

SEVENTH BIENNIAL REPORT

OF THE

STATE FISH COMMISSION

OF

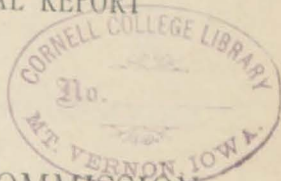
IOWA,

For the Years 1885-86 and 1886-87.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

DES MOINES:

GEO. E. ROBERTS, STATE PRINTER.  
1887.



## REPORT OF STATE FISH COMMISSION.

*To his Excellency, WILLIAM LARRABEE, Governor of Iowa:*

In compliance with the act of the Nineteenth General Assembly I herewith submit my report of the operations of the Fish Commission of the State of Iowa, from July 1, 1885, to June 30, 1887, the same being the Seventh Biennial Report.

The removal of the State fish hatchery from Anamossa, Jones county, to Spirit Lake, as provided by the acts of the Twenty-first General Assembly, was a matter of no small amount. It required much labor and quite a considerable expense.

The hatchery in Jones county was, with the exception of a small office, getting old, and some of the timbers were badly decayed. I found that the expense of tearing down and removing would cost more than the material would be worth when laid down at Spirit Lake. Consequently no effort was made to remove any of the buildings. As the season was so far advanced before new ponds could be constructed to receive the fish, they were kept in the ponds in Jones county until fall.

Among the fish on hand at the time I took charge of the affairs pertaining to the Commission, was a fine stock of carp, one and two years old; two or three ponds of adult Lake and Rainbow trout; several thousand Lake trout fry, and few Brook trout; also some ornamental fish, such as Gold fish and Golden Ides.

All the movable property was taken to Spirit Lake as soon as a suitable place could be provided for its reception. Later in the season, when the weather was sufficiently cool to warrant the attempt, all the carp and young trout, together with the Gold fish and Golden Ides, were placed in the newly completed ponds, located on the "Isthmus" located between Spirit and East Okoboji lakes. A location which for the propagation and culture of our native fishes could hardly be equaled at any other point in the State.

For this location we are indebted to the Spirit Lake Hotel and

Transportation Company, owning and operating the famous Hotel Orleans, located on the south shore of Spirit Lake.

We have a fine location, convenient to railroads, comprising a tract of about four acres, extending from the railroad right of way along the outlet of Spirit Lake to the north shore of East Okoboji lake.

Although not giving quite the necessary fall for complete drainage of our winter ponds, it is sufficient for all practical purposes. The water not being such as was necessary for preserves for the Brook and Mountain trout, I considered it as entirely useless to incur the great expense necessary to move them to Spirit Lake, and they were allowed to remain in the ponds, and passed into the hands of Messrs. Shaw & Niles, the purchasers of the Jones county property.

The old site, although consisting of some twenty acres, was so broken as not to be of any particular value to any one, except adjacent property owners for pasture land, or to some one desiring to engage in trout culture.

The property being so isolated that it was found to be of little commercial value. After advertising thoroughly for bids in the Anamosa papers, and the Cedar Rapids Republican, it was sold to the highest bidder for \$320.

Although we are not able to have such fine trout preserves, on account of the temperature of the lake water during the summer months, we have an abundance of good, pure water, and can hatch and supply, to those portions of Iowa having trout streams, the fry, as well from the present hatchery as from the old ones.

Superintendent C. G. Atkins, of the Government Hatchery Station at Grand Lake Stream, pronounces such source of water supply second to none for hatching purposes.

At our Spirit Lake location we now have a series of ponds, eight in number, in excellent condition and entirely free from danger of overflow, that constantly threatened the destruction of ponds and loss of fish at Anamosa, an event that happened at least twice during the occupancy of that location.

With little expense we can construct fine breeding ponds for carp, black bass, and such other native fishes as we desire to propagate.

We have abundant opportunities for taking the spawn of the wall-eyed pike, as they run up the stream that forms the outside boundary of our grounds in vast numbers during their spawning season.

Owing to the numerous duties devolving upon me during the summer of 1886, connected with the moving of the Jones county plant,

the constructing of new ponds, laying of water mains and attending the calls to look after violators of the law, I was unable to complete the new hatching house until the spring of 1887, and then not in season to take pike eggs.

In the fall of 1886 I secured the use of the old hatchery formerly rented by the State of Mr. A. A. Mosher, at the extremely low figure of \$5 per month.

On account of disuse for so long a period, I found this house in rather bad condition and did not consider it advisable to purchase eggs of any kind, but succeeded in hatching such eggs as were gratuitously furnished the State by the United States Commissioner. Had I not been so much embarrassed for funds, on account of the great expense in moving and relocating our State hatchery, I should have endeavored to obtain a supply of brook trout eggs, in order to have aided in restocking the trout streams of northeastern Iowa. I have not visited any of these streams, but am assured by reliable residents that such streams as were stocked by Commissioners Shaw and Aldrich are now teeming with fine trout.

Iowa has not many trout streams, but has some that are as good as the best, and should have a liberal supply next season.

Our new hatchery is a commodious building of 20 x 40 feet, with 12-foot posts and a stone basement wall of 4½ feet laid in water lime and having a good, durable cement floor. The hatching floor is of the full size of the building, and is of ample room for any future work that we are liable to do. It is a well-lighted, convenient room, and is in its construction much more durable than the old one. The upper floor is at present used as a store room, but could be fitted for living room without great expense. This store room was much needed, as the miscellaneous appurtenances were strewn about in great confusion and were rapidly becoming demoralized, more from ill usage than from actual wear.

The conduit pipe laid from the upper end of the pond to the lake shore, a distance of about 500 feet, is of 8-inch glazed sewer pipe and the joints all cemented with Portland cement. The trenching for and laying of this pipe was the most difficult undertaking of the new work, as it had to be laid below the frost line and a tunnel had to be driven under the heavy railroad embankment.

The average depth of the trench was about 7 feet, and this being below the water level in Spirit Lake, we were very much inconveni-



enced by water filling in, so that much of the pipe had to be laid under water.

From the lake shore end of our supply pipe we extended a plank box tubing 200 feet into Spirit Lake, to insure pure cold water. This tubing was necessarily cribbed at intervals of 50 feet, in order to hold it firmly in position.

The overflow from our pond is piped directly into the outlet of Spirit Lake, that marks our western boundary, and is only about 30 feet distant from the ponds.

Much of this work, such as hauling of sand, stone, lumber and cement, and even to the moving of the dirt from the excavations for ponds and hatchery, was done by myself and assistant.

We need several good breeding ponds for bass and carp, which can be constructed at small expense, as they are not required of any great depth. But we must have the room to handle bass of the various varieties, such as the large and small-mouth black bass, silver and calico bass, in order to materially aid in the work of replenishing our streams, any of which are admirably adapted to all these varieties.

Spirit and Okoboji Lakes, that were stocked by Commissioner Shaw with silver bass several years ago, are now literally alive with them. Quite a number of this variety (*Roccus chrysops*) were taken this season, weighing from three to four pounds. Our people very highly prize them, and their gaminess makes them much sought after by experts with the rod and reel.

Their extreme hardness and their ability to combat even with the much maligned pickerel, make them a valuable acquisition to our inland waters. With one or two more breeding ponds for carp, we will be enabled to supply the total demand of our State for stocking ponds, and the demands are quite numerous; the number supplied in 1886 by the United States Commissioner, through the Iowa Commissioner, being about 350, besides many that were supplied direct from the ponds at Washington.

I would not recommend any further expense of experimenting in stocking our lakes and streams with white fish, lake trout, salmon and other varieties, such as have been so extensively distributed throughout the State. No good results can reasonably be expected of putting such fish in many of the shallow lakes that have been so stocked, and no such results have been observed, for with the exception of brook trout planted in the natural brook trout streams in northeastern Iowa, no reports have been received concerning the

millions of fry planted, with perhaps the exception of a few white fish taken from West Okoboji Lake, and this lake is an exception in the Iowa lake system as to the depth and purity of its water.

The almost unprecedented dry season of 1886 was very discouraging to the multitude throughout the State just making a start in fish culture. Many ponds dried up entirely, and many others were so low that, if not frozen to the bottom during the following winter, the fish were so closely confined that they perished from suffocation. Even in some of our moderate sized lakes fish died and were washed upon the shore in such quantities that the stench was intolerable.

These same lakes and ponds have for many years afforded not only an immeasurable fund of sport, but an abundance of good food-fish; and it should be among the first efforts of the Commission, as soon as they regain their usual stage of water, to restock them with native fishes, such as have proven best adapted to their respective waters. It is hardly probable that a repetition of such a series of dry seasons as 1886 and 1887 will occur for many years.

The Commission has constant demands for native fish for the purpose of restocking of such ponds and lakes, and were we in possession of funds sufficient we could supply all demands, by seining the bayous and shoal ponds along our border rivers. These shoal places are formed by the filling up of the old river beds and smaller depressions during the spring freshets, and on the receding of the waters leaving many spawners of different varieties imprisoned. These ponds are good breeding grounds and the fall finds them alive with small fry that must surely perish before spring. Commissioner Shaw reports the seining of and transplanting of millions of fry from such waters to inland streams and lakes. His work in this line was highly commended by our neighboring Commissioners and all other persons that have taken pains to investigate the work done in this line.

I do not think Mr. Shaw's work was appreciated by the public, for millions of our choicest fish are annually bred in these ponds, and in fact many times the amount that we can hope to propagate at our hatchery, and at an expense of but a few hundred dollars annually they could be transplanted to the head waters of our streams and thus distributed throughout the State.

## NECESSARY APPROPRIATIONS.

## BREEDING PONDS.

There should be appropriated, in order to systematically carry on the work of the Commission, \$500 for the construction of a system of breeding ponds. By having ample pond room there is no reason why we cannot have thousands of bass of the several varieties for distribution each season.

## HATCHING HOUSE.

Two hundred and fifty dollars to complete the hatching house. It should be thoroughly painted, and we need an office partitioned off on the upper floor. The hatching room should be ceiled, as in its present condition it will be very uncomfortable attending to necessary work during the severe cold weather.

## ENFORCEMENT OF FISH LAW.

If the Commission follows up the customary work of ferreting out and prosecuting the violators of our fish laws the expense, including railroad fare, will be heavy and will demand an appropriation of not less than \$1,000 per annum.

## NECESSARY HELP.

It is also unavoidable that the Commissioner have in his employ some person capable of attending to all work pertaining to the hatchery and looking after the fish in the preserves during his absence. This cannot be done with less than \$40 per month.

## INCIDENTAL EXPENSES.

The incidental expenses of the distribution of fish, the purchase of fish eggs, repairs and numerous minor expenses will require not less than \$1,000 per annum.

I would estimate that not less than \$6,000 will be necessary for the expenses of the next biennial period, including the needed improvements.

It is poor economy to have the appropriations so limited that whatever is to be undertaken cannot be well done.

There are few among the many commissions of the United States that are limited to a less amount, and many have a much larger sum besides having two or more members on their commission.

On account of the abolishing of the office of Assistant Commissioner all duties pertaining to the Commission devolve upon one man, and all assistance that he may require has to be paid out of the biennial appropriation, making quite a draft on funds that have hitherto been applied to minor expenses.

The work of enforcing the laws for the protection of fish, so vigorously and fearlessly performed by Mr. Aldrich during his last year was fruitful of much good, and yet only more clearly demonstrates how lightly a certain element in our great commonwealth looks upon this class of laws.

Men that consider themselves law abiding citizens and that are above reproach in all social and business relations appear to totally ignore and must heedlessly violate these laws relating to the protection of game and fish, and for mere sport trespass upon the public rights. The fact that certain laws do not meet with their approval, or that the ownership is vested in the people, does not warrant such conduct, and they should more seriously consider the example that they set. Surely the fact that this class violate the laws for sport and another for pecuniary reasons does not lessen the responsibility resting upon them as citizens.

We have another element in almost every county in Iowa that defies the law, and defies it in a manner that makes it not only exceedingly unpleasant for the neighborhood but dangerous to any one that has the courage to say "stop," or the manhood to file information before some peace officer and insist on the enforcement of the law.

Such do we find the case to be throughout the State. Here a clique of men, who, if not openly, do secretly and at night continually strive to make a livelihood by seining, dynamiting or trapping fish, and this work, interspersed by petty thieving meantime, muttering threats of shooting, barn burning, etc., if interfered with. The Fish Commissioner is then called upon to ferret out and prosecute these violators.

This business must, if followed up, occupy much time and incur considerable expense. When such offenders are brought to justice, many good, upright citizens and business men come to us and say, "Now, don't use our names in connection with this matter, for it will



hurt our business;" or, "that the guilty party is a neighbor;" or that they fear personal violence.

On the other hand we meet many who see the necessity of extending to the Fish Commission their faithful co-operation and good will if any effective results are to be achieved by its efforts in suppressing such unlawful work. And it must be suppressed if the work of restocking Iowa's waters by the Commission is successful, for the constant dredging of our streams and lakes by the various methods employed by these violators will exhaust the supply faster than any Commission can ever hope to replenish. This matter should have the serious attention of all those who think the cause worthy of public support. These things are spoken of to show to those who think the Commission lukeworm in attending to the interests of the people what we have to contend with.

The expense of such work is necessarily heavy, and during the last year I have been obliged, on account of a shortage of funds, to refer many parties making complaints of open violations of the law to the county attorneys of their respective counties, trusting that they would give the matter such attention as the case may require.

#### FISH AND GAME CLUBS.

The numerous fish and game clubs throughout the country are doing good work and are really the most effective assistance we can hope for. The guilty ones fear them and are very careful how they operate in the vicinity of any of these clubs. In quite a number of instances they offer a reward for such information as results in conviction. Thus making it of some pecuniary object for the police and detective forces of our cities and towns to make special efforts to apprehend this class of law breakers.

It is made the duty of all members to report any violations coming under their observation to the secretary of the club and his duty to file information before some peace officer. In most instances the club membership includes one or more attorneys who most generously offer their professional services to prosecute any cases started through the instrumentality of their associations.

#### NEEDED LEGISLATION.

None but those who have had occasion to study our fish laws in detail are aware of the great necessity for further legislation in this line.

The present law forbidding the taking of fish "by spearing with gaff, spear or other devise any fish from any of the *permanent lakes or ponds or inlets or outlets thereto* within the State of Iowa between the first day of November and the thirty-first day of May following," should cover all Iowa waters.

The spearing of fish in the mill ponds and deep pools throughout the length of our principal rivers is carried on to quite an extent and is in the eyes of all those interested in the preservation of our food fishes an exceedingly important item that needs looking after. I have received many communications from all parts of the State relating to the work.

The numerous complaints by the press during the winter and spring of 1887 show in what light they look upon this method of destruction.

The proof of parties using seines or nets should be evidence sufficient to convict for violations of the clause prohibiting the taking of fish by seines or nets. People do not *own* and *use* seines without the intent of taking fish.

#### THE USE OF DYNAMITE.

The killing of fish by the use of dynamite is perhaps the most wanton destruction known. During such exceedingly dry seasons as we have had in 1886-7, when our streams are reduced in some instances to a mere succession of pools, connected by a small stream easily stepped across, malicious persons have followed up and down these water courses exploding dynamite cartridges in these deep pools killing everything—both great and small—fish that are marketable and those out of season and totally unfit for use—culling the good ones out and allowing all others to lie and rot on the banks.

Our State Board of Health appealed to me in one instance to suppress this *supposed violation* of the law. I took pains to investigate the matter to satisfy myself whether it was the work of dynamite or not and found parties that witnessed the work, and that had reported the result to Dr. Kennedy but we are powerless under the statutes.

#### CARP AND CARP CULTURE IN IOWA.

There seems to be quite a diversity of opinion as to the value of the carp as a food fish even among those who have spent much time and expense in their culture.

We have, in my opinion, fish of better quality among the native fishes of Iowa, but their rapidity of growth and apparent hardness under conditions necessarily fatal to many of our natives commend them to all people embarking in fish culture.

With but few exceptions under my observation in our State, they are raised in ponds of sluggish, impure water, and any person expecting to take fine flavored, firm-fleshed fish from such waters will continue to be disappointed as to their edible qualities. Simply because they are of such hardy nature that they will thrive and multiply in such water does follow that such ponds are necessary for successful carp culture. The idea so prevalent throughout the country that carp can be reared in any sort of a pond is a mistaken one and many people have been deluded by this notion and have made application for and received the necessary supply of carp for a fair start in the business, deposited them in their supposed model ponds never to see them again.

Among the many causes of this seemingly mysterious disappearance are:

*First.* Enemies that their ponds contain that are certain destruction to the young fry such as turtles, water-snakes and fish of predatory nature.

*Second.* Ponds so shallow in their deepest parts that if not freezing entirely to the bottom, all fish smother in what little foul water remains.

*Third.* Surface drainage from some field fertilized with compost that is fatal to them, and not unfrequent are ponds constructed across a draw or ravine that in ordinary weather supplies only a small quantity of water, but, at times of heavy rains are subject to moderate floods and the screens constructed to restrain the fish are either overrun or swept away together with all the fish.

It is much better to build ponds at one side of the natural water course so that at times of having freshets the surplus water can pass without injury to the embankments.

A part of the flow sufficient for all purposes can be conveyed into such ponds by tapping the stream at a sufficient distance above to gain the required head to fill the ponds.

Ponds constructed by draining small creeks or spring runs are treacherous affairs and are not to be relied upon for fish ponds.

Quite a number of Iowa farmers are this season putting their carp

on the market and finding ready sale at good prices, and I hope soon to see many more doing so.

But many will find that if they desire a really marketable fish from their carp ponds that they must either supply them with purer water or have a market pond in which to confine such as they intend to market for a few weeks prior to marketing them, in order to remove the muddy flavor.

The best of our game fishes if they would survive at all in some of these slimy water-holes called fish ponds, would soon become as fully permeated with the mud flavor as the carp.

M. Y. McMaster, of Postville, Iowa, received in 1883, through the Iowa Fish Commission twenty carp, and has made answer to a series of questions propounded, which I will insert for the benefit of the public.

What is the size and depth of your carp pond?

Answer. One acre and six feet deep.

What is your water supply?

Answer. A spring flowing nine gallons per minute.

Have you any other fish in the pond with them?

Answer. No.

When did you receive your first stock?

Answer. April, 1883.

What has been your success?

Answer. Perfect.

How many have you sold?

Answer. Since April, 1887, one thousand.

How many have you on hand now?

Answer. Several hundred thousand.

Do you feed them, and if so, what?

Answer. I only feed them for experiment. Corn-meal is the most satisfactory.

Do you find them a good food fish?

Answer. Yes, first class.

In order to successfully use spring water of so ample a flow as Mr. McMaster uses, the pond must be large and should be quite shallow in a greater part of it in order to have the water warm up to a temperature agreeable to their nature and habits.

One other instance of practical carp culture under entirely different



conditions will perhaps be of interest to those making preparations for experiment in this line.

S. W. Coffin, of Fairfield, Iowa, makes the following statement:

I received three mirror carp, June 17, 1882. Have four ponds of one-fourth acre each from one to six feet deep; clay bottom. All artificial ponds. These ponds can be drained by the use of the syphon. No other fish are allowed in the ponds. There is no water flowing through these ponds and they are supplied by rain fall only. The water becomes very warm in the summer and freezes one-half to two feet deep in the winter.

White water lillies are the principal plants growing in my ponds. I keep the ponds free from water-snakes, turtles, etc., so far as is possible. I feed my carp three times each week on corn-meal mush.

My carp spawned first at three years old, and have produced many thousands. I have sold thousands for stocking ponds and have many thousands on hand.

Those now on hand will measure from three to twenty-eight inches long and weigh as high as sixteen pounds. We eat them principally in the spring and they are of *good* edible quality.

The chief difficulty in Mr. Coffin's experience has been to keep them from suffocating under the ice.

Here we have two extreme cases, the first a bountiful supply of cold spring-water, located in the northern tier of counties in Iowa, and the other not having any regular flow of water through the ponds and located in next to the southern tier of counties in the State. Both parties report the best of results and unstinted praise as to their edible qualities.

These are certainly most encouraging reports, and present no complication not readily overcome by almost any farmer in Iowa.

The flowing wells can almost be counted by the hundreds, and any of these will furnish a series of ponds capable, not only of furnishing the owners with an abundant supply of fish at a very small expense, but will furnish them in quantities sufficient to repay them for all outlay, say nothing of the pleasure derived from having such a recourse of amusement under their own control.

Springs and creeks can also be utilized for the same purpose, and even a good well of water, with wind mill power for pumping can be used for a two fold purpose.

Wesley Belknap, of Goldfield, Iowa, has a pond of several acres supplied by an artesian well that affords him much profit not only

from the fish but from the quantities of ice annually cut from its surface.

Charles H. Watkins, of Story City, also has a fine pond on the highest part of his farm, built by throwing up an embankment enclosing about forty acres, supplied by a flowing well.

The water of both of these wells is quite highly impregnated with mineral, but not withstanding this they have an abundance of fine fish of several kinds.

C. Getchel, of Meriden, Cherokee county, has five acres in ponds, supplied by a number of springs.

He states that his family consumes about 800 pounds annually, and that at one time during the season of 1886 he sold over \$30 worth of fish; people coming to his farm for them. Many more instances could be cited where individuals have been very successful in fish culture in Iowa.

I trust that the Commission will be placed on such financial footing next season as to be able to assist all persons applying for assistance in stocking ponds, and to be prepared to plant many thousands of all the most valuable kinds of native fish in Iowa lakes and streams.

The following letter from the U. S. Fish Commissioner will explain why some of the applicants for carp in 1886 were disappointed in not receiving the carp applied for.

U. S. COMMISSION OF FISH AND FISHERIES,  
WASHINGTON, D. C., December 1, 1886. }

E. D. CARLTON, *Commissioner, Spirit Lake, Iowa.*

DEAR SIR: It is with great regret that we find ourselves unable to comply with your request for an additional supply of carp for the public purposes of your State, this, in consequence of the scanty crop of the fish—scarcely one-third of which had been expected from the experience of previous seasons. You are perhaps aware that the U. S. Carp Ponds are situated on the edge of the Potomac River, adjacent to the so-called flats, which have been in process of reclamation, under the direction of the general government, for some considerable time. During the past year the work of reclamation has been extended to the edge of the ponds, and the filling in all around them has completely obstructed their outlet to the Potomac; consequently, instead of being able to drain off the ponds in the early spring and fall, and thus get rid of all the injurious fish that make their way into them, we were obliged to keep them in their present condition until lately, when they were pumped out. We then learned that many thousands of perch, sunfish, eels, etc.—greater in number than carp themselves—were existing in the ponds. An application has been made to Con-



gress for an appropriation to construct an outlet that will fully restore the ponds to their original condition, and enable us to keep them as they should be kept. This we hope to obtain. We shall then put in a culvert as soon as the pasty mud has hardened sufficiently to excavate it.

Yours truly,

S. F. BAIRD, *Commissioner*.

### FISH COMMISSIONERS.

List of Fish Commissioners and officers of United States and Canada:

#### THE UNITED STATES—

G. Brown Goode..... Washington, D. C.

#### ALABAMA—

Col. D. R. Hundley..... Madison.

Hon. Charles S. G. Doster..... Prattville.

#### ARIZONA—

J. J. Gosper ..... Prescott.

Richard Rule..... Tombstone.

J. H. Taggart, business manager ..... Yuma.

#### ARKANSAS—

James H. Hornibrook..... Little Rock.

H. H. Rottaken..... Little Rock.

[These were the officers last year; we have not been able to get replies from them.]

#### CALIFORNIA—

R. H. Buckingham, president..... Sacramento.

Hon. A. B. Dibble, secretary and treasurer..... Grass Valley.

Thomas J. Sherwood..... Marysville.

#### CANADA—

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

#### PROVINCE OF NEW BRUNSWICK—

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

#### PROVINCE OF NOVA SCOTIA—

W. H. Rogers, inspector ..... Amherst.

A. C. Bertram, assistant inspector..... North Sydney.

#### PROVINCE OF PRINCE EDWARDS ISLAND—

J. H. Duvar, inspector..... Alberton.

#### PROVINCE OF QUEBEC—

W. Wakeham, inspector Lower, St. Lawrence and Gulf

Division..... Gaspi Basin.

#### PROVINCE OF BRITISH COLUMBIA—

Thos. Morrat, acting inspector..... New Westminster.

#### PROVINCE OF MANITOBA AND NORTHERN TERRITORIES—

Alex. McQueen, inspector..... Winnipeg, Man.

S. Wilmot, superintendent of fish culture..... Newcastle, Ont.

#### COLORADO—

John Pierce ..... Denver.

## CONNECTICUT—

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

## DELAWARE—

Enoch Moore.....Wilmington.

## GEORGIA—

Hon. J. T. Henderson, Commissioner of Agriculture.....Atlanta.  
Dr. H. H. Cary, Superintendent of Fisheries.....LaGrange.  
[Under the laws of the State these constitute the Board of Fish Commissioners.]

## ILLINOIS—

N. K. Fairbank, president.....Chicago.  
S. P. Bartlett, secretary.....Quincy.  
Major George Breuninger.....Centralia.

## INDIANA—

Enos B. Reed.....Indianapolis.

## IOWA—

E. D. Carlton.....Spirit Lake.

## KANSAS—

S. Fee.....Wamego, Pottawattamie county.

## KENTUCKY—

Wm. Griffith, president.....Louisville.  
P. H. Darby.....Princeton.  
John B. Walker.....Madisonville.  
Hon. C. J. Walton.....Mumfordsville.  
Hon. John A. Steele.....Midway.  
W. C. Price.....Danville.  
Dr. W. Van Antwerp.....Mt. Sterling.  
Hon. J. M. Chambers.....Independence, Kenton county.  
A. H. Goble.....Catlettsburg.  
J. H. Mallory.....Bowling Green.

## MAINE—

E. M. Stillwell... { Commissioners of }.....Bangor.  
Henry O. Stanley. { Fish and Game. }.....Dixfield.  
B. W. Counce, Commissioner of Sea and Shore Fisheries...Thomaston.

## MARYLAND—

G. W. Delawder.....Oakland.  
Dr. E. W. Humphries.....Salisbury.

## MASSACHUSETTS—

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

## MICHIGAN—

Dr. J. C. Parker.....Grand Rapids.  
John H. Bissell.....Detroit.  
Herschel Whitaker.....Detroit.  
W. D. Marks, superintendent.....Paris.  
A. J. Kellogg, secretary.....Detroit.

## MINNESOTA—

First District—Daniel Cameron.....LaCrescent.  
Second District—Wm. M. Sweeney, M. D.....Red Wing.  
Third District—Robert Ormsby Sweeney, president.....St. Paul.  
S. S. Watkins, superintendent.....Red Wing.

## MISSOURI—

J. G. W. Steedman.....2803 Pine street, St. Louis.  
Gen. J. L. Smith.....Jefferson City.  
H. M. Garliech.....St. Joseph.

## NEBRASKA—

W. L. May.....Fremont.  
R. R. Livingston.....Plattsmouth.  
B. E. B. Kennedy.....Omaha.

## NEVADA—

W. M. Cary.....Carson City.

## NEW HAMPSHIRE—

George W. Riddle.....Manchester.  
E. B. Hodge.....Plymouth.  
John H. Kimball.....Marlboro.  
E. B. Hodge, superintendent.....Plymouth.

## NEW JERSEY—

Richard S. Jenkins.....Camden.  
William Wright.....Newark.  
F. M. Ward.....Newton.

## NEW YORK—

Hon. R. Barnwell Roosevelt, president.....17 Nassau St., New York.  
Gen. Richard U. Sherman, secretary.....New Hartford, Oneida County.  
Eugene G. Blackford.....Fulton Market, New York.  
William H. Bowman.....Rochester.  
(Superintendents—Seth Green, Rochester; Fred Mather, Cold Spring Harbor; Monroe A. Green, Munford, Monroe Co.; F. A. Walters, Bloomingdale, Essex Co.)  
Secretary—H. H. Thompson.....P. O. Box 25, New York City.

## NORTH CAROLINA—

(A note from Col. M. McGehee, Raleigh, the former Commissioner, under date of August 9, says: "There is no Fish Commissioner in the service of the State.")

## OHIO FISH AND GAME COMMISSION—

C. V. Osborn, president.....Dayton.  
A. C. Williams.....Chagrin Falls.  
Judge H. B. Ingalls.....Huntsville.  
John Hoffer.....Bellaire.  
C. W. Saddler.....Sandusky.



## PENNSYLVANIA—

John Gay, president.....Greensburg.  
H. H. Derr, secretary.....Wilkesbarre.  
Arthur Maginnis.....Swift Water, Monroe county.  
A. M. Spangler, Cor. Sec., 512 Commerce street.....Philadelphia.  
Aug. Duncan, treasurer.....Chambersburg.  
Charles Porter.....Corry.

## RHODE ISLAND—

John H. Barden.....Rockland.  
Harry T. Root.....Providence.  
William P. Morton.....Providence.

## SOUTH CAROLINA—

Hon. A. P. Butler.....Columbia.  
Commissioner of Agriculture.

## TENNESSEE—

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

## VERMONT—

Hiram A. Cutting.....Lunenburg.  
Herbert Brainerd.....St. Albans.

## VIRGINIA—

Col. Marshall McDonald.....Berryville.

## WASHINGTON TERRITORY—

Albert T. Stream.....North Cove, Pacific county.

## WEST VIRGINIA—

C. S. White, president.....Romney.  
W. A. Manning, secretary.....Talcott.  
F. J. Baxter, treasurer.....Braxton Court House.

## WISCONSIN—

The Governor, *ex-officio*.  
Philo Dunning, president.....Madison.  
C. L. Valentine, secretary and treasurer.....Janesville.  
J. V. Jones.....Oshkosh.  
A. V. H. Carpenter.....Milwaukee.  
Mark Douglas.....Melrose.  
Calvert Spensley.....Mineral Point.  
James Nevin, superintendent.....Madison.

## WYOMING TERRITORY—

Otto Gramm.....Laramie.  
[Dr. W. N. Hunt, Cheyenne, is Commissioner for Laramie county,  
and B. F. Northington, Rawlins, is Commissioner for Corbon county.]

## CARP DISTRIBUTION, 1886.

NAME.	POST-OFFICE.	Number.	COUNTY.
Valentine Fuller.....	Moravia.....	12	Appanoose.
C. H. Fuller.....	Moravia.....	12	Appanoose.
R. B. Arnold.....	Moravia.....	12	Appanoose.
P. B. Tuttle.....	Moravia.....	12	Appanoose.
Chas. E. Vrooman.....	Moravia.....	12	Appanoose.
E. M. Reynolds.....	Moravia.....	12	Appanoose.
W. G. Moore.....	Moravia.....	12	Appanoose.
S. M. Moore.....	Moravia.....	12	Appanoose.
A. J. Baker.....	Moravia.....	12	Appanoose.
C. H. Birkett.....	Moravia.....	12	Appanoose.
Phillip Ely.....	Moravia.....	12	Appanoose.
Francis M. Sharp.....	Moravia.....	12	Appanoose.
Wm. J. Taylor.....	Moulton.....	12	Appanoose.
J. P. Goodwin.....	Moulton.....	12	Appanoose.
James N. Swan.....	Plan.....	12	Appanoose.
Robert J. Johnson.....	Plan.....	12	Appanoose.
J. D. Lewis.....	Jackson.....	8	Adair.
T. L. Lewis.....	Jackson.....	8	Adair.
Wm. Sersmith.....	Greenfield.....	8	Adair.
Isaac A. Barton.....	Prescott.....	25	Adams.
John E. Baker.....	Waterloo.....	12	Black Hawk.
M. W. Taylor.....	Waterloo.....	12	Black Hawk.
John A. Goodell.....	Shellsburg.....	12	Benton.
Jonathan Donal.....	Shellsburg.....	12	Benton.
John W. Miller.....	Shellsburg.....	12	Benton.
Dennis R. Allen.....	Brandon.....	12	Buchanan.
Frank Bush.....	.....	.....	.....
James W. Williams.....	Greene.....	12	Butler.
Fred. Froelich.....	Beulah.....	12	Clayton.
Chas. Thompson.....	Strawberry Point.....	12	Clayton.
J. B. Uriell.....	Garnaville.....	12	Clayton.
N. S. Parmenter.....	Marcus.....	12	Cherokee.
Byron A. Belcher.....	Clarence.....	12	Cedar.
Frank L. Root.....	Clarence.....	12	Cedar.
Levi B. Root.....	Clarence.....	12	Cedar.
George E. Sly.....	Durant.....	12	Cedar.
Duane Zimmerman.....	Mechanicsville.....	12	Cedar.
O. M. Boree.....	Anita.....	12	Cass.
C. J. Beason.....	Anita.....	12	Cass.
Wm. Campbell.....	Anita.....	12	Cass.
John Book.....	Griswold.....	12	Cass.
August Browns.....	Murray.....	25	Clarke.
August Browns, Jr.....	Murray.....	25	Clarke.
Wm. Brockelsby.....	Vail.....	12	Crawford.
C. E. Price.....	Vail.....	12	Crawford.
Peter Kruse.....	Goose Lake.....	12	Clinton.
Frank P. Butterfield.....	De Witt.....	12	Clinton.
Thos. F. Butterfield.....	De Witt.....	12	Clinton.
Chas. A. Butterfield.....	De Witt.....	12	Clinton.
Dennis G. Butterfield.....	De Witt.....	12	Clinton.
Mary T. England.....	De Witt.....	12	Clinton.
J. O. Ferree.....	De Witt.....	12	Clinton.

## CARP DISTRIBUTION, 1886—CONTINUED.

NAME.	POST-OFFICE.	Number.	COUNTY.
Anna B. Ferree.....	De Witt.....	12	Clinton.
Sylvester Keeder.....	De Witt.....	12	Clinton.
Thomas Wilson.....	De Witt.....	12	Clinton.
Dan'l Langan.....	De Witt.....	12	Clinton.
Morell D. Evans.....	De Witt.....	12	Clinton.
Harrison Devire.....	De Witt.....	12	Clinton.
Wm. Henry Nash.....	Lohrville.....	12	Calhoun.
Wm. Henry Nash, Jr.....	Lohrville.....	12	Calhoun.
F. M. Gregory.....	Rock Falls.....	12	Cerro Gordo.
Frank Burk.....	Rock Falls.....	12	Cerro Gordo.
Cyrus Burk.....	Rock Falls.....	12	Cerro Gordo.
E. A. Brown.....	Rock Falls.....	12	Cerro Gordo.
Richard Moore.....	Rock Falls.....	12	Cerro Gordo.
W. I. Smith.....	Rock Falls.....	12	Cerro Gordo.
H. I. Smith.....	Mason City.....	12	Cerro Gordo.
C. H. McNider.....	Mason City.....	12	Cerro Gordo.
W. H. Shelton.....	Pulaski.....	12	Davis.
John Staller.....	Pulaski.....	12	Davis.
Scott Power.....	Pulaski.....	12	Davis.
Albert Power.....	Pulaski.....	12	Davis.
H. A. Wonn.....	Belknap.....	12	Davis.
John H. Sharron.....	Belknap.....	12	Davis.
J. C. Henderson.....	Belknap.....	12	Davis.
Wm. W. Rankin.....	Belknap.....	12	Davis.
Alfred W. Rankin.....	Belknap.....	12	Davis.
Albert Munn.....	Belknap.....	12	Davis.
John Nelson.....	Belknap.....	12	Davis.
F. W. Hesse.....	Stiles.....	12	Davis.
A. W. Hesse.....	Stiles.....	12	Davis.
Dr. T. B. Jennings.....	Drakeville.....	12	Davis.
James F. Stevens.....	Stilesville.....	12	Davis.
James W. Gore.....	Bloomfield.....	12	Davis.
C. S. Harvey.....	Delaware.....	15	Delaware.
M. T. Hunt.....	Delaware.....	15	Delaware.
Wm. H. Moore.....	Van Meter.....	12	Dallas.
C. H. Lyon.....	Dexter.....	12	Dallas.
Jas. Sheaffer.....	Adel.....	12	Dallas.
Martin Sheaffer.....	Adel.....	12	Dallas.
John S. Sheaffer.....	Adel.....	12	Dallas.
James H. Sutherland.....	Adel.....	12	Dallas.
James Haw.....	Farley.....	12	Dubuque.
Henry Funk.....	Yarmouth.....	12	Des Moines.
Marion Miller.....	Yarmouth.....	12	Des Moines.
Charles Koestner.....	Burlington.....	12	Des Moines.
C. Lemuel.....	Lamoni.....	25	Decatur.
Jerry Landis.....	Weldon.....	25	Decatur.
Solomon Hidy.....	Weldon.....	25	Decatur.
John W. Newell.....	Weldon.....	25	Decatur.
Sherman Hidy.....	Weldon.....	25	Decatur.
John Hidy.....	Weldon.....	25	Decatur.
W. E. Pierce.....	Pierce.....	25	Decatur.
George Medman.....	Pierce.....	25	Decatur.

## CARP DISTRIBUTION, 1886—CONTINUED.

NAME.	POST-OFFICE.	Number.	COUNTY.
W. M. Woods.....	Grand River.....	25	Decatur.
G. R. Bathe.....	Tuskeego.....	25	Decatur.
John P. Jordan.....	Garden Grove.....	25	Decatur.
Orris M. Jordan.....	Garden Grove.....	25	Decatur.
Alfred B. Stearons.....	Garden Grove.....	25	Decatur.
Samuel McCrosky.....	Decatur.....	25	Decatur.
James W. Laney.....	Decatur.....	25	Decatur.
James George.....	West Union.....	15	Fayette.
C. A. Weed.....	Randallia.....	15	Fayette.
James Blackstone.....	Chapin.....	12	Franklin.
David W. Wright.....	Chapin.....	12	Franklin.
Amos Wright.....	Chapin.....	12	Franklin.
James H. Trotter.....	Guthrie Center.....	12	Guthrie.
Charles Long.....	Nelson.....	12	Guthrie.
Henry H. Jobes.....	Casey.....	12	Guthrie.
A. A. Duncan.....	Casey.....	12	Guthrie.
William L. Morrison.....	Casey.....	12	Guthrie.
John H. Simmons.....	Casey.....	12	Guthrie.
W. J. Knapp.....	Montieth.....	12	Guthrie.
A. I. Willard.....	Grundy Center.....	12	Grundy.
C. H. Jackson.....	Jefferson.....	12	Greene.
W. J. Livers.....	Alden.....	12	Hardin.
M. K. Donnavan.....	Ackley.....	12	Hardin.
M. W. Hill.....	Iowa Falls.....	12	Hardin.
E. M. Morton.....	Dunlap.....	12	Harrison.
S. W. Morton.....	Dunlap.....	12	Harrison.
John Winters.....	Mt. Pleasant.....	12	Henry.
John C. Winters.....	Mt. Pleasant.....	12	Henry.
John F. Leech.....	Mt. Pleasant.....	12	Henry.
Horace L. Farr.....	Mt. Pleasant.....	12	Henry.
James M. Holland.....	Mt. Pleasant.....	12	Henry.
John Rukgaber.....	Mt. Pleasant.....	12	Henry.
Mathias S. Bowers.....	Mt. Pleasant.....	12	Henry.
Bent H. Farr.....	Mt. Pleasant.....	12	Henry.
R. M. Brown.....	Mt. Pleasant.....	12	Henry.
John Laftery.....	Mt. Pleasant.....	12	Henry.
W. R. Cole.....	Mt. Pleasant.....	12	Henry.
John Hartley.....	Salem.....	12	Henry.
L. M. Hartly.....	Salem.....	12	Henry.
D. A. Hartley.....	Salem.....	12	Henry.
Daniel N. Hartley.....	Salem.....	12	Henry.
Allen H. Briggs.....	Salem.....	12	Henry.
C. F. Morrell.....	Salem.....	12	Henry.
J. W. Morrell.....	Salem.....	12	Henry.
John F. Madden.....	Salem.....	12	Henry.
Henry W. Swan.....	Salem.....	12	Henry.
Elmer Winslow.....	Salem.....	12	Henry.
Charles P. Thompson.....	Salem.....	12	Henry.
Harry Pidgeon.....	Salem.....	12	Henry.
W. A. Maddock.....	Salem.....	12	Henry.
Samuel Maddock.....	Salem.....	12	Henry.
M. F. Clausen.....	Salem.....	12	Henry.



## CARP DISTRIBUTION, 1886—CONTINUED.

NAME.	POST-OFFICE.	Number.	COUNTY.
H. S. Brown.	Salem.	12	Henry.
Alfred Cook.	Salem.	12	Henry.
Wm. Andariess.	New London.	12	Henry.
Sam'l O. Long.	Oakland.	12	Henry.
Elisha Wright.	New London.	12	Henry.
D. J. Antoneider.	Hardy.	12	Humboldt.
G. W. Taylor.	Goodell.	12	Hancock.
Chauncy G. Price.	South Amana.	12	Iowa.
James M. Merritt.	South Amana.	12	Iowa.
Alex LaDow.	South Amana.	12	Iowa.
Mrs. Charlotte Douglas.	South Amana.	12	Iowa.
Thos K. Price.	Williamsburg.	12	Iowa.
J. W. Carmichael.	Williamsburg.	12	Iowa.
"Amana Society" care of L. Hammerschmidt.	Amana.	60	Iowa.
Herbert Morse.	Genoa Bluffs.	12	Iowa.
James Dalton.	Homestead.	12	Iowa.
Patrick Dalton.	Homestead.	12	Iowa.
Richard Dalton.	Homestead.	12	Iowa.
J. D. Gingerich.	Amish.	12	Johnson.
Wm. Zimmermann.	Lone Tree.	12	Johnson.
James L. Smith.	Fairfield.	12	Jefferson.
James Barton.	County Line.	12	Jefferson.
Jesse B. West.	County Line.	12	Jefferson.
James A. Graft.	Wyoming.	15	Jones.
W. S. Niles.	Wyoming.	15	Jones.
Henry S. Dutton.	Anamosa.	15	Jones.
Wm. A. Hay.	Anamosa.	15	Jones.
Joseph Wagoner.	Anamosa.	15	Jones.
Isaac Hay.	Anamosa.	15	Jones.
Wm. Roper.	Anamosa.	15	Jones.
A. A. Mirick.	Fairview.	15	Jones.
Isaac T. Welty.	Newton.	12	Jasper.
Emanuel Swihart.	Newton.	12	Jasper.
C. M. Hanna.	Maquoketa.	12	Jackson.
Isaac J. Black.	Maquoketa.	12	Jackson.
J. F. Thompson.	Maquoketa.	12	Jackson.
I. G. Welty.	Newton.	12	Jasper.
E. Swihart.	Newton.	12	Jasper.
G. M. Blackman.	Newton.	12	Jasper.
Anthony Newhouse.	Harper.	12	Keokuk.
Anthony Newhouse, Sr.	Harper.	12	Keokuk.
J. D. Davis.	Nassau.	12	Keokuk.
L. M. G. Barritt.	Houghton.	12	Lee.
E. B. Barnum.	Houghton.	12	Lee.
O. H. Coon.	Houghton.	12	Lee.
Oren Fowler.	Houghton.	12	Lee.
J. L. Macy.	Houghton.	12	Lee.
J. W. Jenkins.	Houghton.	12	Lee.
Alpheus Taylor.	Houghton.	12	Lee.
Henry Law.	Chariton.	25	Lucas.
J. F. Spiker.	Chariton.	25	Lucas.
S. B. Tinkham.	Chariton.	25	Lucas.

## CARP DISTRIBUTION, 1886—CONTINUED.

NAME.	POST-OFFICE.	Number.	COUNTY.
O. H. Evans.	Russell.	25	Lucas.
S. B. Tinkham, Jr.	Chariton.	25	Lucas.
Myron C. Barnes.	Mt. Vernon.	12	Linn.
Horatio S. Hale.	Mt. Vernon.	12	Linn.
Thomas Gromley.	Mt. Vernon.	12	Linn.
Thos. Wilkinson.	Waubeek.	12	Linn.
Edwin Wilkinson.	Waubeek.	12	Linn.
J. A. Wilkinson.	Waubeek.	12	Linn.
David Wild.	Springville.	12	Linn.
John Wild.	Springville.	12	Linn.
Chas. S. Wild.	Springville.	12	Linn.
J. M. Pearson.	Springville.	12	Linn.
Aaron Williams.	Springville.	12	Linn.
W. K. Wild.	Springville.	12	Linn.
Edward Tiggs.	Vancleve.	12	Marshall.
D. M. Watson.	Selection.	12	Monroe.
H. W. Ames.	Albia.	12	Monroe.
R. O. Bailey.	Oskaloosa.	12	Mahaska.
Jno. A. Newburg.	Red Oak.	12	Montgomery.
Wm. H. Kennedy.	Elliott.	12	Montgomery.
Jno. C. Schomberg.	Nichols.	12	Muscatine.
M. Augusta Young.	Knoxville.	12	Marion.
Frank Nottsgar.	Knoxville.	12	Marion.
John Bush.	Knoxville.	12	Marion.
Jasper Nye.	Knoxville.	12	Marion.
Amos W. Campbell.	Swan.	12	Marion.
J. B. May.	Newburn.	12	Marion.
Geo. W. Franks.	Pleasantville.	12	Marion.
Abraham Erb.	Pleasantville.	12	Marion.
Elmer Bane.	Pleasantville.	12	Marion.
Clarence L. Bane.	Pleasantville.	12	Marion.
M. T. McClenahan.	Henderson.	25	Mills.
Alfred Hammer.	Des Moines.	12	Polk.
W. S. Bauer.	Des Moines.	12	Polk.
P. C. Fisher.	Des Moines.	12	Polk.
E. W. Grimes.	Des Moines.	12	Polk.
Orsen Mead.	Des Moines.	12	Polk.
M. L. Lawton.	Des Moines.	12	Polk.
Wm. Montgomery.	Des Moines.	12	Polk.
Geo. C. Sims.	Des Moines.	12	Polk.
L. W. Barlow.	Chesterfield.	12	Polk.
Frank S. Burkhard.	Shenandoah.	25	Page.
Michael Redman.	Grattanger.	12	Palo Alto.
Miles Mahan.	Grattanger.	12	Palo Alto.
M. A. Moore.	Le Mars.	12	Plymouth.
Geo. Atkinson.	Kingsley.	12	Plymouth.
L. Newman.	Carson.	12	Pottawattamie.
W. Jasper Otto.	Wheeler.	12	Pottawattamie.
William H. Zentmire.	Oakland.	12	Pottawattamie.
Jas. E. McIntire.	Monfuzum.	12	Poweshiek.
Wallace E. Rice.	Ewart.	12	Poweshiek.
Geo. F. Ingram.	Ewart.	12	Poweshiek.

## CARP DISTRIBUTION, 1886—CONTINUED.

NAME.	POST-OFFICE.	Number.	COUNTY.
James Avenell.....	Tingley.....	25 Ringgold.	
Clark McConnell.....	Tingley.....	25 Ringgold.	
J. H. Nelson.....	Tingley.....	25 Ringgold.	
Peter F. Hetzer.....	Delphos.....	25 Ringgold.	
Chas. W. Gilbert.....	Delphos.....	25 Ringgold.	
Homer Boardman.....	Nevada.....	12 Story.	
Mary S. Scott.....	Nevada.....	1 Story.	
John Scott.....	Nevada.....	12 Story.	
W. J. Renne.....	Nevada.....	12 Story.	
Ulyses S. Renne.....	Nevada.....	12 Story.	
Dan'l Renne.....	Nevada.....	12 Story.	
John L. Stevens.....	Ames.....	12 Story.	
Thos. M. Gossard.....	Ames.....	12 Story.	
Harry A. Gossard.....	Ames.....	12 Story.	
Parley Sheldon.....	Ames.....	12 Story.	
Chas. H. Watkins.....	Story City.....	12 Story.	
J. W. Black.....	Harlan.....	12 Shelby.	
Mrs. Mary A. Young.....	Kirkman.....	12 Shelby.	
Jas. W. White.....	Harlan.....	12 Shelby.	
Frank J. Hoyt.....	Sac City.....	12 Sac.	
David Morrison.....	Odebolt.....	12 Sac.	
Isaac Davenport.....	Lenox.....	25 Taylor.	
Hiram H. Baumann.....	Lenox.....	25 Taylor.	
James P. Lininger.....	Lenox.....	25 Taylor.	
Z. M. Haynes.....	Lenox.....	25 Taylor.	
Henry Baum.....	Lenox.....	25 Taylor.	
Simon P. Bauman.....	Lenox.....	25 Taylor.	
J. H. Cahill.....	Lenox.....	25 Taylor.	
James Elliott.....	Gravity.....	25 Taylor.	
Wm. Schwemslay.....	Conway.....	25 Taylor.	
Asa A. Martin.....	Haven.....	12 Tama.	
L. P. Winterstein.....	Elberon.....	12 Tama.	
Timothy Smith.....	Toledo.....	12 Tama.	
Winfield S. Alvord.....	Cromwell.....	25 Union.	
John McElroy.....	Farmington.....	12 Van Buren.	
John C. French.....	Farmington.....	12 Van Buren.	
Mahlon Crown.....	Farmington.....	12 Van Buren.	
W. H. Coulter.....	Farmington.....	12 Van Buren.	
Ira B. Boyle.....	Farmington.....	12 Van Buren.	
L. H. Boyer.....	Farmington.....	12 Van Buren.	
Mary E. Harlan.....	McVeigh.....	12 Van Buren.	
W. A. Baker.....	Mt. Zion.....	12 Van Buren.	
Oliver W. Bradford.....	Mt. Zion.....	12 Van Buren.	
Andrew H. Bradford.....	Winchester.....	12 Van Buren.	
Isaac N. Walter.....	Winchester.....	12 Van Buren.	
John Smith.....	Keosauqua.....	12 Van Buren.	
E. S. Pinnell.....	Milton.....	12 Van Buren.	
James Elerich.....	Doud's Station.....	12 Van Buren.	
A. H. Hendrickson.....	Blakesburg.....	12 Wapello.	
W. F. Foster.....	Agency City.....	12 Wapello.	
John D. Newell.....	Agency City.....	12 Wapello.	
F. W. Newell.....	Agency City.....	12 Wapello.	

## CARP DISTRIBUTION, 1886—CONTINUED.

NAME.	POST-OFFICE.	Number.	COUNTY.
David M. Rinard.....	Cambria.....	25 Wayne.	
N. Glaus.....	Allerton.....	25 Wayne.	
Geo. R. Huston.....	Allerton.....	25 Wayne.	
Chas. C. Huston.....	Allerton.....	25 Wayne.	
Wm. R. Childs.....	Allerton.....	25 Wayne.	
John Ferree.....	Allerton.....	25 Wayne.	
Robert J. McCoy.....	Allerton.....	12 Wayne.	
C. Sprow.....	Allerton.....	25 Wayne.	
R. L. Yohe.....	Allerton.....	25 Wayne.	
Bart. Harper.....	Promise City.....	25 Wayne.	
Wm. Alexander.....	Promise City.....	25 Wayne.	
Mrs. Mattie Alexander.....	Promise City.....	25 Wayne.	
Frank Blair.....	Harvard.....	25 Wayne.	
P. D. Brown.....	Lineville.....	25 Wayne.	
E. H. Stone.....	Sioux City.....	12 Woodbury.	
D. H. Talbott.....	Sioux City.....	12 Woodbury.	
John W. P. Graham.....	Lucky Valley.....	12 W odbury.	
Wm. P. M. Graham.....	Lucky Valley.....	12 Woodbury.	
Nels O. Bue.....	Decorah.....	12 Winneshiek.	
Zeno Heemblossom.....	Washington.....	12 Washington.	
Allen Meacham.....	Washington.....	12 Washington.	
Chas. Corlette.....	Clay.....	12 Washington.	
Benj. Eicher.....	Noble.....	12 Washington.	
Mrs. Anna L. Fillmore.....	Dows.....	12 Wright.	
David H. Fillmore.....	Dows.....	12 Wright.	
Albert Fisher.....	Dows.....	12 Wright.	
F. Reed.....	Dows.....	12 Wright.	
Almira Seeley.....	Dows.....	12 Wright.	
Henry D. Fullerton.....	Clarion.....	12 Wright.	
E. A. Weston.....	Moreland.....	12 Webster.	
Fannie M. Norton.....	Moreland.....	12 Webster.	
S. Norton Talcott.....	Moreland.....	12 Webster.	
R. N. Pomroy.....	Forest City.....	12 Winnebago.	





List of applications for carp filed by U. S. Commissioner at Des Moines, Iowa,  
October, 1886.

NAME.	POST-OFFICE.	COUNTY.
George N. Wailes	Pola	Appanoose.
G. M. Boal	Centerville	Appanoose.
J. M. Dow	Greenfield	Adair.
C. M. Govern	Bridgewater	Adair.
Nathan H. Becker	Spirit Lake	Dickinson.
James A. Bolton	New Hartford	Butler.
Ernest H. Struve	Almont	Clinton.
Artemus L. Grippen	Mason City	Cerro Gordo.
Herman Hellmuth	Burlington	Des Moines.
Chas. Keastner	Burlington	Des Moines.
Lewis M. Knob	Garden Grove	Decatur.
Chas. W. Pettyman	Pleasanton	Decatur.
E. A. Mallary	Hampton	Franklin.
Henry H. Jobs	Casey	Guthrie.
Ore A. Bardahl	Grundy Center	Grundy.
John H. Lyle	Sweedsburg	Henry.
Henry Shultz	Tiffin	Johnson.
J. O. Lawrence	Monticello	Jones.
Geo. H. Wolfe	Oxford Mills	Jones.
Bently Clark	Monticello	Jones.
Fred A. Weckler	Newton	Jasper.
M. B. McMichael	Monroe	Jasper.
C. B. Stevens	Donnellson	Lee.
Henry Huxley	Pilot Grove	Lee.
Joseph Baker	Zero	Lucas.
Geo. H. Van Horn	Charlton	Lucas.
Will M. Lumer	Cedar Rapids	Linn.
Wm. Hunt	Toddville	Linn.
D. W. Deal	Center Point	Linn.
T. A. Kelly	Cedar Rapids	Linn.
Wm. T. Fuson	Runnells	Polk.
Ernest B. Gaston	Des Moines	Polk.
Lewis Baker	Norwich	Page.
F. A. Winchell	Kingsley	Plymouth.
G. W. Hopwood	Deep River	Poweshiek.
A. P. Condit	Ames	Story.
D. G. Merrihew	Maxwell	Story.
Wm. Young	Kirkmley	Shelby.
Wm. M. Winkley	Clearfield	Taylor.
R. M. Flowers	Gravity	Taylor.
J. H. Fitch	Bedford	Taylor.
W. H. Gartside	Bedford	Taylor.
Daniel R. Barnet	Tama City	Tama.
J. L. Glass	Gladbrook	Tama.
J. A. Johnson	Spaulding	Union.
Mary E. Harlan	Wilsonville	Van Buren.
Samuel Rednour	Douds Station	Van Buren.
Iowa H. Burrier	Farmington	Van Buren.
Samuel L. Creek	Douds Station	Van Buren.
Chas. Sherod	Mt. Sterling	Van Buren.
F. W. Weirsmith	Ottumwa	Wapello.
W. L. Henry	Cambria	Henry.

## LIST OF APPLICATIONS—CONTINUED.

NAME.	POST-OFFICE.	COUNTY.
Albert P. Street	Lewisburg	Wayne.
W. A. Farren	Corydon	Wayne.
J. F. Hayes	Corydon	Wayne.
C. V. Allen	Corydon	Wayne.
Francis B. Fry	Corydon	Wayne.
Wm. Hughes	Corydon	Wayne.
Hiram T. Morford	Humeston	Wayne.
Peter Hien	Correctionville	Woodbury.
W. W. Suayzee	Gowrie	Webster.

## DISTRIBUTION OF GOLD FISH.

Susie B. Adams, Dubuque, Iowa.....	20
Ben McCoy, Oskaloosa, Iowa.....	12
S. S. Gard, Anamosa, Iowa.....	12
D. Lowe, Springville, Iowa.....	12
S. Bell, Anamosa, Iowa.....	10
A. M. Johnson, Spirit Lake, Iowa.....	3
Mrs. Chisholm.....	3
W. F. Carlton.....	3
Mrs. Stevens, Okoboji, Iowa.....	3
M. Tuttle, Des Moines, Iowa.....	3
Milo Brown, Spencer, Iowa.....	3
Jennie O'Brien, Burlington, Iowa.....	3
F. W. Hossfeld, Des Moines, Iowa.....	7
H. S. Hale, Mt. Vernon, Iowa.....	5

## BROOK TROUT DISTRIBUTION.

Winneshiek county.....	80,000
Delaware county.....	20,000
Chicago, Milwaukee and St. Paul Railway, for reservoir.....	25,000

## LAND LOCKED SALMON DISTRIBUTION.

Okoboji and Spirit Lakes.....	20,000
-------------------------------	--------

## BASS AND CROPPIE DISTRIBUTION.

To S. B. Hewett, Eagle Grove, Iowa :	
100 croppie, " <i>Pomoxis annulans</i> ."	
100 silver bass, " <i>Roccus chrysops</i> ."	
12 silver bass, adult.	
Storm Lake, Iowa :	
70 adult croppies.	
7 adult silver bass	
C. Gitchil, Meriden, Iowa :	
225 silver bass.	
150 croppies.	
J. T. Urice, Garrison, Iowa :	
75 silver bass.	
Dr. Leonard and W. R. Shriver, Winterset, Iowa :	
45 adult croppies.	
H. V. Peckenpaugh, Reeder's Mills, Iowa :	
100 silver bass.	
100 croppies	

## Storm Lake :

500 croppies.

230 silver bass.

25 black bass, "*Myxopetris salmoides*."

## J. T. Dogget, Garrison, Iowa :

50 silver bass.

## Clear Lake, Iowa :

500 silver bass.



## STATEMENT OF EXPENSES OF IOWA STATE FISH COMMISSION.

A. W. Aldrich, Fish Commissioner.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1885.		
July	A. W. Aldrich, cash expenses .....	\$ 21.25
July	J. A. Scott, bill hardware .....	1.90
July	Frank Hormel, legal services .....	15.00
July	Higgins & Griffith, repairing and repainting wagon .....	29.00
July	C. H. Lull, bill merchandise .....	4.55
July	Frank Schuler, one month's labor .....	45.00
August	Frank Schuler, one month's labor .....	45.00
August	A. W. Aldrich, cash expenses .....	13.75
August	Leo Kauffman, fish feed for July and August. ....	5.00
August	Mrs. K. L. Monger, copying .....	10.00
September	H. B. Burritt, livery .....	5.65
September	Frank Schuler, 19 days labor .....	25.50
September	"Pioneer Press," one photo eng. of hatchery .....	25.00
September	S. A. D. Byerly, labor from Sept. 5th to 30th .....	37.50
September	A. W. Aldrich, cash expenses .....	84.05
September	Cudworth & Osborne, hardware and aquarium .....	19.20
September	S. A. D. Byerly, for labor from Oct. 1st to Dec. 1st, B. R. fare and expense on trip to Des Moines. ....	97.45
November	Leo Kauffman, fish feed, Sept., Oct. and Nov. ....	7.50
November	A. W. Aldrich, cash expenses .....	83.92
November	C. E. Wagoner, 15 days labor .....	22.50
November	G. W. Wright, bill labor and use of boat .....	16.00
November	W. T. Shaw, two tons hay .....	20.00
November	G. R. Greene, expense taking fish eggs .....	57.82
November	S. S. Watkins, expense taking fish eggs .....	45.30
November	M. P. Sigworth, bill merchandise .....	11.10
November	M. F. Sullivan & Co., feed for fish and horse. ....	41.48
December	G. D. McKay, bill merchandise .....	17.70
December	Cudworth & Osborne, hardware bill. ....	15.15
December	Thomas Ford, blacksmithing .....	8.10
December	S. A. D. Byerly, one-half month's labor .....	22.50
December	J. Cleveland, one-half month's labor .....	22.50
December	A. W. Aldrich, cash expenses .....	14.00
December	Durr & Rugee, lumber and coal .....	29.66
1886.		
January	W. L. Gilbert, 75,000 trout eggs .....	138.00
January	J. G. McGuin, bill merchandise .....	4.20
January	James Cleveland, one month's labor .....	45.00
January	A. W. Aldrich, cash expenses .....	24.70
January	Leo Kauffman, four month's fish feed .....	10.00
April	Sullivan & Co., bill feed .....	14.15
April	American Express Co., express on fish eggs .....	6.60
April	United States Express Co., express on carp .....	1.95
April	C. H. Lull, bill merchandise .....	2.65
April	J. W. Binard, labor .....	4.50
April	Cudworth & Ryder, wire cloth .....	.45
April	Anamosa Eureka, printing circulars .....	2.00

## STATEMENT OF EXPENSES—CONTINUED.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1886.		
April	Shaw & Dutton, fish and horse feed .....	\$ 42.30
April	A. W. Aldrich, cash expenses, February, March and April .....	72.03
April	C. Manger, printing .....	23.25
April	Frank Fisher, repairing harness .....	2.85
April	Jas. Cleveland, three month's labor .....	135.00
April	H. B. Burritt, livery .....	8.15
		\$ 1,463.81

## STATEMENT OF EXPENSES OF IOWA FISH COMMISSION.

A. A. Mosher, Assistant Commissioner, Spirit Lake, Iowa.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1885.		
September ..	Cash paid express on fish eggs .....	\$ 3.00
December ..	Cash paid express on fish eggs .....	.90
December ..	Letter heads and envelopes .....	3.00
December ..	Postage from April, 1885 .....	3.00
December ..	Cash paid man for shoveling snow and work in hatchery .....	8.00
		<u>\$ 17.90</u>

## STATEMENT OF EXPENSES OF IOWA FISH COMMISSION.

E. D. Carlton, Commissioner.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1886.		
May 19	E. D. Carlton, cash expenses .....	\$ 15.90
May 31	A. W. Aldrich, labor, 12 days .....	19.80
June ..	E. D. Carlton, cash expenses .....	25.21
June ..	A. W. Aldrich, one month labor .....	50.00
July ..	E. D. Carlton, cash expenses .....	40.63
July ..	A. W. Aldrich, one month labor .....	50.00
July ..	G. D. McKay, bill harness repair, etc., A. W. Aldrich, Com. ....	5.40
July ..	Turner & Smith, legal services, prosecutions for violation of fish laws .....	15.00
July ..	Sullivan & Co., fish and horse hire, account of A. W. Aldrich, Com. ....	16.41
August ..	E. D. Carlton, cash expenses .....	42.10
August ..	C. & St. P. R'y, one car goods from Anamosa to Spirit Lake .....	85.00
August ..	B. C. R. & N. R'y, freight on cement .....	17.50
August ..	J. A. Smith, 650 feet 8-inch tile pipe .....	122.20
August ..	Hamilton & Amidon, 25 barrels cement .....	87.50
August ..	Durr & Ruger, coal, account of A. W. Aldrich, Com. ....	2.25
August ..	C. E. Wagoner, labor, moving goods .....	13.00
August ..	J. W. Miller, photograph of old hatchery, account of A. W. Aldrich, Com. ....	2.50
August ..	A. W. Aldrich, one month labor .....	50.00
August ..	D. S. Blakey, bill of stone and sand furnished for new ponds at Spirit Lake .....	95.04
August ..	Sargent Bros., team work on new ponds .....	27.25
August ..	A. B. Funk, stationery and printing .....	17.50
August ..	Wm. Cook, labor on new hatchery .....	15.00
September ..	Cedar Rapids Republican, advertising for bids on old hatchery and grounds .....	1.80
September ..	Anamosa Eureka .....	1.80
September ..	Anamosa Journal .....	3.00
September ..	Mott & Abbott, livery .....	5.00
September ..	M. G. McClintock, labor on new grounds .....	49.05
September ..	N. Farmer, labor on new grounds .....	40.00
September ..	A. Hartman, labor on new grounds .....	32.60
September ..	Jasper Loomis, labor on new grounds .....	40.50
September ..	R. Sperbeck, labor on new grounds .....	30.60
September ..	F. Sperbeck, labor on new grounds .....	30.45
September ..	H. S. Check, labor on new grounds .....	33.50
September ..	W. Yager, labor on new grounds .....	1.84
September ..	Pete White, labor on new grounds .....	3.00
September ..	L. Sherman, labor on new grounds .....	1.50
September ..	J. E. Streator, labor on new grounds .....	1.50
September ..	D. Stone, labor on new grounds .....	15.00



## STATEMENT OF EXPENSES—CONTINUED.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1886.		
September	Ira Farr, team work.....	\$ 10.00
September	L. Farr, team work.....	3.50
September	B. A. Narey, team work.....	5.50
September	J. Swalle, team work.....	3.50
September	J. Buckwheat, team work.....	3.50
September	A. Peick, carpenter work.....	13.75
September	William Uptegrafft, stone.....	27.30
September	L. W. Vreeland, stone mason.....	28.85
September	H. Woods, stone mason.....	23.75
September	Ole Bjorensen, two month's labor.....	65.00
September	A. W. Aldrich, labor.....	50.00
September	E. D. Carlton, cash expenses.....	28.19
October	Barron & Dodge, lumber bill.....	74.91
October	D. L. Riley, lumber bill.....	55.51
October	A. W. Aldrich, one month's labor.....	50.00
November	E. D. Carlton, cash expenses, Oct. and Nov.....	25.80
December	E. D. Carlton, cash expenses.....	4.50
December	E. D. Carlton, cash expenses, hay for horse, stamps, etc.....	20.93
December	M. F. Sullivan, horse feed.....	18.40
December	H. Burritt, horse hire.....	74.50
December	L. Kauffman, fish feed.....	20.00
December	A. W. Aldrich, one month's labor.....	50.00
December	Ole Bjorensen, two months labor.....	60.00
December	A. W. Aldrich, expense account as Fish Commissioner in April and May.....	21.25
December	H. Buritt, livery, account A. W. Aldrich, Commissioner.....	2.95
December	Charles Wagoner, hauling hatching troughs, etc.....	11.00
December	W. W. Stow, bill hardware.....	10.78
December	E. F. Newell, bill hardware.....	5.55
December	Cudworth & Ryther, bill hardware, account of A. W. Aldrich, Commissioner.....	8.38
December	Brasted & Prentice, fruit, feed, etc., account of A. W. Aldrich, Commissioner.....	4.60
December	B. C. R. & N. Ry's Co., one car transportation of fish to Spirit Lake.....	54.00
1887.		
January	30 E. D. Carlton, expense account.....	24.85
January	30 E. D. Carlton, express bills on fish eggs.....	23.55
January	30 Ole Bjorensen, labor of January.....	30.00
February	28 E. D. Carlton, cash expenses.....	35.74
February	28 Ole Bjorensen, labor for February.....	30.00
March	31 E. D. Carlton, cash expenses.....	33.50
March	31 Ole Bjorensen, labor for March.....	30.00
April	30 E. D. Carlton, cash expenses.....	3.05
April	30 Ole Bjorensen, labor for April.....	30.00
May	31 S. Poland, fish feed.....	2.25
May	31 Sargent Bros., team work.....	8.00
May	31 D. L. Riley, lumber.....	6.33
May	31 Barron & Dodge, lumber and cement.....	41.76
May	31 Joe Buckwheat, stone and team work.....	11.75
May	31 Sim. Gray, stone.....	7.25

## STATEMENT OF EXPENSES—CONTINUED.

DATE.	TO WHOM PAID AND ON WHAT ACCOUNT.	AMOUNT.
1887.		
May	31 Jasper Loomis, labor on ponds and hatchery.....	\$ 36.00
May	31 Abe Hartman, labor on ponds and hatchery.....	49.00
May	31 James Robb, laying stone.....	28.00
May	31 A. A. Mosher, rent of hatchery, five months.....	25.00
May	31 Ole Bjorensen, labor for May.....	30.00
May	31 E. D. Carlton, cash expenses.....	7.30
June	30 E. F. Newell, hardware.....	1.00
June	30 A. Peick, contractor for material and labor on new hatchery.....	275.00
June	30 J. P. Calvin, meal and crackers for fish feed.....	4.27
June	30 W. F. Carlton, county auditor, bill for recording papers.....	4.10
June	30 E. D. Carlton, cash expenses.....	14.17
		<u>\$ 2,683.96</u>

## RECAPITULATION.

Expended by A. W. Aldrich.....	\$ 1,463.81
Expended by A. A. Mosher.....	17.90
Expended by E. D. Carlton.....	2,683.96

Total expenses of Iowa Fish Commission, including the removal of hatchery to Spirit Lake, and the building of a new hatchery and construction of new ponds.....\$ 4,165.67

I cannot, from any information at hand, give a detailed report of the operation of the Commission from July 1, 1885, to May 19, 1886; at the latter date I assumed control of the affairs of the Commission. In the fall of 1885 there was quite an extensive distribution of carp made by Mr. Aldrich for the United States Commissioners; also in the spring of 1886 he made distribution of about 125,000 brook trout, as tabulated in my report.

I found many unsettled accounts, but also found in the State treasury, to the credit of the Fish Commission, more than sufficient funds to disburse them. As to the work of the Assistant Commissioner at the branch hatchery, I believe nothing in the way of propagation was attempted during this time, and aside from the salary of the Assistant Commissioner, and the rental of his private fish hatchery, there were but a few small items of expense.

In performing the duties of Fish Commissioner of Iowa, I have endeavored to conduct the affairs in the most economical manner possible, consistent with thorough work and substantial improvement.

The new grounds were without any manner of shade trees. I transplanted upward of fifty native trees, and notwithstanding the extreme drouth saved nearly all of them. I fenced the grounds on the unprotected sides with barbed wire fencing. Put down a good well, and otherwise improved the grounds to the best of my ability.

I found it utterly impossible to attend the numerous requests to visit sections of the State in which violations of the fish laws were reported. It would incur an expense far beyond the appropriations for my use during this biennial period.

I have endeavored to make as concise a statement of the work and expenditures of the Commission as possible, and have on file in the office of the Auditor of State, together with the files in my office, a complete list of all articles and items of expenditures, with receipts therefor.

SPIRIT LAKE, IOWA, October 12, 1887.

E. D. Carlton, being duly sworn, on oath says that the foregoing accounts of the Fish Commission with the State of Iowa, are true, as he verily believes.

E. D. CARLTON,  
*Fish Commissioner.*

Subscribed in my presence and sworn to before me, by E. D. Carlton, this 12th day of October, 1887.

WM. HAYWARD,  
*Notary Public.*