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BIENNIAL REPORT
OF THE
State Game and Fish
Commissioner
OF THE
STATE OF COLORADO
For the Years 1913-1914
WALTER B. FRASER, Commissioner



DENVER, COLORADO
THE SMITH-BROOKS PRINTING COMPANY, STATE PRINTERS
1914

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STATE OF COLORADO
DEPARTMENT OF GAME AND FISH

Walter B. Fraser, Denver,
Commissioner

J. L. Gray, Fort Collins,
Deputy Commissioner

R. L. Spargur, Denver,
Chief Clerk

S. E. Land, Denver,
General Superintendent, Fish Hatcheries

S. S. Poe, Greeley,
Chief Game Warden, First District

James Bush, Denver,
Deputy Game Warden

W. P. Hummel, Denver,
Deputy Game Warden

W. W. Hart, Craig
Chief Game Warden, Fourth District

Charles A. Ribbing,
Superintendent, Denver Hatchery

S. E. Thompson,
Superintendent, Glenwood Hatchery

John P. Bengard,
Superintendent, Del Norte Hatchery

Thomas L. Hamor,
Superintendent, La Plata Hatchery

Charles Dowdell,
Superintendent, Grand County Hatchery

L. B. Crawford,
Superintendent, Routt County Hatchery

R. L. Light, Pitkin,
Superintendent, Gunnison County Hatchery.

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LETTER OF TRANSMITTAL

STATE OF COLORADO
DEPARTMENT OF GAME AND FISH
CAPITOL BUILDING
DENVER

To His Excellency,
HON. ELIAS M. AMMONS,
Governor of Colorado.

Sir: Herewith I have the honor to transmit the Biennial Report, covering the operations, transactions, receipts, and disbursements of the Department of Game and Fish for the period ending November 30, 1914.

Respectfully submitted,

WALTER B. FRASER,
State Game and Fish Commissioner.

December 15, 1914.



RAINBOW TROUT. (*Salmo irideus*).

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BIENNIAL REPORT
OF THE
State Game and Fish Commissioner

To His Excellency,
HON. ELIAS M. AMMONS,
Governor of Colorado.

Sir: As State Game and Fish Commissioner I herewith present a report of my official operations for the biennial period ending November 30, 1914.

I have had an exceptionally prosperous and busy year, and notwithstanding the inconvenience and loss of valuable time sustained by virtue of the action of my predecessor in attempting to hold the office after my appointment had been made, by reason of which I was forced into litigation covering nearly four and one-half months, the year has, indeed, been a pleasant one.

The principal duties of the Commissioner may be divided into two classes; viz.: first, the propagation and distribution of trout and game birds; second, the administration of the laws governing the protection of our game and fish.

These branches of the work are reported herein under the relevant headings. They will show that more trout eggs were taken and more young trout distributed in the public waters of the state than during any previous biennial period.

Special attention is called to the comparative table, to be found on another page, which shows that more trout eggs were taken and more trout fry distributed in the public waters during the year of 1914 alone than ever before in any two years.

Fish culture, like any other business, demands suitable equipment to accomplish results, and the department during the past year has been actively engaged in completing the present hatcheries with sufficient equipment to enable us to operate them to their full capacity. This has been done without the aid of any appropriation, and required considerable work to carry out the details.

TROUT DISTRIBUTION

The form of application required of applicants for trout fry is supplied by the department, and requires the applicant to fur-

nish a full description of the stream he proposes to stock, together with such other details as will enable the Commissioner to pass upon the advisability of granting the application.

Experience teaches us that in many instances too many varieties of trout are planted in the same stream, and in other cases we find streams and lakes stocked with unsuitable varieties. Hundreds of applications for fry are received each season, some of which we are unable to fill for the above-described reasons.

The distribution of fry under our present methods, and without the use of a fish car, is a most tedious and difficult task, and the messenger in charge of a consignment of fry frequently rides for hours, and occasionally all night, in a baggage car, where he is kept extremely busy re-icing and agitating the cans, as we have no aerating system.

In view of the hardships endured in the distribution, it is gratifying indeed to receive so many acknowledgments of the receipt of fry from applicants, stating the condition in which the fry were received. In almost every case there was only a very small, if any, loss, and the majority of applicants express satisfaction with the number, size, and general condition of the fry received.

I shall make no mention of the spawn taken or of the fry distribution which occurred previous to the time of my appointment, which was January 26, 1914, inasmuch as the records are incomplete. However, I am using such data as are available in the tables which appear later.

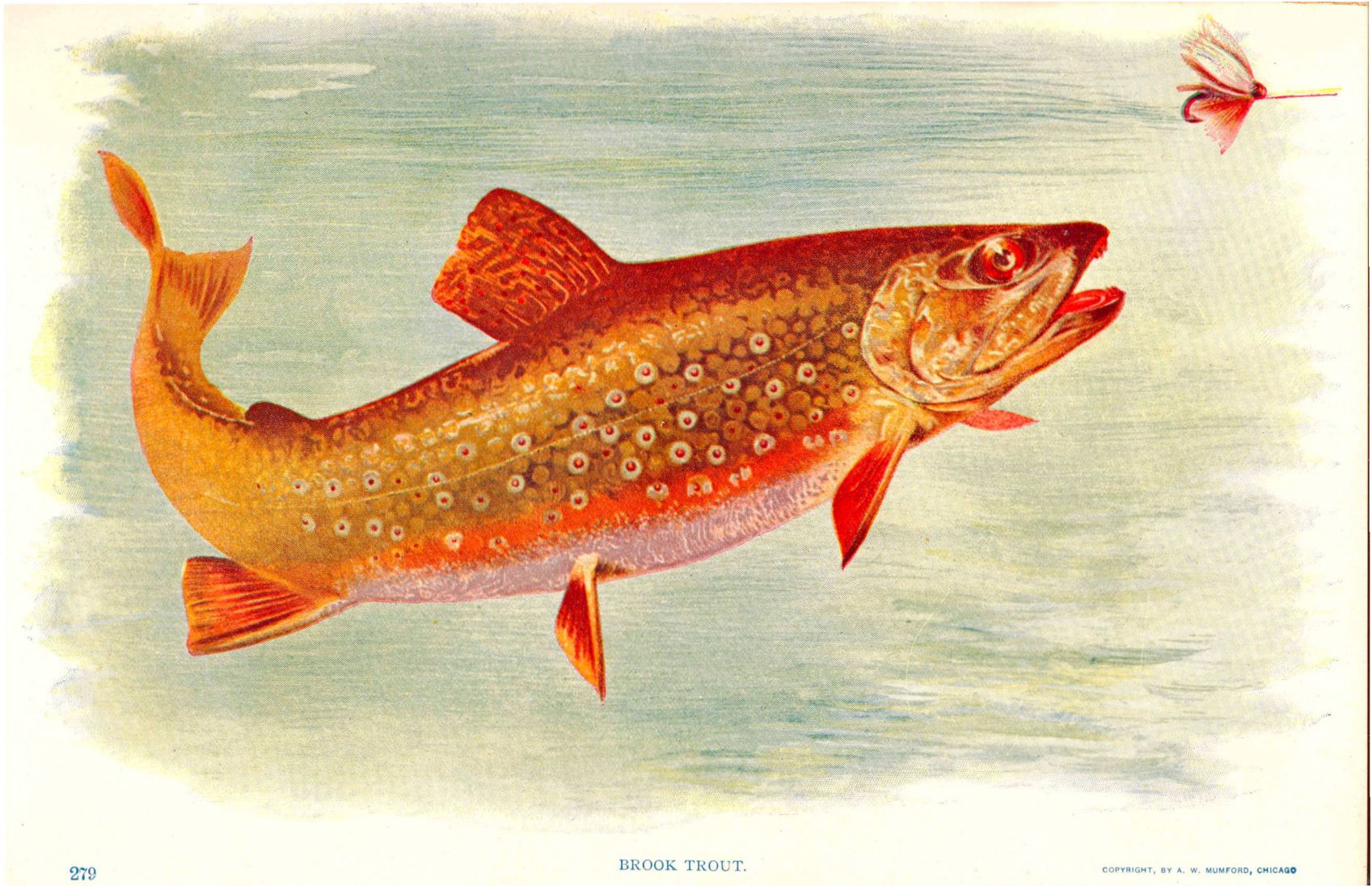
NEW HATCHERIES

Three new hatcheries, located, respectively, at Antonito, Aspen, and Georgetown, were equipped and placed in operation during 1914, thereby making a total of nineteen hatcheries that were operated during the past summer by the department. The total output of all of the hatcheries was 13,380,500 trout fry, of which 6,280,200 were of the rainbow trout and 7,100,300 of the native, or black-spotted, trout; all of which were distributed during the fall of 1914.

The sportsmen of the North Park district have erected a hatchery at Walden, and it is the intention of the department to undertake its operation in the spring of 1915, thereby making a total of twenty hatcheries, most of which are admirably located as to water supply and distributing facilities.

BUENA VISTA HATCHERY

At Buena Vista the state is maintaining a good hatchery building. The hatchery is well equipped with troughs, trays, etc. Half a mile distant and twenty-nine feet above the hatchery is an ideal spring of water, with a never-varying temperature of forty-eight degrees. A tile pipe-line had formerly been installed to



convey water from the spring to the hatchery. I found that city water was being used in the hatchery instead of the spring water, and my investigation disclosed that the pipe-line was poorly installed, that the joints were not caught, and that, while the water was taken from the spring, none reached the hatchery.

This hatchery is located upon the grounds occupied by the Colorado State Reformatory. With the assistance of M. P. Capp, the warden, who furnished part of the necessary funds and all of the labor required, a new four-inch pipe-line, with screwed joints, was laid in 1914, which conveys an ample supply of water from the spring to the hatchery. The water so supplied is adequate for twice as many troughs as are now in the hatchery, and I have decided to double the capacity and output of the Buena Vista hatchery, troughs and other necessary equipment having already been supplied. I understand that the sportsmen of Buena Vista, Salida, and Canon City originally contributed toward the equipping of this hatchery, which previous to this fall has proven a failure. The department has received many letters commending it upon its action at Buena Vista.

ADMINISTRATION

The Commissioner, in the administration of the protective laws, is allowed by statute to appoint five chief game wardens, and such other deputy game wardens as may be deemed necessary.

At the present time, however, I have but two chief game wardens and nine deputy game wardens, in addition to the hatchery superintendents and the spawn-takers, who act as game wardens when not otherwise occupied.

J. L. Gray, the deputy commissioner, resides at Fort Collins and personally performs the duties of a fish and game warden.

With this limited number of wardens, the department during the last period has caused 179 arrests and secured 168 convictions.

I desire to add that I am more than gratified with the work accomplished, and the territory covered, by our wardens.

While I realize that the present force is inadequate to patrol the state and to afford our game the desired protection, and that our laws are being violated from time to time, the efforts of our deputy game wardens have been entirely satisfactory.

I hope to be able at an early date to add a few more deputy game wardens to our present force, and in so doing secure more and better protection for both game and fish.

The position of a deputy game warden is one requiring considerable tact, a thorough knowledge of the country, of methods employed in matters of arrest and trial before a court, of riding and driving horses, and of handling men; and, above all, he must possess a strong physical constitution.

This department prides itself on having such men as wardens: men who take no cognizance of the time of day or night,

or of weather conditions; men who are alert, keen, and willing to sacrifice themselves to enforce the game and fish laws.

COLORADO'S WEALTH

Colorado as a state is the most abundantly blessed with natural resources of any equal area on this continent: mines of incalculable wealth, forests of pine and spruce, rivers furnishing abundant water power, vast areas of fertile soil which annually yield untold wealth in the various crops, soil and climatic conditions favorable to fruit-raising, that are unequaled elsewhere, in addition to being the natural grazing field of horses and cattle.

Our hills and plains alike abound with game and birds; our lakes and streams with trout. The residents of this state are awake to the necessity of conserving our natural resources, such as the forests and waters; and I am gratified to add that our game animals, birds, and fish have not been overlooked.

The impression has long prevailed among pioneer settlers and their successors that the game and fish of the woods and streams are their natural heritage and food, and that they should not be restricted in the right to take them at will. This impression is based on the fact that such settlers came before the law, hunted and killed animals without restraint or hindrance; and it has been hard for them to conform to the rules made necessary by the encroachments of a higher civilization. This impression is now fast disappearing, and I am pleased to state that these citizens are now acquiescing and assisting this department in our work of protection.

Our game, birds, and fish are extremely valuable for their natural beauty and ornament to the forest and stream, and especially for the sport and healthful recreation obtained in their pursuit.

It is estimated that at least five thousand automobiles—visitors from other states—spent from three weeks to three months within the borders of Colorado during the past summer. At an average of three persons to each car, fifteen thousand tourists spent the summer in our hills, fishing and enjoying our scenery.

Thousands of dollars have already been spent, and many thousands more are available, for the construction of automobile roads, and practically every county in Colorado now points with pride to her many highways and beautiful drives.

One enthusiastic booster has said that fully seventy-five thousand people will visit this state by automobile during 1915. The majority of our auto visitors camp out, and I have no hesitancy in stating that, if our streams are sufficiently well stocked with trout to enable these visitors to take an occasional mess of fish, Colorado will certainly receive more favorable advertising from this source alone than could possibly be obtained from the combined efforts of all other mediums.



MALLARD DUCK. 1 Life-size.

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FIELD OPERATIONS

Owing to the fact that there are no complete records in the office regarding the operations of spawning crews in the years past, I shall make no comment upon past records, but confine myself to the operations conducted in the field since I took charge of the office.

This department has, as in years past, made contracts with various lake-owners whereby our crews are permitted to take the spawn from the trout in private lakes, distribute same in our various hatcheries, and return to the lake-owners a certain percentage of the fry so hatched.

Immediately after taking possession of the office, I was visited by several of these lake-owners, who presented claims past due against this department, which they demanded be settled before permitting any of our crews to take spawn or conduct further operations at their lakes. I am pleased to state that I have been able to adjust the differences between the state and these individuals in a satisfactory manner, and that our crews, six in number, that were sent out in the spring of 1914 for the eggs of the rainbow and native trout, conducted successful operations at Electra Lake, which is near Silverton; Grand Mesa Lakes, near Cedaredge; Emerald Lake, near Vallecita; Cottonwood Lakes, near Molina, and Marvine and Trappers Lakes, north of Glenwood Springs. The results obtained by these crews were more than gratifying, the total number of eggs taken last spring being a little more than fourteen million, of which six million were of the rainbow and the balance of eight million of the native, or black-spotted, trout.

Our crews also visited Monarch Lake, in Grand County; Jefferson Lake, in Park County, and Naylor Lake, in Clear Creek County, but were unable to take spawn at any of these lakes, owing to the high water conditions.

This record take of eggs is the largest ever made by this department at any one season in the history of the state, and the total cost to the state for the eggs taken, exclusive of salaries, was six cents per thousand.

Last fall six crews were sent into the field to secure the eggs of the brook trout. Operations were conducted at Castle Lake, near Lake City; Grand Mesa Lakes; Electra Lake; Columbine Lake, near Grand Lake; Warrens Lake and the Roaring Forks, near Glenwood Springs, and Sowards and Phipps Lakes, at Wagon Wheel Gap.

The number of eggs taken in the fall was 40 per cent greater than ever before taken at this season of the year, and exceeded our expectations by fully six million eggs. The total number of eggs of the brook trout reaches thirteen million, and once more all previous records were broken. The cost of the brook-trout eggs exceeded that of our spring take, in that the crews were obliged to be at the various lakes a greater length of time on

account of the open fall. However, this cost was considerable less than that of previous years, and amounts to seventeen cents per thousand on the whole number taken. I believe that this department is better equipped and has better spawn-takers than any other organization in this country.

HATCHERIES

During the winter season of 1914-15 this department is operating eleven hatcheries, all of which are overcrowded with eggs of the brook trout. The hatcheries now in operation are located as follows, and the number of eggs now in each hatchery is mentioned immediately following the name of the hatchery:

Aspen.....	425,000
Boulder.....	320,000
Buena Vista.....	680,000
Del Norte.....	1,030,000
Denver.....	3,385,000
Estes Park.....	783,000
Fort Collins.....	765,000
Glenwood Springs.....	1,895,000
La Plata (Durango).....	1,535,000
Pitkin.....	862,000
Routt County.....	836,000

It was the intention of the department to operate only eight hatcheries during the winter months, but the enormous take of brook-trout eggs compelled us to utilize three additional ones.

It is my intention to operate twenty hatcheries during the coming summer, and, in addition to the above-named hatcheries, there will be added those of Antonito, Emerald Lakes, Georgetown, Grand Lake, Grand Mesa, Marvine, Molina, and Cherokee Park, and the new North Park hatchery, located at Walden.

Practically all of our hatcheries and buildings are greatly in need of repair and paint. I have had an extremely busy year, and the men of this department have had no time to make these necessary alterations. We have contented ourselves with giving our attention to the troughs and equipment in the hatcheries, in order that our eggs might be properly cared for.

I trust that the incoming legislature will see fit to appropriate a small amount of money to repair and keep in condition the hatchery buildings and property.

BIG GAME

Colorado is the natural home of elk, deer, mountain sheep, and antelope. The present closed season on these animals has, in the opinion of the department, materially assisted in their in-



GAMBEL'S PARTRIDGE.
 $\frac{1}{2}$ Life size.

crease. Sportsmen and deputy game wardens sent out to report on the number and condition of these animals agree that our deer, mountain sheep, and elk are increasing rapidly; but I regret to state that the antelope are decreasing.

It is my belief that, with adequate protection and the continued closed season on these animals, our state will be greatly benefited.

Large bands of elk are reported in the White River district, and smaller bands in Moffat, Grand, and Routt Counties.

Deer are distributed over our entire mountain region, probably the largest bands reported being in Garfield and Rio Blanco Counties.

As regards the mountain sheep, I will state that the department is receiving more co-operation in the preservation of these animals than is the case with the elk or deer. Large numbers of tourists visit Ouray annually, attracted there by the bands of mountain sheep which are cared for and fed by the citizens of Ouray. Other bands are observed in several of our counties, particularly Pitkin, Garfield, Clear Creek, Teller, Grand, Chaffee, and Fremont.

Bands of antelope, numbering from ten to one hundred, may be seen almost any day by taking an automobile trip east of Denver through Adams, Arapahoe, and Lincoln Counties. These animals are growing more tame, and may be found eating with the cattle at the various ranch-houses. Others are reported in Morgan and Weld Counties, and an exceptionally large band is to be found near Sugar City. The department certainly deplores the action of various automobile hunting parties, who, from reports frequently received, are killing large numbers of these animals, and leaving many wounded on the field. It is our earnest desire to apprehend and be able to secure a conviction in all of these cases.

QUAIL

Both the bob white, and Gambel's partridge, the so-called crested quail, are protected under our laws, and I am pleased to state that these valuable insect-destroyers are fast multiplying and, in practically every locality, receive the protection merited.

Leading agricultural specialists of the United States agree that the quail render the farmers and fruit-growers of our country services which in actual value run into millions of dollars annually. One authority states that each quail is worth five dollars per year to the farmer.

Government reports are my authority for the statement that "the American sparrow family saved the sum of \$89,260,000 to the farmers in 1910 in consuming weed seed, and that one-half of the daily food of the quail consists of undesirable weed seeds."

I have recently issued several permits to responsible parties residing in localities adapted to quail, and where there are but a few, authorizing them to arrange for the trapping of such birds, in numbers of from two to five dozen, the trapping to be conducted in localities where the quail are plentiful, with the express understanding that the birds are to be shipped and liberated in new districts.

It is the intention of the department to assist our citizens, who will guarantee protection to the birds, in securing a proper number for liberation, where feed is plentiful, and where the winters are not too severe.

For several years the quail have been increasing rapidly upon the western slope, especially in the fruit-growing sections of Mesa, Delta, Montrose, and Fremont Counties, and it is reported that large numbers are to be found in the Arkansas and Platte valleys on the eastern slope.

Inasmuch as the value of these birds is admitted, it is most assuredly the solemn duty of our people to resist the killing of quail, and, in so doing, conserve this valuable asset.

INDIAN VIOLATORS

The year 1914 has been no exception as regards the invasion of Colorado by the Indians from the Uintah and Ouray Reservations in Utah. It has been the custom of these Indians to organize a band and cross the borders of our state in the vicinity of the Douglas and Piceance Creeks, southwest of Rangely in Rio Blanco County. These trips are usually made in the fall of the year, while the deer are coming down from their summer haunts to the winter feeding-grounds.

Early in October the department received advices to the effect that a band of one hundred Indians, with wagons, tents, and a large number of horses, had crossed our border, and were encamped in the Douglas Creek district. I reported this matter to the Bureau of Indian Affairs at Washington, and dispatched several wardens to the Indian camp, with instructions to persuade them to leave Colorado.

The Indians were located about sixty miles southwest of Meeker, and it was found that they had killed but two deer. Wardens from this department gave the Indians forty-eight hours in which to leave the state, pitched their own camp a few miles distant, and awaited developments. On the eve of the second day the wardens were happily surprised in noting that the Indians had decided to leave, and escorted them to the Utah border.

I have received assurances from the Bureau of Indian Affairs at Washington to the effect that orders have been issued to the superintendent in charge at Fort Duchesne, Utah, that the Indians be retained on the reservation and not allowed to hunt in Colorado. The Indian superintendent, upon receiving these



DE ARDIE HEN (Tremontibus Americanus)

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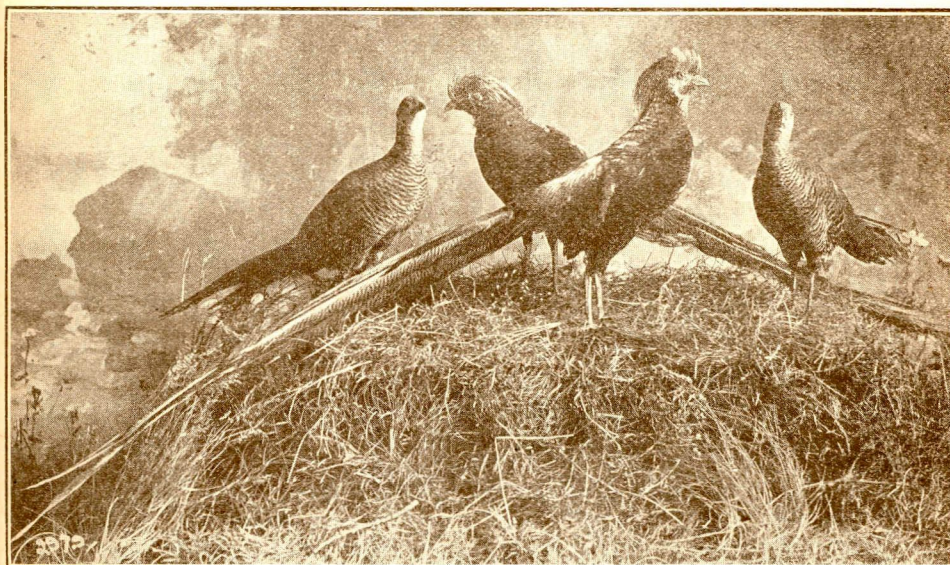
instructions, immediately dispatched Indian police, who aided our department materially in ridding Colorado of these game violators.

While this experience caused us some inconvenience, I feel that the matter has been handled and disposed of in a highly satisfactory manner.

PHEASANTS

During the past period the department has made rapid strides in the work of the propagation of the ring-neck pheasant.

Acting upon the suggestion of Thomas J. Tynan, warden of the State Penitentiary at Canon City, who offered to furnish the



Two Pairs of Golden Pheasants. Copyrighted by W. F. Kendrick.

necessary labor without cost to this department, our pheasantries have been consolidated at Canon City. Acting in conjunction with Mr. Tynan, this department has received far better results during the past year than heretofore. New pheasantries have been built, which were paid for by this department. Mr. Tynan's report shows that he started the year with ninety-four old birds; that fifteen of these birds died during the season; that a total of fourteen hundred eggs were gathered during the spring; that twenty-seven settings of eggs were sent to this department, or distributed to private individuals who were interested in pheasant-raising.

Early in the fall of 1914, 268 pheasants were shipped to various localities in Colorado for liberation, and at the pheasantries now we have a total of eighty-seven old birds.

Pheasants were supplied as follows:

Frank J. Webster, Estes Park; J. D. Rhoades, Las Animas; Ben White, Eagle; A. P. Mercer, State Farm, Avondale; J. R. Greer, Las Animas; T. W. Monnell, Montrose; W. A. Shepard, Delta; Mrs. Charles Mayer, Eagle; Dr. A. J. Nasaman, Pagosa Springs; Brice Patterson, Pagosa Springs; Lee Willets, Basalt; Mrs. Geo. A. Pughe, Craig; J. Thatcher, Avondale; M. P. Capp, Buena Vista; P. R. Maylor, Denver; Miss H. Kempton, Loveland; A. H. Davis, Loveland; W. Blayney, Montrose; A. Brockman, Hillrose; Henry Honebin, Hillrose; George Stephan, Delta; S. H. Lindsay, Sterling; William Brooks, Fort Morgan; Mrs. Fred Baker, Fort Morgan; James Burke, Boulder; E. M. Ammons, Parshall; W. J. Walsh, Wray; John A. McGee, Wray.

Satisfactory reports are received in practically every instance where pheasants have been delivered.

In addition to the birds which were distributed throughout the state, twenty-seven settings of eggs were furnished to those who desired to attempt to make a hatch themselves. The reports from these individuals will show that a 60 per cent hatch was obtained, and that more than one-half of the birds hatched were raised and liberated. The department expects to have a large number of eggs for gratuitous distribution in the spring of 1915.

The pheasant was recognized by the Romans before the Christian era as easily the most gorgeously plumaged and most toothsome of all the game birds then known to the world, and it was carried by them to the island of what is now known as Great Britain. Since that date of over two thousand years ago these birds have been recognized and protected by the Norman and Celt, Angle and Saxon, and jealously guarded against the poacher, heavy fines being imposed throughout the country against those caught destroying the birds.

Many importations have been made of almost every known variety found in Asia, many of which cross or inbreed. The first pheasants of English history were the brass-neck, blue-neck, and black-neck. The later importations have added varied colorings and features, the most marked and interesting of which were from the crossing of the Chinese ring-neck, producing what is now spoken of as the English ring-neck, being a cross or mixture of several varieties.

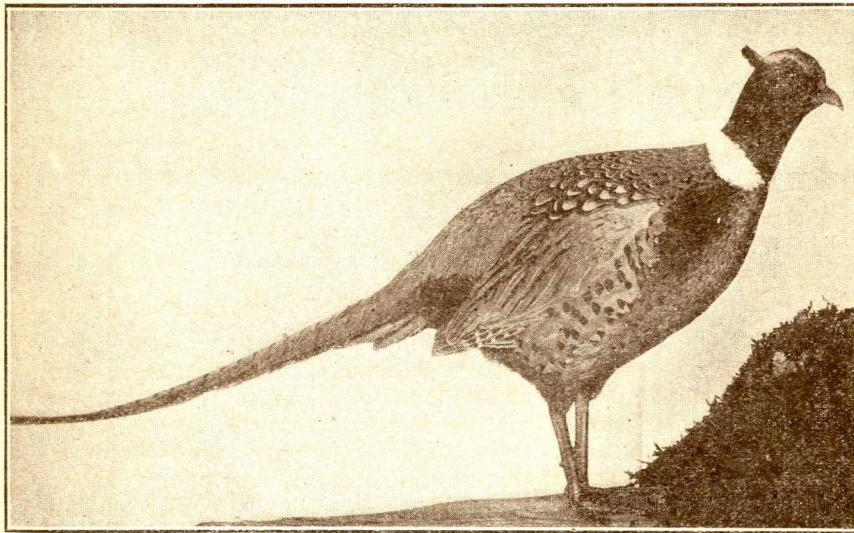
The first pheasants imported into the United States were of this variety of English birds, but in those days there were few laws for protecting birds, and none of such laws were respected by the masses; consequently, all efforts for many years were complete failures. The making and enforcing of laws protecting these birds since, with fresh importations, has made it possible for a number of states to be well stocked.

The first importation of the Asiatic pheasant into the western states was by Judge O. N. Denny, then consul-general at Shanghai, in 1880, when they were first recognized as insectivorous birds.

"Chinese farmers never shoot the birds nor do anything which tends to frighten them from their fields, holding them friends rather than enemies, doing far more good to their crops than harm by the destruction of insects."

The first shipment by Judge Denny consisted of seventy birds, but by bad handling they all died. One year later Judge Denny made another large shipment, this time to his brother in the Willamette Valley, Oregon. Here the birds were cared for, and they thrived and propagated rapidly. A third importation was made with many fancy varieties, as well as the Chinese ring-neck, which were turned over to a hunting club controlling Protection Island in the Columbia River; but the members of the club got into some difficulties, and the birds were allowed to be shot.

Judge Denny made a fourth shipment of pheasants from China, this time to a Mr. Redding, of San Francisco, who owned extensive landed interests and had prepared to propagate them; but while the birds were in transit Mr. Redding died, the birds arriving in San Francisco on the day of his funeral, and, as



Chinese Ring Neck Pheasant.

there was no one who claimed them, they were sold for table purposes. Thus, out of the four shipments, only the one that was sent to his brother's farm was successful.

Mr. W. F. Kendrick, an extensive traveler in America and Europe, a lover and student of animal life and nature, was first attracted by the great beauty of the English pheasant, as well as its qualities as a game bird, during his visits to that country and the continent. He bought birds and eggs, and imported English and Scotch game-keepers and English prepared foods, and expended large sums of money in breeding and experimenting with

many varieties. He selected the Chinese ring-neck pheasant as the most vigorous, beautiful, gamy, hardy, and prolific, and sold his English ring-neck birds, shipping them east, so as not to mix them with his Chinese ring-necks, for stocking the State of Colorado, with his compliments to the people of his adopted state. He first presented the pheasants to the Colorado State Game and Fish Commission to stock its hatcheries, and later, from year to year, sent birds and eggs in large numbers to many people or sections, to care for and liberate.

For several years Mr. Kendrick kept on exhibit at City Park, Denver, a number of thousands of these striking and interesting birds, including many fancy varieties, and said to be the largest collection ever kept in a public park. These were under the care of his English game-keepers, to interest and educate the people as to their beauty and value, and have been the means of extensive publicity by the daily press and magazines.

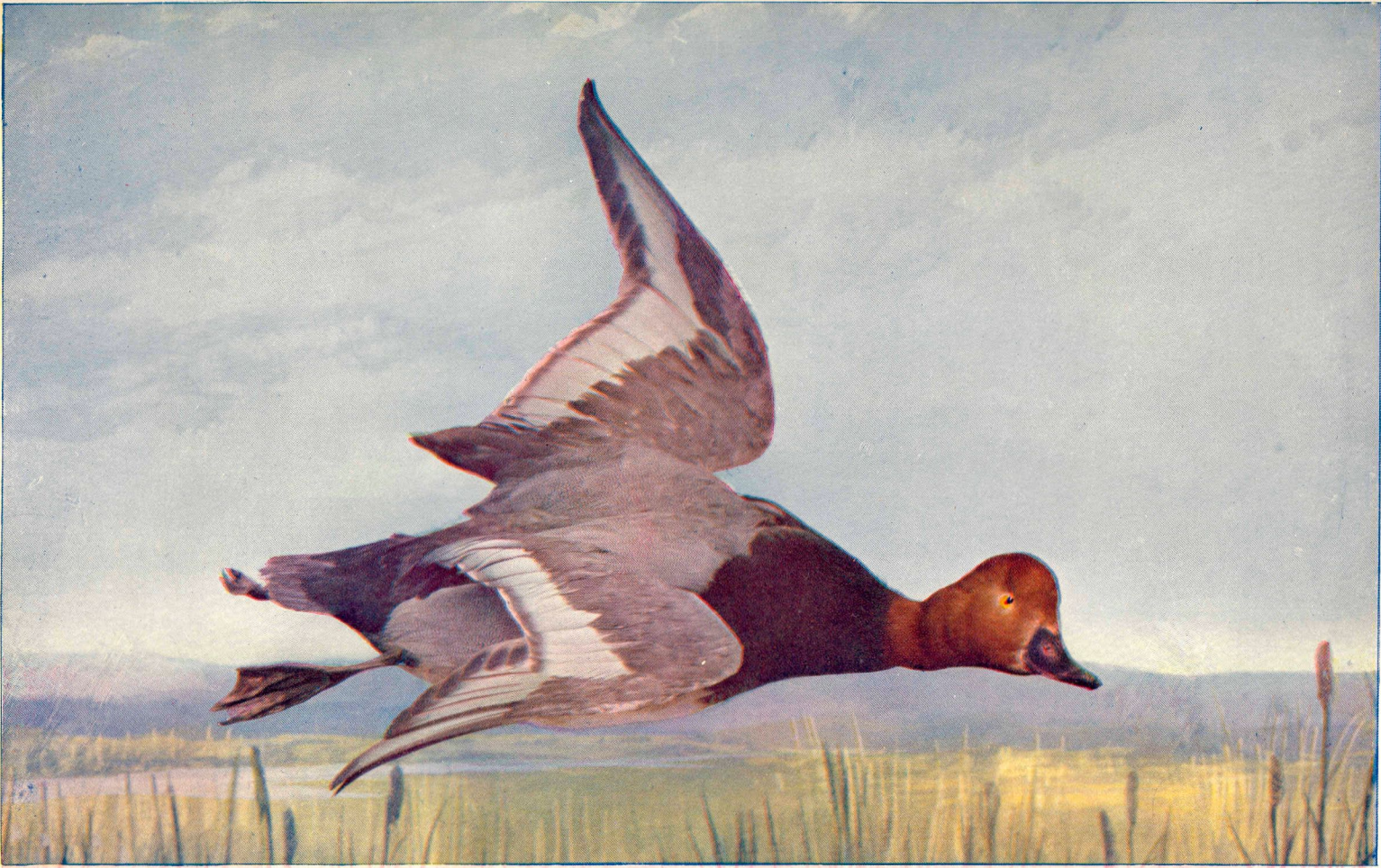
Mr. Kendrick says that, in addition to its gamy qualities and attractive appearance, the pheasant is "the farmer's friend;" that it is the most valuable insectivorous bird, more hardy than the quail or partridge, and more able to resist vermin enemies; that it hunts for and eats the eggs and larvae of more insect pests than any other wild or domestic bird or fowl, the latter eating the bugs after they have destroyed plant life, while the pheasant eats them before.

Folders containing information as to their good qualities, and instructions in regard to rearing them, will be mailed to applicants who write for same to the Game and Fish Commission, State House, Denver.

POLLUTION

Inasmuch as the department is now operating eleven hatcheries during the winter, and is to undertake to operate twenty hatcheries during the summer months, I am confident that we shall be able to supply all the demands made upon us for the stocking of streams and waters of Colorado with trout. Colorado is blessed with lakes and streams that will sustain numerous quantities of fish life, provided our waters are kept in suitable condition. The problem of overcoming the various forms of pollution found in our streams is indeed a proposition in itself. I am pleased to state that but a few complaints have reached the office during my incumbency, and further gratified to state that moral suasion has induced many concerns to install various devices with an idea of purifying the water.

Municipalities are spending millions of dollars for filtration plants, much of which money might have been saved had the public insisted upon the clarification of the streams. The department regrets to advise that, while the majority of our mining companies and mill operators are willing to co-operate with us, yet



RED HEADED DUCK. $\frac{1}{2}$ Life-size.

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607

LARGE-MOUTHED BLACK BASS.
 $\frac{1}{3}$ Life-size.

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there are some who, while not defying the law, will resort to evasive methods.

This department contends that the refuse from mills, as well as the wash from dredges, will kill fish; also, that it will cause a deposit or sediment upon the rocks and sand in the bed of the stream, thereby killing all aquatic life and depriving our fish of their natural food. On the other hand, trout will not spawn in streams where this sediment is prevalent. If the department can show these facts, it claims that it has made a case, because it has shown either that the fish are destroyed or that their food and spawning places are destroyed.

There are various substances which flow into a stream that, chemically tested, would not be poison to a fish; yet these substances, if placed in the water, will finally drive all of the fish away. The trout depend for oxidation upon the 3 per cent of oxygen contained in pure water.

The man who has typhoid fever, caused from drinking impure water, is consoled but very little when assured that if the stream had some distance farther to run the water might have been pure.

A closer co-operation between the dwellers along our various streams and this department is desired. The department would appreciate information from our residents relative to large numbers of dead fish being seen upon the surface of a stream, or upon discoloration of the waters. The supreme courts of several of our eastern states, particularly New York and Pennsylvania, have held that pollution of public streams and waters is a public nuisance, and that it can be abated. Some time ago a suit was brought in New York against a paper-mill which was running refuse into a stream. The mill was a large one and represented an investment running into the millions, employing six or seven hundred operators. An injunction was granted by the lower court, and an appeal taken; the defendants setting up the plea that the injunction would work an injustice by virtue of the large investment in the mill and of the large number of employes. The Court of Appeals of the State of New York sustained the decision rendered by the lower court, and remarked that—

“Although the damage of the plaintiff may be slight as compared with the defendant’s expense of abating the condition, that is not the reason for reducing the judgment, for if that was followed out it would deprive the poor litigant of his little property by giving it to those already rich.”

I sincerely hope for the co-operation of our mining companies, and trust that this department will not be forced into litigation.

BLACK BASS

The large-mouthed black bass is considered by numerous sportsmen as one of the gamiest fish, and it would be extremely difficult to find a better variety for table use.

Some small effort has been made by this department to stock a few of our lakes with bass; but I regret that during the past period our time has been fully taken up in the propagation of trout, and the bass has consequently been slighted.

It is my intention to stock several of the lakes (and we have many on this side of the range that are well adapted to this species) with black bass during the coming summer months.

OUR GAME BIRDS

✓ From all information received, the department believes that our prairie chickens, grouse, and sage-hens are on the increase.

Recommendations as to the open season on these birds may be found on another page of this report.

I personally saw grouse and sage chickens that were killed during the open season last fall, and from the size of the birds, which in some instances was not much larger than that of a meadowlark, I believe that our season should open later, thereby allowing these birds to attain a reasonable growth before the hunting season opens.

ACKNOWLEDGMENTS

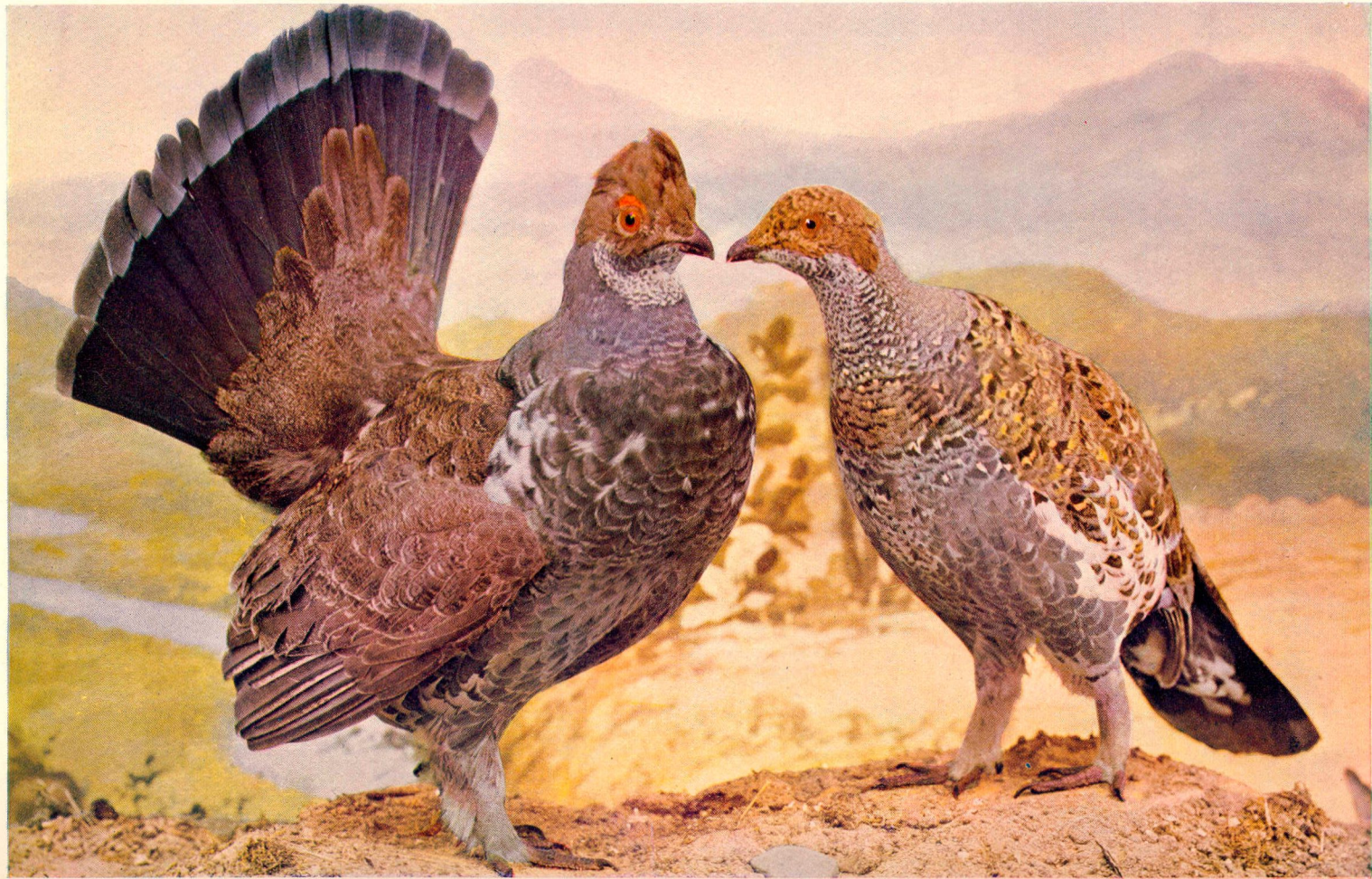
The department is indebted—

To the various railroads of Colorado, for the many courtesies extended in the matter of transporting eggs and young trout, and the return of the empty boxes and cans.

To the United States Forest Service, for the co-operation received at the hands of the supervisors and rangers. All of the rangers are deputized as game wardens, and this department fully appreciates the invaluable assistance rendered by the Forest Department.

To the United States Bureau of Fisheries, for consignments of eggs.

To the newspapers of the state, with but few exceptions, for the impartial reports of the operations of this department, and for the publishing of information to hunters and fishermen.



DUSKY GROUSE. (*Dendragapus obscurus*).

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DEATHS

It is with deep sorrow and regret that I mention the death of Frank Hayes, of Glenwood Springs, Chief Deputy Game Warden for the Third District.

His death occurred at St. Joseph's Hospital, Denver, on December 2, following an operation for appendicitis.

Mr. Hayes possessed all of the qualifications necessary for the position which he held, and this department suffered a severe loss by reason of his death.

HUNTING AND FISHING LICENSES

Under the Colorado laws, every person, regardless of sex or age, who desires to hunt must have a hunting license. The fee exacted from citizens of this state for this license is \$1; whereas the fee for non-citizens or non-residents is \$10.

Every male person sixteen years of age or over must have a license to fish, the fee for citizens of Colorado being \$1, and for non-citizens and non-residents, \$2.

The combination hunting and fishing license for non-citizens and non-residents is \$12; whereas the resident combined hunting and fishing license is but \$1.

The resident combined hunting and fishing license is meeting the approval of the sportsmen of our state, and I am frank to admit that no true sportsman raises any objection whatever to paying for this license, inasmuch as he appreciates the fact that the money so received is credited to the Game Cash Fund, and expended in the propagation of trout and the protection of our game and fish.

NEW HUNTING LICENSE

I have never quite understood why a hunting and fishing license, $4\frac{1}{2}$ by $5\frac{1}{2}$ inches in size—one that has to be folded at least once to be carried in the pocket, and folded twice to be placed in a card-case—was adopted by this department. In my efforts to secure a new form, I talked with several sportsmen, securing their ideas, and have decided upon a card—one that conforms in size to that of a railroad pass, and also to the automobile license. An order for the first installment of the 1915 issue has been placed. I trust my action in this matter will meet with the approval of all the people who carry licenses.

Incidentally, the cost of the new license is \$7 per one thousand less than the cost of the old-style license, which means a saving of at least \$500 to this department.

ARRESTS AND CONVICTIONS

A total of 179 arrests and 168 convictions has been secured during the period for violating the provisions of the game and fish laws. On the following pages will appear an itemized statement showing the number during the fiscal years of 1913 and 1914 separately.

No violation has been brought to my attention that was not promptly investigated, and an arrest ordered if the action was warranted by the evidence secured.

The department will show due diligence in the matter of the apprehension of violators in the future.

ARRESTS AND CONVICTIONS DURING 1913

Buying beaver hides.....	1	
Catching fish under size	2	
Fishing out of season.....	5	
Fishing without a license.....	3	
Hunting without a license.....	9	
Hunting on private property without permission.....	1	
Killing beaver unlawfully.....	7	
Killing deer and having deer meat in possession unlawfully.....	5	
Killing doves out of season.....	1	
Killing elk and having elk meat in possession unlawfully.....	5	
Killing mountain sheep.....	1	
Killing grouse out of season.....	4	
Killing pheasants.....	3	
Killing ptarmigan.....	1	
Killing quail.....	9	
Killing song birds.....	2	
Seining without permit.....	4	
Selling fish and importing without license.....	4	
Shooting ducks out of season.....	1	
Snaring fish.....	1	
		69
The state received from fines and convictions.....		\$ 618.21

ARRESTS AND CONVICTIONS DURING 1914

Catching fish under size.....	7
Catching fish unlawfully.....	19
Fishing without license.....	13
Fishing out of season.....	8
Having deer hides in possession unlawfully.....	1
Hunting without license.....	22
Importing and selling fish without license.....	1
Killing antelope.....	1
Killing beaver without permit.....	6
Killing ducks out of season.....	2
Killing deer.....	4
Killing elk.....	2
Killing grouse.....	1
Killing mountain sheep.....	2
Killing pheasants.....	11
Killing quail.....	5
Pollution of streams.....	2
Seining without permit.....	1
Selling wild ducks on market.....	1
Shooting at game from public highway.....	1
	110
The state received from fines and convictions.....	\$ 902.44

DETAILED REPORT OF RECEIPTS

DECEMBER 1, 1912, TO NOVEMBER 30, 1913

Received from county recorders, resident hunting and fishing licenses issued.....	\$25,488.50
Resident hunting and fishing licenses issued by office.....	8,378.00
Non-resident fishing licenses issued.....	1,944.25
Non-resident general hunting and bird licenses issued.....	789.50
Lakes, parks, and renewals of same.....	646.00
Preserves and renewals of same.....	51.00
Importers' licenses.....	350.00
Guide licenses.....	60.00
Seining permits.....	24.00
Taxidermists' licenses.....	75.00
Transportation permits.....	183.00
Specimen tags.....	38.00
Importation certificates.....	32.00
Seizures and sale of game and fish.....	332.82
Received from fines imposed on violators.....	618.21
Beaver permits issued.....	110.00
Miscellaneous.....	114.55
Total receipts.....	\$39,234.83

DECEMBER 1, 1913, TO NOVEMBER 30, 1914

Received from county recorders, resident hunting and fishing licenses issued.....	\$27,203.50
Resident hunting and fishing licenses issued by office.....	10,522.00
Non-resident fishing licenses issued.....	2,168.00
Non-resident general hunting and bird licenses issued.....	840.00
Lakes, parks, and renewals of same.....	289.00
Preserves and renewals of same.....	103.00
Importers' licenses.....	400.00
Guide licenses.....	30.00
Seining permits.....	22.00
Taxidermist's licenses.....	100.00
Transportation permits.....	197.00
Specimen tags.....	65.00
Importation certificates.....	30.00
Seizures and sale of game and fish.....	260.50
Received from fines imposed on violators.....	902.44
Received from beaver permits issued.....	118.00
Miscellaneous	22.91
	<hr/>
Total receipts.....	\$43,273.35
	<hr/>
Grand total receipts for biennial period.....	\$82,508.18

DISBURSEMENTS FROM GAME CASH FUND FOR THE
BIENNIAL PERIOD ENDING NOVEMBER 30, 1914

I have attempted to show herewith the expenditures made by both Mr. Shinn and myself. The following are disbursements made covering expenditures and bills incurred by Mr. Shinn for that part of the biennial period beginning December 1, 1912, and ending May 11, 1914.

NOTE.—The following amount charged to collecting spawn does not include the salaries of the men so employed, inasmuch as previous to May 12, 1914, field men appeared on the payroll and were paid as deputy game wardens.

Amount on hand in State Treasury December 1, 1912, to credit of		
Game Cash Fund.....	\$ 3,559.24	
Amount deposited with State Treasurer December 1, 1912, to May		
11, 1914.....	50,549.55	\$54,108.79
<hr/>		
Paid deputy game wardens.....	\$21,356.52	
Other salaries and expenses.....	7,022.49	
Purchase of fish eggs.....	3,193.09	
Transferred by State Auditor.....	770.75	
Collecting spawn and distributing.....	8,782.41	
Printing and stationery.....	2,200.99	
Office expense.....	2,113.04	
Rewards paid.....	100.00	
Feeding game birds.....	142.94	
Feeding antelope and deer.....	97.00	
Building pheasant pens and feed.....	287.70	
Horse pasture.....	40.00	
Refund on licenses.....	2.25	
Paid for black bass.....	70.00	
Paid for game birds.....	221.00	
Paid for frogs.....	50.00	
Paid for seines.....	138.71	
Paid for making egg-trays.....	53.00	
Care of deer.....	28.20	
Attorney fees.....	25.00	
Making egg-boxes.....	64.75	
Insurance on hatcheries.....	249.00	
Denver Hatchery—		
Salary.....	\$1,200.00	
Maintenance.....	1,299.53	2,499.53
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Glenwood Hatchery—		
Maintenance.....		190.52
La Plata Hatchery—		
Salary.....	\$ 600.00	
Maintenance.....	156.37	756.37
Del Norte Hatchery—		
Salary.....	\$ 160.00	
Maintenance.....	191.92	351.92
Estes Park Hatchery—		
Salary.....	\$1,833.35	
Maintenance.....	259.48	2,092.83
Pitkin Hatchery—		
Salary.....	\$ 695.00	
Maintenance.....	266.67	961.67
Antonito Hatchery—		
Salary.....	\$ 300.00	
Maintenance.....	161.00	461.00
Buena Vista Hatchery—		
Salary.....	\$ 200.00	
Maintenance.....	529.89	729.89
Routt County Hatchery—		
Maintenance.....		77.19
Grand County Hatchery—		
Salary.....	\$ 100.00	
Maintenance.....	71.35	171.35
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May 12, 1914.....	\$55,301.11	\$54,108.79

Thus it will be seen that on May 12, 1914 (the day I secured possession of the office) there was a deficit amounting to \$1,192.32 in the Game Cash Fund; that is, vouchers had been drawn, covering bills incurred by my predecessor, which, if paid, would have resulted in the Game Cash Fund being overdrawn.

The following will show the receipts and disbursements subsequent to May 12, 1914, and it will be noted that the deficit has been overcome and that a substantial balance remains to the credit of the Game Cash Fund:

Brought forward.....	\$55,301.11	\$54,108.79
Amount deposited with State Treasurer, May 12 to November 30, inclusive.....		31,958.63
Disbursements, same period:		
Paid deputy game wardens.....	\$ 4,603.33	
Other salaries and expenses.....	2,006.04	
Purchase of trout eggs.....	1,830.00	
Collecting spawn and distributing trout.....	7,872.25	
Printing and stationery.....	387.04	
Office expense.....	1,048.12	
Paid rewards.....	125.00	
Feeding and distributing pheasants.....	51.62	
Miscellaneous.....	258.00	
Denver Hatchery—		
Salary.....	450.00	
La Plata Hatchery—		
Salary.....	300.00	
Del Norte Hatchery—		
Salary.....	123.00	
Estes Park Hatchery—		
Salary.....	\$666.35	
Maintenance.....	56.00	722.35
Pitkin Hatchery—		
Salary.....	\$450.00	
Maintenance.....	8.43	458.43
Antonito Hatchery—		
Maintenance.....		27.50
Buena Vista Hatchery—		
Salary.....	\$300.00	
Maintenance.....	483.12	783.12
Aspen Hatchery—		
Salary.....	\$150.00	
Maintenance.....	25.00	175.00

Marvine Hatchery—			
Salary.....		50.00	
Fort Collins Hatchery—			
Salary.....		150.00	
Cottonwood Lakes Hatchery (Molina)—			
Salary.....	\$225.00		
Maintenance.....	38.60	263.60	
<hr/>			
Paid for waders.....		11.50	21,695.91
<hr/>			
			\$76,997.02
			\$86,067.42
<hr/>			
Total deposits.....			\$86,067.42
Total disbursements.....			76,997.02
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Balance on hand to the credit of Game Cash Fund.....			\$ 9,070.40

NOTE.—The heaviest expense of the entire year is incurred in the spawn-taking seasons, and payments are made in July and November.

TOTAL NUMBER OF HUNTING AND FISHING LICENSES
ISSUED BY VARIOUS COUNTIES DUR-
ING THE YEAR 1913

Counties	Combination				
	Resident Hunting	Non-Resident Hunting	Hunting and Fishing	Bird Hunting	Non-Resident Fishing
Commissioner's office.....	8,439	17	8	12	451
Adams.....	224	.....	.....	.....	.....
Alamosa.....	28	.....	.....	.....	.....
Arapahoe.....	276	.....	.....	.....	.....
Archuleta.....	184	.....	.....	.....	.....
Baca.....	10	.....	.....	.....	.....
Bent.....	205	.....	.....	.....	.....
Boulder.....	1,755	.....	.....	.....	50
Clear Creek.....	337	.....	.....	.....	11
Chaffee.....	782	.....	.....	.....	20
Cheyenne.....	5	.....	.....	.....	.....
Conejos.....	599	.....	.....	.....	9
Custer.....	135	.....	.....	.....	.....
Costilla.....	161	.....	.....	.....	2
Crowley.....	135	.....	.....	.....	.....
Delta.....	1,368	.....	.....	.....	.....
Denver.....	942	.....	.....	.....	.....
Dolores.....	113	.....	.....	.....	.....
Douglas.....	87	.....	.....	.....	.....
Eagle.....	538	.....	.....	.....	15
Elbert.....	36	.....	.....	.....	.....
El Paso.....	1,068	4	.....	10	79
Fremont.....	1,736	3	.....	.....	11
Garfield.....	1,193	20	.....	.....	47
Gilpin.....	288	.....	.....	.....	.....
Grand.....	314	.....	.....	.....	39
Gunnison.....	1,125	8	.....	2	54
Hinsdale.....	110	.....	.....	.....	3
Huerfano.....	846	1	.....	.....	1
Jefferson.....	261	.....	.....	.....	.....
Jackson.....	175	.....	.....	.....	.....
Kiowa.....	13	.....	.....	.....	.....
Kit Carson.....	24	.....	.....	.....	.....
Logan.....	491	.....	.....	.....	1
Larimer.....	1,955	2	.....	2	59
Lake.....	841	.....	.....	.....	.....
La Plata.....	793	.....	.....	.....	14

TOTAL NUMBER OF HUNTING AND FISHING LICENSES
ISSUED BY VARIOUS COUNTIES DUR-
ING THE YEAR 1913—Continued

Counties	Combination				
	Resident Hunting	Non-Resident Hunting	Hunting and Fishing	Bird Hunting	Non-Resident Fishing
Las Animas.....	1,052	.....	.....	.....	.....
Lincoln.....	26	.....	.....	.....	.....
Mesa.....	1,058	.....	.....	.....	2
Mineral.....	269	1	.....	.....	32
Montezuma.....	182	.....	.....	.....	.....
Montrose.....	766	.....	.....	.....	6
Morgan.....	521	.....	.....	.....	.....
Moffat.....	153	.....	.....	.....	.....
Ouray.....	269	.....	.....	.....	.....
Otero.....	655	.....	.....	.....	.....
Park.....	155	.....	.....	.....	4
Pitkin.....	483	.....	.....	.....	10
Phillips.....	58	.....	.....	.....	.....
Prowers.....	246	.....	.....	.....	.....
Pueblo.....	2,248	.....	.....	.....	9
Routt.....	893	.....	.....	.....	24
Rio Blanco.....	323	.....	.....	.....	21
Rio Grande.....	609	.....	.....	.....	4
Saguache.....	303	.....	.....	.....	.....
Sedgwick.....	131	.....	.....	.....	.....
Summit.....	213	.....	.....	.....	1
San Miguel.....	298	.....	.....	.....	2
San Juan.....	191	.....	.....	.....	.....
Teller.....	710	.....	.....	.....	.....
Washington.....	37	.....	.....	.....	.....
Weld.....	1,391	.....	.....	.....	17
Yuma.....	90	.....	.....	.....	.....
Totals.....	40,922	56	8	26	998

NUMBER OF HUNTING AND FISHING LICENSES ISSUED
BY THE VARIOUS COUNTY CLERKS DUR-
ING THE YEAR 1914
(Incomplete)

NOTE.—Our records will show a material increase in the number of licenses sold during 1914, when the final reports are received from all of the county clerks and recorders.

You will note that but four of the sixty-three counties have made complete returns; three of the counties report monthly, and the remainder, to the number of fifty-six, are from three to six months behind in sending in their reports. It is estimated that our receipts from the sale of hunting licenses will exceed \$50,000 for the year.

Counties	Date of		Resident Hunting	Non- Resident Hunting	Combination Hunting and Fishing	Bird Hunting	Non- Resident Fishing
	Last Report						
Commissioner's office.....			7,658	26	9	45	703
Adams.....	Oct.	1	231	.....	.....	.....	.....
Alamosa.....	Aug.	3	211	.....	.....	.....	.....
Arapahoe.....	July	3	166	.....	.....	.....	.....
Archuleta.....	Aug.	4	63	.....	.....	.....	3
Baca.....	Oct.	26	.....	.....	.....	.....	.....
Bent.....	Oct.	2	175	.....	.....	.....	.....
Boulder.....	Oct.	22	2,299	.....	.....	.....	49
Chaffee.....	July	23	721	.....	.....	.....	3
Cheyenne.....	Oct.	8	4	.....	.....	.....	.....
Clear Creek.....	Nov.	27	200	.....	.....	.....	.....
Conejos.....	Oct.	2	430	.....	.....	.....	10
Costilla.....	Oct.	26	104	.....	.....	.....	4
Crowley.....	Oct.	27	90	.....	.....	.....	.....
Custer.....	Oct.	12	136	.....	.....	.....	2
Delta.....	Oct.	9	1,305	.....	.....	.....	5
Denver.....	Oct.	15	900	.....	.....	.....	.....
Dolores.....	Final		116	.....	.....	.....	.....
Douglas.....	Oct.	16	99	.....	.....	.....	.....
Elbert.....	Oct.	27	21	.....	.....	.....	.....
El Paso.....	Oct.	13	1,158	5	.....	4	90
Eagle.....	Oct.	6	709	.....	.....	.....	17
Fremont.....	Final		1,459	.....	.....	.....	11
Garfield.....	Oct.	25	1,396	11	.....	2	31
Gilpin.....	Oct.	12	232	.....	.....	.....	.....
Grand.....	Nov.	11	379	.....	.....	.....	20
Gunnison.....	Oct.	9	1,213	13	.....	.....	75
Hinsdale.....	Oct.	10	91	.....	.....	.....	4
Huerfano.....	Nov.	10	319	.....	.....	.....	.....
Jackson.....	Oct.	6	325	.....	.....	.....	19

NUMBER OF HUNTING AND FISHING LICENSES ISSUED
BY THE VARIOUS COUNTY CLERKS DURING THE YEAR 1914—Concluded
(Incomplete)

Counties	Date of Last Report	Resident Hunting	Non-Resident			Non-Resident Fishing
			Hunting	Combination Hunting and Fishing	Bird Hunting	
Jefferson.....	Oct. 22	333	.....	.....	.....	3
Kiowa.....	Oct. 20	13	.....	.....	.....	.....
Kit Carson...	Oct. 22	35	.....	.....	.....	.....
Lake.....	Final	1,213	.....	.....	.....	4
Las Animas...	Dec. 2	368	.....	.....	.....	.....
La Plata.....	Oct. 13	706	2	.....	.....	29
Larimer.....	Final	2,547	.....	.....	.....	71
Lincoln.....	Oct. 17	46	.....	.....	.....	.....
Logan.....	Nov. 10	778	.....	.....	.....	2
Mesa.....	Oct. 20	1,085	.....	.....	.....	7
Mineral.....	Oct. 16	193	.....	.....	.....	52
Moffat.....	Oct. 3	179	.....	.....	.....	1
Montrose.....	Oct. 3	719	.....	.....	.....	.....
Montezuma...	Oct. 6	140	.....	.....	.....	.....
Morgan.....	Oct. 3	686	.....	.....	.....	.....
Otero.....	Nov. 27	489	.....	.....	.....	.....
Ouray.....	Oct. 12	231	.....	.....	.....	.....
Park.....	Oct. 19	248	.....	.....	.....	6
Phillips.....	Oct. 2	141	.....	.....	.....	.....
Pitkin.....	Oct. 20	760	.....	.....	.....	43
Pueblo.....	Nov. 30	2,279	1	.....	.....	5
Prowers.....	Nov. 2	145	.....	.....	.....	.....
Totals.....		35,514	58	9	51	1,269

APPROPRIATIONS 1913-14

SHOWING AMOUNTS GRANTED FOR SALARIES, TRAVELING EXPENSES, AND
MAINTENANCE, TOGETHER WITH UNUSED BALANCES

	Salary	Unused	Expenses	Unused
Game and Fish Commissioner.....	\$ 4,000.00		\$ 1,200.00	
	3,002.73	\$ 997.27	785.25	\$ 414.75
Deputy Commissioner.....	\$ 3,000.00		\$ 960.00	
	2,000.00	1,000.00	610.15	349.85
Superintendent Hatcheries.....	\$ 3,000.00		\$ 1,000.00	
	2,375.00	625.00	704.54	295.46
Five Chief Game Wardens.....	\$12,000.00		\$ 4,800.00	
	6,700.00	5,300.00	1,981.28	2,818.72
Clerk and stenographer.....	\$ 3,000.00			
	2,375.00	625.00	Maintenance	
Superintendent Denver Hatchery.....	\$ 2,400.00		\$ 1,800.00	
	1,900.00	500.00	1,418.65	381.35
Superintendent Gunnison Hatchery....	\$ 2,400.00		\$ 1,800.00	
	750.00	1,650.00	676.06	1,123.94
Superintendent Glenwood Hatchery ...	\$ 2,400.00		\$ 1,800.00	
	1,900.00	500.00	981.16	818.84
Superintendent Routt County Hatchery	\$ 2,400.00		\$ 1,800.00	
	1,900.00	500.00	693.70	1,106.30
Superintendent Grand County Hatchery	\$ 2,400.00		\$ 1,000.00	
	2,200.00	200.00	448.33	551.67
Superintendent La Plata Hatchery.....	\$ 2,400.00		\$ 1,800.00	
	1,900.00	500.00	906.35	893.65
Superintendent Del Norte Hatchery....	\$ 2,400.00		\$ 1,800.00	
	1,900.00	500.00	960.71	839.29
		\$12,897.27		\$ 9,593.82
Salaries unused.....				\$12,807.27
Expenses unused.....				9,593.82
Total amount unused and returned to the General Fund for period.....				\$22,491.09

PAST APPROPRIATIONS

The Nineteenth General Assembly appropriated for the Game and Fish Department for the biennial period ending November 30, 1914, \$61,500, which covered the salary and traveling expenses of the Game and Fish Commissioner, Deputy Game and Fish Commissioner, Superintendent of Hatcheries, five Chief Game Wardens, and the salaries only of a clerk and stenographer, and of the superintendents of seven hatcheries. There was also included in this item a maintenance fund of \$900 each for the seven hatcheries. All of the operations of the department, as well as all of the salaries of other members, were paid from the Game Cash Fund. During the last biennial period \$22,491.09, the total amount of the unused appropriation, reverted to the General Fund of the state.

For the months of November and December we are running upon our own resources, all vouchers being drawn on the Game Cash Fund.

I believe it will not be necessary to ask for any appropriation after the 1915-16 period, as I am confident the department will then be self-sustaining.

APPROPRIATIONS

COMPARATIVE TABLE, SHOWING THE AMOUNTS GRANTED FOR EACH OF THE
LAST FIVE BIENNIAL PERIODS, THE AMOUNT USED, AND THE TOTAL
AMOUNT UNUSED, WHICH REVERTED BACK TO THE GENERAL FUND.

Period	Appropriated	Used	Unused Balance
			Returned to General Fund
1905-06.....	\$57,700.00	\$50,709.09	\$ 6,990.91
1907-08.....	64,100.00	60,029.15	4,070.85
1909-10.....	61,700.00	59,820.01	1,879.99
1911-12.....	64,450.00	62,100.67	2,349.33
1913-14.....	61,560.00	39,068.91	22,491.09

NEEDED APPROPRIATIONS

It is estimated that the following amounts are necessary, under the present law, for salaries and expenses in the operation of this department for the next biennial period:

Game and Fish Commissioner—		
Salary.....	\$ 4,000.00	
Traveling expenses.....	1,800.00	\$ 5,800.00
Deputy Commissioner—		
Salary.....	\$ 3,000.00	
Traveling expenses.....	960.00	3,960.00
Clerk and Stenographer—		
Salary.....		3,000.00
Five Chief Game Wardens—		
Salary for five.....	\$12,000.00	
Traveling expenses.....	4,800.00	16,800.00
General Superintendent of Fish Hatcheries—		
Salary.....	\$ 3,000.00	
Traveling expenses.....	1,000.00	4,000.00
Superintendent Denver Hatchery—		
Salary.....		1,200.00
Superintendent Glenwood Hatchery—		
Salary.....		1,200.00
Superintendent Routt County Hatchery—		
Salary.....		1,200.00
Superintendent Del Norte Hatchery—		
Salary.....		1,200.00
Superintendent La Plata Hatchery—		
Salary.....		1,200.00
Superintendent Gunnison County Hatchery—		
Salary.....		1,200.00
Superintendent Grand County Hatchery—		
Salary.....		1,200.00
For maintenance:		
Denver Hatchery.....		3,000.00
Glenwood Hatchery.....		2,100.00
Routt County Hatchery.....		1,800.00
Del Norte Hatchery.....		1,800.00
La Plata Hatchery.....		2,000.00
Gunnison County Hatchery.....		1,800.00
Grand County Hatchery.....		1,500.00

For collecting spawn.....		3,000.00
For distributing fish.....		1,000.00
Special Chief Game Warden for Denver—		
Salary.....	\$ 1,200.00	
Traveling expenses.....	960.00	2,160.00
		<hr/>

SUGGESTED SPECIAL APPROPRIATIONS

For the purpose of purchasing, breeding, and caring for game birds to be liberated . . .	\$2,500.00	
For either the purchase of the Pitkin Hatchery, or the purchase of a suitable site and the erection of a hatchery in Gunnison County, not to exceed	7,500.00	
For the repairing of buildings and water-supply system, and the painting of the hatchery and superintendent's dwelling at the Del Norte Hatchery	400.00	
For painting the hatchery and superintendent's dwelling at Glenwood Hatchery	\$150.00	
For enlarging and cementing the fish ponds at the Glenwood Hatchery	200.00	
For placing a foundation under the Glenwood Hatchery	100.00	
Additional troughs in the Glenwood Hatchery	150.00	600.00
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For raising the foundation and placing a new floor in the La Plata Hatchery at Durango	\$200.00	
For building an addition on the north end of the hatchery buildings at Durango, covering the spring-house and water supply	350.00	
For painting the hatchery and superintendent's dwelling at Durango . .	150.00	700.00
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For new fish troughs in the Routt County Hatchery at Steamboat Springs		500.00
Cement work at the Denver Hatchery, development of water supply, and building new retaining-ponds	\$200.00	
For new woven-wire fence at the Denver Hatchery, enclosing what is now known as the "Picnic Grounds," and in order to prevent ducks and hogs from interfering with our display ponds	200.00	
Improving and painting the hatchery and dwelling at the Denver Hatchery	150.00	550.00
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You will note that I have made no mention of needed appropriations for the operation of the balance of our hatcheries, of which there are thirteen being operated by this department. It is proposed to operate these latter hatcheries from moneys available in the Game Cash Fund.

If the appropriations are made as suggested in this report, including both salaries and fixed charges, and those under special headings, the department will be enabled to make the necessary improvements at the many hatcheries, and will be put in such financial condition that it will be self-supporting in the future, and will likely be able to return a substantial sum to the General Fund at the end of each biennial period.

COMPARATIVE TABLE, SHOWING NUMBER OF EACH
VARIETY OF TROUT FRY, TOGETHER WITH THE
TOTALS, DISTRIBUTED EACH YEAR FOR THE PAST
TWELVE YEARS

Year	Brook Fry	Rainbow Fry	Native Fry	Grand Total
1903.....	168,000	1,182,000	1,272,500	2,622,500
1904.....	1,814,100	652,500	3,643,500	8,641,600
1905.....	1,449,000	403,000	2,649,500	4,501,500
1906.....	732,500	977,500	4,388,000	6,096,000
1907.....	1,825,000	614,000	2,804,000	5,243,000
1908.....	3,721,500	1,311,000	4,431,000	9,463,500
1909.....	1,884,500	1,765,000	3,167,000	6,816,500
1910.....	2,490,000	1,593,700	3,232,500	7,316,200
1911.....	5,339,849	1,881,719	4,041,811	11,263,379
1912.....	4,400,000	1,975,000	4,905,000	11,280,000
1913.....	3,226,000	1,323,000	3,180,900	7,730,400
1914.....	5,673,000	6,280,200	7,100,300	19,053,500

COMPARATIVE TABLE, SHOWING THE NUMBER OF TR
YEAR FOR PAST

Hatchery	1903	1904	1905	1906	1907
Denver.....	869,000	1,402,100	1,177,500	1,276,000	1,114,500
Durango.....	786,000	2,569,000	2,209,000	1,500,000	1,355,500
Gunnison.....	627,000	740,000	715,000	1,300,000	447,000
Routt.....	265,500	1,040,000	.....	255,000	466,000
Emerald Lakes.....	75,000	268,000	400,000	425,000	250,000
Glenwood Springs.....	.....	.....	.....	1,055,000	1,293,000
Grand County.....	.....	.....	.....	268,000	.....
Del Norte.....	.....	.....	.....	.....	.....
Marvine.....	.....	.....	.....	.....	.....
Grand Mesa.....	.....	.....	.....	.....	.....
Colbran.....	.....	.....	.....	.....	.....
Molina.....	.....	.....	.....	.....	.....
Boulder.....	.....	.....	.....	.....	.....
Estes Park.....	.....	.....	.....	.....	.....
Buena Vista.....	.....	.....	.....	.....	.....
Antonito.....	.....	.....	.....	.....	.....
Aspen.....	.....	.....	.....	.....	.....
Fort Collins.....	.....	.....	.....	.....	.....
Cherokee Park.....	.....	.....	.....	.....	.....
Georgetown.....	.....	.....	.....	.....	.....
Pitkin.....	.....	.....	.....	.....	.....
Grand Lake.....	.....	.....	.....	.....	.....
Totals.....	2,652,500	6,019,100	4,501,500	6,096,000	5,243,000

OUT FRY DISTRIBUTED FROM EACH HATCHERY EACH TWELVE YEARS

1908	1909	1910	1911	1912	1913	1914
1,483,000	1,184,000	1,892,000	1,415,100	2,576,000	1,792,000	4,023,500
2,104,000	892,000	908,000	1,249,000	1,355,000	1,064,000	2,170,000
985,000	621,000	651,000	545,000	1,030,000	321,000	Now Pitkin; see below
427,000	655,000	625,000	1,740,000	1,075,000	780,000	1,125,000
80,000	310,000	300,000	618,000	520,000	.....	430,000
2,321,000	1,677,500	1,031,000	1,963,000	1,628,000	1,133,000	2,766,000
567,000	330,000	700,000	605,000	460,000	315,000	Now Gd. Lake see below
381,000	705,000	699,200	1,495,000	1,076,000	895,400	1,418,000
428,000	442,000	320,000	319,000	200,000	330,000	480,000
300,000	.....	.....	.....	.....	.....	790,000
.....	.....	190,000	.....	.....	.....	.....
.....	.....	.....	350,000	440,000	400,000	250,000
.....	.....	.....	.....	300,000	100,000	.....
447,500	.....	.....	764,279	620,000	530,000	1,406,000
.....	.....	.....	.....	.....	150,000	.....
.....	.....	.....	.....	.....	.....	840,000
.....	.....	.....	.....	.....	.....	324,000
.....	.....	.....	.....	.....	.....	644,000
.....	.....	.....	.....	.....	.....	100,000
.....	.....	.....	.....	.....	.....	100,000
.....	.....	.....	.....	.....	.....	1,623,000
.....	.....	.....	.....	.....	.....	564,000
14,756,500	6,816,500	7,316,200	11,263,379	11,280,000	7,730,400	19,053,500

SUGGESTED CHANGES IN THE GAME AND FISH LAWS

I respectfully recommend for the consideration of the incoming legislature a closed season on bear.

I further recommend that the date of the opening of the season on grouse and sage chickens be made thirty days later; the closing of these seasons to be governed by the legislature.

I believe that rabbits should be construed as game and protected; the open season to be from October 1 to February 28 following.

As regards the open season on ducks, geese, and other waterfowl now having an open season in Colorado, I would suggest that an effort be made, in co-operation with the federal authorities at Washington, to have the date of the closing of the season changed from December 16 to March 1, and that our legislature enact a law in conformity herewith.

It appears to me that the Nineteenth General Assembly erred when it closed the season entirely on bass and catfish, and I recommend that the open season on these two species of fish be made to conform to the open season on trout.

Section 2759a should be amended to read: "Open season for whitefish, sunfish, black bass, and wall-eyed pike to be the same as for trout and grayling—May 1 to October 31."

Section 2759c: The right given by this division is limited to food purposes, and it should be amended to read: "No person shall kill more than ten birds in the aggregate of all kinds in any one calendar day, nor have in his possession more than fifteen birds in the aggregate of all kinds at any one time; and the right herein given to take fish is limited to fifteen pounds in any one calendar day, but no person shall have in his possession more than twenty-five pounds of fish at any one time."

CONCLUSION

I trust that the operations of the Game and Fish Department during the past biennial period have met with your approval. While we have exceeded our expectations in some particulars, much work of improvement yet remains undone.

Efficiency and economy are the greatest factors of success in the business world, and I have endeavored to secure the very best results for the least expenditure. While I have succeeded in a measure, and have during 1914 obtained far greater results, at less expense, than during any former biennial period, I believe that next year we shall be able to show a greater difference both in improvements in the service and in money saving.

I personally desire to thank you for the many courtesies you have extended to me in the administration of the affairs of my office, for the consistent co-operation we have received at your hands, and also for the interest you have taken, and the kindly counsel and advice furnished, in matters pertaining to the department.

Respectfully submitted,

WALTER B. FRASER,
Game and Fish Commissioner.