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FILE

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF BIOLOGICAL SURVEY

IN REPLY REFER TO

R-Crescent Lake

Mumper, Nebraska
January 23, 1934.

Chief,
Bureau of Biological Survey,
Washington, D.C.

Dear Sir:

I am inclosing herewith a Report on Reservation Wild
Life and Activities Appurtanant Thereto for the First Half of
the Fiscal Year 1934.

Very truly yours,

William T. Mumper

Acting Supervisor,
Crescent Lake Migratory Bird Refuge.



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William J. Freeman

Acting Supervisor,
Crescent Lake Migratory Bird Refuge.



CRESCENT LAKE MIGRATORY BIRD REFUGE

REPORT ON RESERVATION WILD LIFE AND ACTIVITIES
APPURTENANT THERETO

FIRST HALF

FISCAL YEAR 1934

I. Report on Wild Life observed during the period.

1. Birds

An estimate indicated that approximately 2400 pairs of ducks, 2500 pairs of grebes, and 3000 pairs of coots stayed on the refuge during the nesting season and thru the summer. Grebe and Coot were the principal nestors with blue-winged teal the most important nestor among the ducks. Gadwall and mallard were next in importance.

Water levels were low during the summer and fall many of the smaller lakes being practically dry. Large marginal areas of pondweeds were left high and dry before the fall migration started.

Bluewinged teal began to leave the refuge on the fall migration about October first and were mostly gone by November first. The height of the fall migration was reached during the latter part of October. A census taken October 29 and 31 indicated about 40,000 ducks on the Refuge. This number was divided approximately as follows: mallard 10,000; shoveller, 7100; gadwall, 5900; pintail, 4800; baldpate, 2400; bufflehead, 2200; scaup, 2100; teal, 1500; canvas back, 700. Old timers in the region stated that there were more mallards this year than had been seen in several years. sue

A snowstorm and accompanying cold spell on November 4 and 5 closed all lakes except Blue and part of Island. All ducks left the Refuge except about 4000, mostly mergansers, shovellers, and mallards. The lakes opened up again in a few days and many ducks returned to the lakes. A count November 12 showed 9000 mergansers, 4500 shovellers, 2000 mallards, 4500 of other species. On December 18 all lakes were frozen except small parts of Island and Blue Lakes. Ducks estimated; 4000 mergansers, mallards, and shovellers. On January 1 all lakes were closed and no ducks present on the Refuge.

In driving over the Refuge only occasional coveys of grouse and prairie chicken are flushed. There are two colonies of ring-necked pheasant numbering about 25 birds each. One located on the north end of Island Lake and the other at Refuge Headquarters.

Birds (Cont) -

Birds observed and definitely identified during the period;
underlined species indicate that nests or young birds were
observed indicating nesting activities.

Waterfowl

Mallard
Pintail
Gadwall
Blue-winged teal
Green-winged teal
Canvasback
Redhead
Scaup
Baldpate
Shoveller
Ruddy
American merganser
Red-breasted merganser
Hooded merganser
American golden-eye
Buffle-head
Coot
Western Grebe
Horned Grebe
Pied-billed grebe
Black tern
Common tern
White pelican
Canada goose
Snow goose
White-fronted goose
Whistling swan
Sabine gull
Herring gull

Shore Birds

Avocet
Long-billed curlew
Western willet
Western sandpiper
Lesser yellow-legs
Upland plover
Pail
Wilson phalarope
Wilson snipe
Killdeer
Semi-palmated plover
Greater blue heron
Black-crowned night heron
American bittern
Sandhill crane

Game Birds

Prairie hen
Sharp-tailed grouse
Ring-necked pheasant
Mourning dove

Birds of Prey

American eagle
Golden eagle
Burrowing owl
Barn owl
American goshawk
Marsh hawk
Prairie falcon
Osprey
Sparrow hawk

Birds observed (Cont)

Insectivorous

Red-winged blackbird
Yellow-headed blackbird
Brewer blackbird
Meadow lark
Horned lark
Lark bunting
Bob-o-link
Red-headed woodpecker
Red-shafted flicker
Night hawk
Kingbird
Arkansas kingbird

Magpie
Blue jay
Crow
Vesper sparrow
White-crowned sparrow
White-rumped shrike
Brown thrasher
Robin
Nashville warbler

2. Animal Life

(a) Muskrats - Muskrats are on the increase in many of the Refuge lakes but public trapping to decrease their numbers is not believed necessary for 1934. Since June 1933 a muskrat fur condition study has been carried on in cooperation with the Division of Fur Resources. At 20-day intervals a small number of muskrats are trapped and the pelts sent to Washington for examination and grading.

(b) Coyotes - Coyotes are plentiful on the Refuge. A communication from Mr. Louis Knowles, Predatory Animal Leader for this district indicated that there would be little chance of getting a government trapper assigned to the Refuge to trap coyotes during the winter of 1933-34.

(c) Antelope - Occasional antelope are seen on the south east part of the Refuge during the summer and fall.

II. Other Activities

1. Grazing - On January 1 approximately 3000 head of cattle were being wintered on the West Division of the Refuge. The East Division of the Refuge, which is used by the Abbott Cattle Company for summer pasture, was somewhat overgrazed this last season. Two successive drought years have considerably lowered the quality of the range. The Abbott Company started approximately 3500 head of cattle on this pasture, which number is under the 4000 limit allowed under the grazing reservation. After August 15 this number was cut to 2000 head for the balance of the season. Even with the decreased use of the range showed very definite signs of overgrazing when the cattle were taken off after October 1. My letter of January 22, sent to Washington

Office, covers the situation in more detail and outlines possible solutions.

Permanent sample plots to study range conditions have been set up on the summer pasture area.

2. Protection - No violations have been noted on the Refuge during this period.

A small fire started in rushes spread on the main road across the east part of the Refuge was put out by Deputy Keenan and two helpers after burning along the road for about $\frac{1}{4}$ mile. Range grass bordering the road was short so that the fire did not spread beyond the road. There were no other fires on the Refuge during the period.

Galvanized metal fire caches were set up at the Island Lake Recreational Area and on the east end of the Refuge at main road entrance. Each cache contains 8 long-handled shovels, six 16-quart galvanized buckets, and several gunny sacks. These caches are accessible to the public but are marked "For Fire Use Only". A similar set up is kept at Refuge Headquarters for fire suppression. Four back-pack pumps with tanks of $4\frac{1}{2}$ gallon capacity were purchased for fire protection use. One of these has been assigned to Deputy Keenan, one to the boat camp on the Island Lake Recreational Area, and two to Refuge Headquarters. A Hauck fire gun for setting backfires has been purchased and is kept at Headquarters.

3. Improvements and Developements

The woven-wire fence at the Refuge Headquarters site has been completed including an improved auto-gate and cattle guard to permit entrance without opening and closing gate.

A temporary fence was put up to protect the recently started experimental windbreak on Gimlet Lake. This fence will be replaced by a permanent one to be constructed in the spring of 1934 under the Public Works program.

Several miles of roads within the Refuge were improved by spreading rushes over sandy stretches and cutting down sharp curves. A road fill $1/8$ mile in length with culvert was built up across a low place in Headquarters meadow. In previous years water standing in this low spot necessitated a bad detour during the wet season.

More improved boundary posts were put up with funds made available during this period. "Private road-No Trespassing" signs were prepared and set up on all minor roads, thus limiting public traffic thru the Refuge to main roads only.

A detailed plan for construction of a telephone line into Refuge Headquarters from Alliance, Nebraska was prepared and sent to Washington. A portion of the regular 1934 allotment was assigned to this project but later it was found that the amount assigned was insufficient and more could not be spared. It is hoped that the telephone line construction can be carried out this coming year under the Public Works Program.

Water and Algal samples were collected from several of the lakes and sent to the Division of Food Habits Research for analysis and identification. It is planned to make some tests with copper sulphate to determine possibilities of eliminating algal "bloom" from certain of the lakes.

On July 18-19, Mr. E. C. O'Roke, of the University of Michigan, visited the Refuge. Mr. O'Roke was looking for signs of the buffalo gnat, carriers of a blood disease attacking ducks. None were found in waters of the Refuge.

Mr. A. C. Martin of the Division of Food Habits Research, visited the Refuge from August 9 to September 6, making a study of duck food plant conditions and also general plant conditions on the Refuge.

The attempt of the Lakewater Carrying Company to get authorization to lower their headgate on Crescent Lake was nominally successful. In the State Engineer's decision handed down after a hearing July 20, the irrigation company was allowed to lower their gate four feet but if damage results either to the Refuge or to adjoining grazing lands, due to lower water levels, the company may be stopped from lowering the water level. Work on the new headgate has not been started. To cooperate in preparing plans for best measuring changes in water levels resulting from any lowering of Crescent Lake, Mr. R. M. Leggette of the U. S. Geological Survey, visited the Refuge October 24-28. At Mr. Leggette's suggestion eleven drive point test wells were put down at scattered points over the west and central parts of the Refuge. These wells were to be used in measuring changes in surface water levels. Temporary gauges were placed in nine important lakes most likely to be effected by the lowering of water level of Crescent Lake. These temporary lake gauges were tied in to permanent Bench Marks on shore.

The nesting study started in the Spring of 1933 was covered by a report sent in some time ago. It is planned to carry on this study again in 1934.

we Duck sickness again appeared on Black Steer Lake which lies just to the north of the Refuge. The greatest mortality was observed from August 18 to about August 28. Not over 75 birds died on this lake from the sickness. Two sick teal were found near Red Kate Lake on the Refuge. These were taken to Headquarters where they were revived, being fed fresh water and food. After a week they were banded and released.

4. Public Relations

Members of the North Platte Valley Sportsmen's Association are sponsoring a plan to obtain Public Works funds for fencing with woven-wire, a considerable area within the Refuge. The purpose of this area to be goose propagation. The geese for stocking the area would be furnished by the sportsmen. On November 20 I called on Dr. Silvernail of Bridgeport, Nebraska, leader of the movement. At that time I invited Dr. Silvernail to visit the Refuge. On December 10 Dr. Silvernail and a party of sportsmen visited the Refuge. A letter dated December 22 and sent to Washington covers in detail the activities to date on this project.

Members of the Nebraska State Game Department under Deputy E. Sinner planned to work the North Platte River thru Garden County and salvage crippled geese known to be there. It was then hoped that these geese might be cared for on the Crescent Lake Refuge. This work was not started until December 15. I assisted them in the first days work on the River. No live crippled birds were found but several skeletons were observed. Two more days were unsuccessful and indicated that the cripples had been there at the close of the hunting season but starvation, coyotes, and eagles had cleaned them out before December 15th. It is planned to carry on this work again next year starting activities immediately after the close of the regular hunting season.

Respectfully submitted,



William T. Hummer.

Acting Supervisor,
Crescent Lake Migratory Bird Refuge.

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