B. Roney	March 8	1,000
Lake	Marquette river	H. B. Roney	March 8	1,000
Lake	Kinney's creek	H. B. Roney	March 8	2,000
Lake	Branch creek	H. B. Roney	March 8	1,000
Mecosta	Big Buck Horn creek	J. G. Portman	March 28	10,000
Mecosta	Little Buck Horn creek	J. G. Portman	March 28	10,000
Mecosta	Cheeney creek	J. G. Portman	March 28	20,000
Mecosta	Head waters Pine river	J. G. Portman	April 20	8,000
Ottawa	Little Sand creek	H. W. Davis	Feb. 14	3,000
Ogemaw	Tributary to Rifle river	Otto Krebs	April 24	3,000
Osceola	Cat creek	H. B. Roney	March 8	1,500
Osceola	Thorn creek	H. B. Roney	March 8	1,500
Osceola	Chippewa river	H. B. Roney	March 8	2,000
Osceola	Roney lake	H. B. Roney	March 8	1,000
Saginaw	Swan creek	H. B. Roney	March 8	4,000
Wexford	Finch creek	C. Ogden	Feb. 10	4,000
Wexford	Newton creek	C. Ogden	Feb. 10	4,000
Total				251,000

Twenty-five thousand were retained at the hatchery to rear into spawners.

Schoodic Salmon.

TABLE G.—Showing the Plant for 1882.

Where Deposited.	By Whom Deposited.	No. of Fish.
Torch lake	J. G. Portman	8,500
Bear lake	J. M. Metheany	1,000
Pentwater river	E. D. Richmond	1,500
Pond of Sanborn	C. Ogden	2,000
Cheeney creek	L. Portman	517
Total		13,517

WHITEFISH (*Corregonus albus*).

TABLE H.—Showing the Plant for 1882.

Date.	Where Deposited.	No. of Fish.
March 16	Detroit river	600,000
March 20	Detroit river	500,000
March 20	Grand Haven	1,500,000
March 22	Detroit river	500,000
March 23	St. Joseph	750,000
March 23	South Haven	750,000
March 25	Detroit river	600,000
March 28	Lake St. Clair	2,800,000
March 29	Detroit river	800,000
March 30	Detroit river	600,000
March 31	Detroit river	600,000
April 1	Detroit river	500,000
April 1	Alpena	400,000
April 1	Detroit river	500,000
April 3	Detroit river	500,000
April 4	Cheboygan	1,600,000
April 5	Detroit river	400,000
April 7	Petoskey	1,500,000
April 11	Alpena	1,600,000
April 18	Detroit river	870,000
April 18	Whitfish lake, Kent county	300,000
Total		18,170,000

PICKEREL (*Stizostethium vitrium*).

TABLE I.—Showing the plant of 1882.

Where Deposited.	Date.	No. of Fish.
Quincy lake	June 1	200,000
Devil and Round lakes	June 1	200,000
Walnut lake	June 1	200,000
Island lake	June 2	150,000
Iosco lake	June 3	30,000
Clam lake	June 3	200,000
Lyon lake	June 6	40,000
Grass lake	June 6	20,000
Gull lake	June 6	60,000
Long lake	June 6	20,000
Total		1,120,000

THE MICHIGAN STATE BOARD OF FISH COMMISSIONERS.

The Board of Commissioners adopt the following regulations to complete their organization, and systematize the work of the Commission.

1. At the first meeting in each year the Board shall elect one member President, appoint a Secretary, a Superintendent and an Overseer of the Paris Hatching Station, and any other employes needed.

2. The President to be the executive officer of the Board, and with assent of the Board to apportion the details of work to single members as Committees.

3. The Secretary to keep full records of meetings and transactions of the Board, to conduct, file and keep correspondence and reports, to sign all vouchers for drawing appropriations and keep accounts of all receipts and disbursements, and under direction of the Board to compile the annual, or biennial, reports to the Governor or Legislature. All letters received to be kept in suitable files to be provided; copies of letters written, and accounts, to be copied in proper books to be provided.

All records, files, account books and reports to the Board, deeds, contracts and vouchers coming to the Secretary's hands, to be the property of the Board, open to inspection by the Board and Superintendent and to be surrendered to the Board, or its agent, upon demand and upon a proper receipt being given.

The Secretary to receive a monthly salary to be fixed by the Board.

4. The Superintendent to have general supervision of the practical and experimental work of the Commission under the general direction of the Board, or in the absence of direction by the Board, under any members of the Board having charge of any particular branch of the business as a Committee of the Board, with headquarters in Detroit; to have special charge of the whitefish work, and all other work undertaken at Detroit.

The Superintendent to receive a monthly salary to be fixed by the Board.

5. The Overseer of the Paris Hatching Station, under the general direction of the Superintendent, to reside and conduct the operations at the Paris Station, that being designated as the headquarters of the brook trout, California trout, salmon trout, and grayling work of the Commission. To receive a monthly salary to be fixed by the Board.

6. The Superintendent, and the Overseer of Paris Hatching Station, each to have one regular assistant. To see that regular notes or memoranda are kept of all operations conducted at their special stations, or of special work done by them or under their direction, and reports are made monthly, or quarterly, to the Secretary. To make and keep accurate minutes of all property, apparatus and tools, and furnish copies of the same to the Secretary once a year, or when called for.

7. All appointees of the Board to give and receive one month's notice to quit: Except that for insubordination, intemperance, or gross neglect of duty they may be discharged at any time by the Superintendent, or the person who employed them. Extra help to be governed by the terms of their employment as to its duration. This regulation shall be deemed an essential part of each contract for employment.

8. There shall be two members of the Board appointed as a Committee of Audit. They, or one of them, shall countersign all vouchers before any money is drawn on appropriations. The Superintendent, or any member of the Board, having bills to be audited, shall present them to the Secretary in order that an accurate copy of the same may be made by him, and obtain his endorsement that the bill has been examined and entered; when the voucher has been been endorsed by the Secretary, the same shall be countersigned by either commissioner on the Committee of Audit, and when so countersigned shall be deemed a sufficient voucher, under the law, upon which to obtain the warrant of the Auditor General, and as the voucher of the State Board of Fish Commissioners. A copy of this regulation shall be furnished to the Auditor General.

Adopted, March 29th, 1883.

The Board, as at present organized, consists of—

JOEL C. PARKER, *President*,
Grand Rapids.

ANDREW J. KELLOGG,
JOHN H. BISSELL,
Detroit,
Commissioners.

HERSCHEL WHITAKER, *Secretary*,
Detroit.

OREN M. CHASE, *Superintendent*,
Detroit.

J. H. Bruce ..... Garrard County.
T. T. Garrard ..... Clay County.
W. C. Allen ..... Bath County.

Maine.

E. M. Stilwell ..... Bangor.
Henry O. Stanley ..... Dixfield.

Maryland.

T. B. Ferguson ..... Baltimore.
P. W. Downes ..... Denton.

Massachusetts.

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

Michigan.

Eli R. Miller ..... Richland.
Andrew J. Kellogg ..... Detroit.
George Clark ..... Ecorse.

Minnesota.

R. O. Sweeny ..... St. Paul.
William Golcher ..... St. Paul.
Robert Ormsby .....

New Hampshire.

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

New Jersey.

B. P. Howell ..... Woodbury.
J. R. Shotwell ..... Rahway.
G. A. Anderson ..... Trenton.

New York.

Horatio Seymour ..... Utica.
Edward M. Smith ..... Rochester.
Robert B. Roosevelt ..... New York City.

Ohio.

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

Pennsylvania.

B. L. Hewitt ..... Hollidaysburg.
Howard J. Reeder ..... Easton.
James Duffy ..... Marietta.

Rhode Island.

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

Utah Territory.

A. P. Rockwood ..... Salt Lake City.

Vermont.

W. H. Lord ..... Montpelier.
M. Goldsmith ..... Rutland.

Virginia.

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

Wisconsin.

Gov. Harrison Ludington, *ex officio* ..... Milwaukee.
William Welch ..... Madison.
A. Palmer ..... Boscobel.
P. R. Hoy ..... Racine.
A. F. Dousman ..... Waterville.