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BIENNIAL REPORT
OF THE
STATE
FISH COMMISSIONER
OF THE
STATE OF COLORADO
FOR THE
YEARS 1891 AND 1892

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FISH COMMISSIONER
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DENVER, COLORADO:
THE SMITH-BROOKS PRINTING CO., STATE PRINTERS
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LETTER OF TRANSMITTAL.

TO HIS EXCELLENCY,

JOHN L. ROUTT,

Governor of the State of Colorado:

SIR — I have the honor to submit, herewith, my report for the years 1891-1892. The work of the Fish Commission during the past two years has been very satisfactory in its results, since every effort has met with a marked measure of success; not only have the growth and introduction of trout into new waters shown the wisdom of such planting, but the people have realized, in many instances, direct and substantial benefits much sooner than was expected. Each year the demand for trout to stock either new or depleted waters has grown beyond the ability of the present State Hatcheries to supply. So urgent and interested have the people become in their desire to obtain a stock of fish for the available waters of the many sections they represent, that it is with pleasure I place before you the manifest needs of this growing and desirable branch of the public service.

Fish culture is no longer an uncertain field of labor, nor is it an occupation fit only for the award of some political favor, but replete with a broad and ever increasing opening for the exercise of intelligent skill and impartial judgment. I find so much to do in order to properly provide for the needs of the State in this desirable industry, that I deprecate

THE UNWISE ACTION

that prompted the last General Assembly to impose the added duties of a Game Warden upon the Department of Fish Culture, and ask that you recommend the immediate repeal of the entire Act relating to Game and Fish Wardens, as the experience of the past two

years has shown that such a law is a complete failure in its present form. So imperfect and crude an act rarely finds a place upon the pages of even frontier legislation.

The experience has been costly, the damage to our game interests great. The utter inefficiency of local wardens, who are influenced by their surroundings and governed by their friendships, the unwillingness upon the part of those who live in remote sections of the State to inform upon their neighbors, or in any way aid in the enforcement of laws for the protection of the game that they believe is solely to benefit the tourist and city sportsmen, and, finally, when these people who are in every other regard honest, upright, intelligent and law-abiding citizens, witness, as they do every succeeding year, the wholesale killing of our four-footed game by skin-hunters and Indians, I am only surprised that they do not kill more than they find convenient for their winter's use. Whatever the game laws may be for the needs of the future, the rights of those who occupy a place on the confines of our western wilds should not be forgotten.

I would like to ask that no

BOUNTY LAWS

be passed that embrace a premium on either bear or mountain lions. The claim made that these animals are particularly destructive to both stock and game is not well founded, since in the case of game, as is well known, the deer, antelope and elk existed in far greater abundance when there were no such laws than they do now; and as for the killing of stock by mountain lions, I am of the opinion that the worthless beings, I will not call them men, who pursue and hunt these animals with dogs solely for the reward, are far more destructive to the live stock interests than are these solitary beasts of prey.

As for the wolves and coyotes, I am led to advocate for the sake of the sheep and cattle interests, the passage of an act giving a greater bounty, and one in which the punching of a clear cut hole in each ear of the scalps presented, shall serve as a sufficient cancellation, and thereby allow of the skins and scalps being subsequently sold entire, thus enhancing their value to the hunter.

I do not desire to be understood as advocating the abandonment of any form of protection of our four-footed game, but rather favor the enactment of such

RESTRICTIVE LAWS

as shall tend to make their enforcement less difficult and provide a State Game and Fish Warden whose supervision shall extend over the entire State, and who shall have power to arrest without warrant until such process can be had at the proper place, and also be authorized to seize all illegally killed game and confiscate and dispose of the same for the benefit of the game and fish interests, and above all things, provide him with funds to defray his necessary expenses and not expect him to use his meager salary for such purpose, as is now the case with the stupid law that at present mars our statutes. I do not favor a law that will call for such a number of wardens as that now in force, it is not necessary; nor do I favor the enactment of a law that will create districts, for that calls for patronage and political preferment, and the past experience has shown that such local officials are of little use. The State has not the money to spare to support such an army of paid partisans, nor is it necessary. One well paid officer or State Marshal, with two deputies, can, if the proper man is selected, enforce the game and fish laws over the entire State, he having no fixed section in which to reside and become too well known. Such an officer would command the respect of the people and render violations of the game laws extremely hazardous.

My report in detail, which is to follow this outline, will show many points of interest to the general public, the angler and the huntsman.

In concluding this brief mention of the work entailed, I beg to submit for your approval and recommendation the real need of as liberal an appropriation as the merits of this branch of the public service deserves.

Very truly,

GORDON LAND,
State Fish Commissioner.

December 14, 1892.

STATE FISH HATCHERIES.

TROUT PROPAGATION.

The location of a trout propagating establishment that is intended to grow young fish in large numbers for distribution in the various streams and lakes of the State, should always be placed where an abundant supply of pure, cold, non-freezing water can be had, and, also, where the means of ready transportation is available. There is yet another requirement, and that is a never-failing supply of suitable food to feed the young fish.

Only experience can impress upon the minds of those who seek to grow trout upon a large scale, the actual needs of the conditions here noted. During the time I have held the office of State Fish Commissioner I have been importuned by many persons to establish State Fish Hatcheries in the various sections known to each writer. I am unable to recall a single instance where any of the places mentioned had even one of the prime requisites to justify its selection. A proper location for such a purpose must needs possess all three of the essentials outlined. This is imperative; and it is due to the lack of these features that failure has so often attended the efforts directed towards the propagation of trout in many places, both east and west. An intimate knowledge of what is most desirable for the production of the best possible results has prevented me from making selections that might prove disastrous, and hence it is, that with the meager means at my disposal I have been enabled to send out to the waters of the State so large a number of desirable food fish.

The several State Fish Hatcheries are in excellent shape for the conduct of the necessary work outlined for the coming season. The demand from all sections of the vast territory to be supplied, is such, that double, or even quadruple the present outlook is needed in order to meet it and place at the disposal of the people a desirable

food supply, that lends the added charm of angling, and that will grow in lake or stream with no outlay or effort other than the trifling cost and trouble of planting. The expense to the people of the State for the annual introduction of from one and one-half to two millions of young trout into the depleted or barren water of our lakes and streams is less than two cents per capita of the entire population, as shown by the census of 1890. The demand is so great and the results already obtained so satisfactory, that a more liberal fund placed at the disposal of this most important industry would inure as a public benefit and place fish culture where it properly belongs, as an established branch of the State service.

The business of fish propagation can be more certainly carried to a successful issue as it is now understood, than the propagation or growing of either sheep or cattle or of any other domestic animal. What is needed is an abundant supply of suitable water and food and the requisite knowledge necessary to perform the work.

The need of more water at the State Hatchery near Denver is urgent and should be obtained at once. All that will be required for many years to come can be readily had by extending the head of the present ditch or flow-line up along the base of the bluff and draw from the under-flow that now runs to waste in the channel of the marsh or slough close by. This can best be done by piping from a system of wells or galleries that should be placed at the head and so arranged that at any time the supply could be increased at moderate cost when needed for an increased business. This will be sure to follow, as the Denver station will continue to grow in importance on account of its nearness to all lines of transportation and the cheap food supply for the fish while being grown to a suitable size for introduction into the lakes and streams.

The branch hatcheries, located at Twin lakes and Gunnison, are used at present for summer work on account of the coldness of the water supply during the winter; though by proper outlay, both of these stations could be made available for winter work. However, they are placed where most excellent results can be had

during the summer months, when our native trout are spawning; and I will ask, that each of these stations be provided with enough funds to enable the person in charge to produce the full capacity of each hatchery.

WORK OF DISTRIBUTION, 1891.

DISTRIBUTION OF TROUT FRY FROM DENVER STATE HATCHERY DURING 1891.

April 9.....	In South Platte, eight miles above station.....	6 cans
April 20.....	In the Poudre river above Fort Collins.....	6 cans
April 22.....	In the Big Thompson above Loveland.....	6 cans
April 25.....	In the Platte at Buffalo station.....	6 cans
April 29.....	In the Platte near Slaghts.....	6 cans
May 1.....	In the Platte near Buffalo station.....	6 cans
May 5.....	In Clear creek above Empire.....	6 cans
May 7.....	In Clear creek near Georgetown.....	4 cans
June 15.....	In Clear creek near Georgetown.....	4 cans
June 17.....	In Elk creek near Pine Grove.....	2 cans
June 20.....	In the Platte at Baily station.....	2 cans
June 22.....	In Platte at Grant station, yearling trout.....	4 cans
June 30.....	In Platte at Buffalo station, yearling trout.....	4 cans
April 23.....	In the South Arkansas near Salida.....	6 cans
April 28.....	In the Cottonwood near Buena Vista.....	6 cans
May 2.....	In Horse Creek and tributaries, sixty-five miles east of Colorado Springs.....	10 cans
June 8.....	In Palmer lake.....	4 cans
June 10.....	In Prospect lake.....	4 cans
June 12.....	In Monument lake near Monument station.....	2 cans
June 14.....	Near Husted on Monument creek.....	2 cans
June 26.....	Near Saguache in Saguache creek.....	6 cans
April 9.....	In Republican river near Wray, Colorado—Brook trout.....	6 cans
April 26.....	In North St. Vrain near Lyons—Brook trout.....	6 cans
June 9.....	In Estes park streams, 6 cans Brook trout, 2 cans Cali- fornia trout.....	
June 23.....	In South St. Vrain near Lyons—Brook trout.....	6 cans

Distribution of Native trout from the Twin Lakes State Hatchery during 1891: From 100,000 eggs placed in the hatchery, 75,000 trout fry were obtained and placed in the lakes and in Lake creek.

Distribution of Native trout from Hetzer's lake in Middle park to the streams of North park during 1891: Grizzly creek and Illinois creek received 150,000. Total trout fry distributed from the State Fish Hatcheries, 1891, 685,000.

WORK OF DISTRIBUTION, 1892.

DISTRIBUTION FROM DENVER HATCHERY, TROUT FRY.	
March 28.....	In Prospect lake, near Colorado Springs, Brook trout.. 8 cans
April 1.....	In Surface creek, near Delta, Brook trout..... 6 cans
April 10.....	In West Plum creek, near Perry park..... 6 cans
April 16.....	In streams near Trinidad, 4 cans Brook, 2 cans California..... 6 cans
April 16.....	To G. O. Shafer, Denver..... 1 can
April 29.....	In the Arkansas, near Salida, 4 cans Brook, 2 cans California..... 6 cans
April 29.....	In the Cottonwood, near Buena Vista, 4 cans Brook, 2 cans California..... 6 cans
May 3.....	In Lake San Cristobal, near Lake City, 4 cans Brook, 2 cans California..... 6 cans
May 10.....	In Palmer lake, Brook trout..... 2 cans
May 10.....	In Monument creek, Brook trout..... 4 cans
May 12.....	In Saguache creek, near Moffat, Brook trout..... 6 cans
May 17.....	In West Plum creek, near Sedalia, Brook trout..... 4 cans
May 17.....	In South Arkansas near Salida, 6 cans Brook; 2 cans California..... 8 cans
April 9.....	In the Platte river near Pine Grove..... 6 cans
April 8.....	In the Platte near Buffalo..... 7 cans
April 12.....	In Deer creek near Baily Station..... 8 cans
April 23.....	In Buffalo creek above station..... 6 cans
April 23.....	In Elk creek near Pine Grove..... 6 cans
April 27.....	In the Platte near Estabrook, 2 cans Brook, 2 cans California..... 4 cans
April 27.....	In stream near Buffalo..... 6 cans
April 28.....	In Snake river near Dillon, 3 cans; one can at Webster, on the Platte river..... 4 cans
April 30.....	In Goose creek above Buffalo Station..... 6 cans
April 30.....	In the Platte, Rainbow trout..... 2 cans
May 4.....	In Craig creek near Estabrook..... 4 cans
May 14.....	In the Boulder creek, 5 cans Brook, 2 cans Rainbow.... 7 cans

STATE FISH COMMISSIONER.

II

May 18.....	In the Poudre river, 6 cans Brook, 2 cans Rainbow.....	8 cans
May 23.....	Brook trout taken to Leadville, exchanged with Dr. Law for Native trout	6 cans
May 23.....	In Crestone creek near Moffat, Brook trout.....	6 cans
June 2.....	In streams near Leadville, 6 cans Brook, 2 cans California.....	8 cans
June 12.....	In Clear creek, Chaffee Co., Brook trout.....	4 cans
June 14.....	In South Arkansas, near Salida, Brook trout.....	6 cans
June 21.....	In Boss lake, near Salida, Brook trout.....	6 cans
June 22.....	In the head waters of the Animas river, near Durango, 6 cans Brook. 2 cans California.....	8 cans
July 8.....	In streams near Del Norte, 4 cans Brook, 2 cans Cali- fornia.....	6 cans
July 8.....	In South Arkansas, near Salida, 3 cans Brook, 1 can California.....	4 cans
July 8.....	In Twin lakes, near Granite, 3 cans Brook, 1 can Cali- fornia.....	4 cans
July 22.....	In the Upper Conejos creek, Brook trout.....	6 cans
May 19.....	In Boulder canon, 5 cans Brook, 1 can Rainbow.....	6 cans
May 20.....	In Chicago creek, near Idaho Springs, 5 cans Brook, 1 can California.....	6 cans
May 21.....	In South Platte, 7 cans Brook, 1 can California.....	8 cans
May 26.....	In Platte and Craig creek, 5 cans Brook, 2 cans Cali- fornia.....	7 cans
May 28.....	In Lake Edith, 5 cans Brook, 1 can California.....	6 cans
May 31.....	In South Boulder, near Black Hawk.....	6 cans
June 6.....	In Platte, near South Platte, 4 cans Brook, 2 cans Cali- fornia.....	6 cans
June 7.....	In Platte, near Slight's, 4 cans Brook, 2 cans Cali- fornia.....	6 cans
June 8.....	In Clear creek, near Georgetown, 4 cans Brook, 2 cans California.....	6 cans
June 11.....	In Bear creek, above Morrison, 5 cans Brook, 1 can California.....	6 cans
June 18.....	In Jefferson lake, in south Park, 4 cans Brook, 2 cans California.....	6 cans
June 24.....	In upper Platte, near Webster.....	6 cans
June 25.....	In North Poudre, above Fort Collins.....	6 cans
June 28.....	In North Boulder, above Boulder City.....	6 cans
June 29.....	In streams near Alma.....	4 cans
July 5.....	In lakes at head waters of Ten Mile, near Robinson....	6 cans
July 11.....	In head waters of Bear creek, 3 cans Brook, 1 can Cali- fornia.....	4 cans
July 11.....	In South St. Vrain above Boulder, 5 cans Brook, 1 can California.....	6 cans

July 20.....	In head waters of Poudre river, 5 cans Brook, 1 can California.....	6 cans
July 25.....	In Big Thompson above Loveland.....	4 cans
August 24.....	In Echo lake near Idaho Springs, 2 cans California, 2 cans Native.....	4 cans
August 24.....	In lakes near Idaho Springs, 2 cans California, 2 cans Native.....	4 cans
May 3.....	In Lake George, 4 cans Brook, 2 cans California.....	6 cans
May 3.....	In Hay creek near Lake George, Brook trout.....	2 cans
May 20.....	In stream near Hartzel, Brook trout.....	6 cans
May 28.....	In Monument reservoir near Woodland park, Brook trout.....	6 cans
May 28.....	In stream near Green Mountain falls, California trout	1 can
August 27.....	In stream near Cascade, Native trout.....	2 cans
August 27.....	In stream near Woodland park, California trout.....	2 cans
August 27.....	In Lake Moraine, near Manitou, Brook trout.....	2 cans
August 27.....	In Fountain in Manitou, Brook trout.....	1 can
August 30.....	In stream, fountain station, Brook trout.....	4 cans
Sept. 16.....	In Grizzly lake, near Buena Vista, Brook trout.....	4 cans

DISTRIBUTION OF TROUT FRY FROM TWIN LAKES HATCHERY DURING 1892.

Placed in the hatchery about 600,000 eggs. 500,000 were hatched, and 400,000 fry were placed in the Two lakes and in Lake creek, and about 100,000 brought to the Denver Hatchery and part of them distributed from there and a small stock kept on the place.

Total output of Native trout for the year, 500,000.

GUNNISON HATCHERY.

The hatchery located at Gunnison had such a small fund available for use, that I had the place improved by the individual labor of the superintendent in charge, at such times as he could devote to the work apart from his duties while engaged in the care and handling of the fish. So efficient has been the services rendered by this skillful and industrious man, that with an annual appropriation of only twelve hundred dollars, out of which

sum all expenses, even his salary, had to be paid, the State has to-day a trout hatchery in perfect working order, that needs only the stock of eggs to place it among the profitable producing establishments of its class. The output of this station during the past two years has been 165,000 trout fry, the lack of funds alone preventing a better result. Still the fact that by reason of only one person being employed a delay has been occasioned does not reflect upon the possibilities of the plant nor prevent its being used to most excellent advantage the present season. I regard this station as one possessing many advantages, that only demands a moderate outlay to demonstrate.

The distribution from this plant was necessarily confined to local waters.

In summing up the work for the year 1892, the results show, that in addition to the labor and cost of construction, at the several stations, there have been deposited in the waters of the State a stock of food fish to aggregate 1,784,500. Were only one third of these to live to attain the weight of four ounces each there would be a gross product, as a food supply, of over 140,000 pounds of fish. Experience has shown a better growth in most instances. One hundred fish taken from Uneva lake on the Ten Mile in Summit County, that did not contain a fish of any kind prior to their introduction two and one-half years ago, were weighed and the gross weight exceeded three hundred pounds. One female from this lot yielded by actual count, over 5,500 eggs. The variety here noted was the Eastern Brook Charr—*Salvelinus Fontinalis*. In Jefferson lake on the main range near Kenosha in Park County, even greater growth has been known in the same period. In fact in every section the result of planting has been most encouraging. In the North park and in the Laramie river, Rainbow trout have been taken that weighed over five pounds. These are waters that were never known to contain trout of any kind, and as the specimens taken were all introduced varieties, no doubt can exist as to their growth; it being well known that neither the Eastern Brook nor the Rainbow trout are indigenous to this region. At Wellington lake, an entirely new body of water that was

formed by the construction of a dam across a natural chasm about two years ago, has proved to be a splendid place for the growth of trout. Recently over 900,000 eggs of the *S. Fontinalis* were taken from the parent fish grown at this place. This evidence, I trust, will set at rest the insane story started by misinformed persons that the Brook trout do not deposit their spawn in our mountain streams and lakes. At Black lake, the property of Gen'l A. H. Jones, located on the slope of Mount Powell in Summit County, the development of all the varieties of trout is something marvellous. This perfection of a lake presents in the month of June an exhibition of trout engaged in depositing their eggs at both outlet and inlet that would repay a journey across the range to see. Here I found the California Rainbow trout paired with the Black Spotted Natives. I took both eggs and milt from either variety and impregnated several pans of the eggs to be sure that I was not in error as to their identity. This cross will prove most interesting to fish culturists; as they belong to the same species the crosses will not prove to be mules or hybrids.

At Hetzer's lake near the edge of the North park and close to the Rabbit Ear range of mountains, is still another evidence of what may be done by stocking a barren lake. In this instance, the trout introduced were our own Black Spotted Rocky Mountain fish, that have a friend in every Colorado angler, whether it be to please the taste as food or take the fly as sport. I found these fish engaged in depositing their spawn at the inlet (I will here note that this lake has no visible outlet, but its surplus water leaches through the natural wall that forms its outline on the north and east, in well defined and numerous springs) in the month of June in such great numbers that it was easy to obtain all the eggs needed. The fish were quite large and in most perfect condition, both male and female. A few years before my visit, this lake was a barren body of water not having in it a fish of any kind. The great abundance of insect life that was everywhere present showed that what it lacked was fish; these, Mr. Hetzer and others supplied by carrying them alive from the waters of a neighboring stream; at the same time, in their eagerness to stock the lake, they took with

the larger fish what they thought were young trout and placed them into the lake; this was building better than they knew, for they were actually supplying to the future fish a perfect food in the form of the little Dulcis minnow, that never grow large, but are very prolific and as they subsist upon food so small that the trout ignore it, they, in turn, serve as food for the larger and more voracious trout. There is a tiny scarlet insect so abundant upon the surface of this lake that at times the color effect is most noticeable.

STOCKING THE PUBLIC WATERS.

In stocking the lakes and streams of the State with trout, it has been deemed best to place such fish in those waters that were either entirely barren of fish life of any kind or had become so depleted from excessive fishing as to demand their re-stocking. In selecting waters for this purpose I paid due regard in the order of priority to those places having suitable waters and the greater population, or whose needs were shown by the annual rush of visitors who sought the resorts mostly for the attractions of angling. Still this consideration did not deter me from placing a few fish of a new variety in waters that were reasonably well stocked naturally. I did this in order to gain a start and learn from an actual trial the desirability of a further plant when opportunity should occur. The only apology I feel like offering to those who fancy they were neglected in the general distribution is that the paucity of the fund available for the purpose precluded the possibility of my so doing. I have, however, kept a record of their needs and shall endeavor to have their wants supplied from the output of another season. There are so many places to be stocked and the results to be obtained are so full of promise that I would ask the members of the Ninth General Assembly to accord to fish culture as liberal an appropriation as the possible benefits to be derived would warrant.

The very general interest manifested by the whole people in this branch of the State's enterprise is so marked that it has afforded an added incentive to renewed effort in order to satisfy their demands. I have found every possible aid extended to those having live fish in charge from interested persons in every section of the State; in many instances the people have borne the entire expense of planting the fish into the public waters, and from both railways and express companies I have had every facility placed at my disposal. There seemed to be no politics in fish; partisan preferences were either ignored or forgotten; it was a people's movement without regard to the issue.

Information has been given at the several State Hatcheries to all who sought it, in relation to the care and propagation of fish, and, judging from the accumulation of correspondence at my office on the subject, the people evidently believe that the State pays for a free bureau of information that includes the services of a typewriter; but, unfortunately, my office is not so favored, not even a homely one with Titian hair.

There is at this date in the trays of the Denver hatchery, over 850,000 eggs of one variety of trout and there are two other varieties yet to spawn.

Information as to feeding and the care of young fish will be cheerfully given; also, any information on the subject to those who desire it, by direct application to the Commissioner. The attempt to introduce it here would entail an amount of space beyond the limits of this report.

New varieties of fish for Colorado waters are needed and I have taken steps to obtain them the present season.

ESTIMATE OF FUNDS NEEDED FOR 1893-1894.

AT DENVER HATCHERY, 1893.

Superintendent's Salary	\$1,000 00	
Assistant's Salary	600 00	
Expenses, fish food, fuel, horse food, etc.....	1,000 00	
Expenses, distribution to public waters.....	1,000 00	
Expenses, Fish Commissioner.....	500 00	
Salary, Fish Commissioner.....	500 00	
Improvements needed to supply an increased business, addi- tional water supply and feeding flumes.....	2,500 00	
Total.....		\$7,100 00

AT DENVER HATCHERY, 1894.

Superintendent's Salary.....	\$1,000 00	
Assistant's Salary.....	600 00	
Expenses, fish food, fuel, labor, etc.....	1,200 00	
Expenses of distribution, increased output.....	1,500 00	
Salary of Commissioner.....	500 00	
Expenses of Commissioner.....	500 00	
Total for two years.....		\$ 5,300 00
		\$12,400 00

TWIN LAKES HATCHERY—1893.

Superintendent's Salary.....	\$900 00	
Assistant's Salary.....	600 00	
Cost of distribution.....	500 00	
Improvements, fish food, horse food, etc.....	1,000 00	
Total.....		\$3,000 00

TWIN LAKES HATCHERY—1894.

Superintendent's Salary.....	\$900 00	
Assistant's Salary.....	600 00	
Cost of distribution, increased stock.....	800 00	
Repairs, improvements, fish food, etc.....	1,000 00	
		<u>3,300 00</u>
Total for two years.....		\$6,300 00

GUNNISON HATCHERY—1893.

Superintendent's Salary.....	\$900 00	
Assistant's Salary.....	600 00	
Improvements, hatching boxes, etc.....	2,000 00	
Fish food and distribution.....	1,000 00	
		<u>\$4 500 00</u>
Total.....		\$4 500 00

GUNNISON HATCHERY—1894.

Superintendent's Salary.....	\$900 00	
Assistant's Salary.....	600 00	
Cost of distribution.....	500 00	
Fish food, fuel, extra labor, etc.....	500 00	\$2,500 00
		<u>\$7,000 00</u>
Total for two years.....		\$7,000 00

In submitting the estimate for the next two years I am convinced that with such capacity as the State will then have available for fish production, the outlay is one in which the people of the State derive a direct benefit, inasmuch as it is generally conceded that the actual value, taken solely as a food supply, is sufficient to justify the expenditure, as it will place into the public waters more than four millions of fish annually, where they can grow and wax fat for the use of the people.

This expense will not tax the population of Colorado more than two cents per inhabitant.

THE GAME AND FISH WARDENS.

I have found the experience of the past two years anything but satisfactory in the matter of game and fish protection, owing mainly to the lack of means for its proper enforcement and the many imperfections in our present laws. There are so many manifest errors, I would ask that the entire law relating to our four-footed game be repealed and a new and less difficult law enacted in its stead. It will require legal skill and ability as well as a complete knowledge of the needed requirements and conditions to formulate a law that will prove satisfactory. I do not favor a law that will permit of the killing of animals of the deer kind as early as the month of July. A law should be enacted to restrict or prevent the traffic in game, hides, heads and horns. Also a means provided whereby persons desiring to take alive animals of the kind mentioned for domestication, should be required to obtain a permit before so doing, and thus put a check upon the business of capturing such animals in large numbers solely for sale to the first willing purchaser. This has grown to be such an abuse that more than ninety head of elk have been so disposed of this season in Routt County alone, while the capture of young deer and antelope is a regular business. No other State permits of this abuse.

The forming of the State into game districts is an error, and my experience with local wardens has been such, as to protest against any law that provides for their appointment. In only two instances have wardens, under the present law, proved efficient and untiring in their service to the State. I will mention one, Mr. C. H. Withington, who took charge of the Third District at the outset and taking with him his own horses and spending his own money, enduring the privations and hardships of exposure in the field at all seasons and under all the trying circumstances presented, this intelligent, honest and fearless man has kept his large game district so free from game law violations, that it has convinced me that the State can secure better results from

one good, clear-headed man, who is intelligent enough to know when and how to act, than from an army of less capable persons.

The laws that finally passed the last General Assembly were so cut to peices by amendments as to render most of them inoperative. This has so hampered all efforts to enforce them, that the best I can say of the result shown from the experience of paid wardens, is, that it has served to direct attention to the fact that we have game and that it is being destroyed and shipped both to markets within and beyond the State, and that the remedy is in better laws and a better means for their enforcement. This interest is so large that it will engage the entire attention of the State Game and Fish Warden, and should not be, as now, an added duty of the Fish, Commisssoner, whose whole time is taken by the growing needs of Fish Culture over so vast a territory as that embraced within the limits of this State.