

BRANCH OF WILDLIFE REFUGES NARRATIVE REPORTS

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REFUGE CRESCENT LAKE and NORTH PLATTE

PERIOD JAN - APR 1958

50
195
16
17
18

CRESCENT LAKE NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

1 January to 30 April, 1958

PERSONNEL

Richard S. Rodgers Refuge Manager
Christ R. Schuler, Jr. Maintenceman
Fred R. Rusch, Jr. Clerk

TEMPORARY-INTERMITTENT PERSONNEL

Lloyd L. Keller 20 January to 20 February

TABLE OF CONTENTS

I. GENERAL	Page
A. Weather Conditions	3
B. Habitat Conditions	3
II. WILDLIFE	
A. Migratory Birds	4
B. Upland Game Birds	6
C. Big Game Animals	9
D. Fur Animals, Predators, Rodents and Other Mammals	10
E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies	12
F. Other Birds	12
G. Fish	13
H. Reptiles	13
I. Disease	13
III. REFUGE DEVELOPMENT AND MAINTENANCE	
A. Physical Development	13
B. Plantings	14
C. Collections and Receipts	14
D. Control of Vegetation	14
E. Planned Burning	14
F. Fires	14
IV. RESOURCE MANAGEMENT	
A. Grazing	15
B. Haying	15
C. Fur Harvest	15
D. Timber Removal	16
E. Commercial Fishing	16
F. Other Uses	16
V. FIELD INVESTIGATIONS AND APPLIED RESEARCH	
A. Captive Goose Flock	16
B. Nesting Islands	18
C. Grouse Studies	18
VI. PUBLIC RELATIONS	
A. Recreational Uses	20
B. Refuge Visitors	20
C. Refuge Participation	20
D. Hunting	21
E. Violations	21
VII. OTHER ITEMS	
A. Photographs	21
B. Personnel	21
C. Acknowledgement	21
APPENDIX	
NR Forms	
Photographs	

I. GENERAL

- A. Weather Conditions. After the cold weather at the beginning of the month, January was unusually dry and warm. The mild weather continued throughout most of February with day-time highs reaching the 60's and 70's until winter arrived in all its fury on the 27th. The first blizzard lasted four days leaving behind 12 inches of snow and drifts up to four feet high. The cold, wet weather continued throughout March with 14 inches of additional snow falling. April was wet with temperatures rising and falling as more snow storms moved in to the area. During this month, we received 2.03 inches of moisture, most of which came in the form of nine inches of snow.

As the period ends, spring seems to have arrived and the days are sunny and warm with high temperatures reaching the high 60's and 70's.

A synopsis of the recorded precipitation and temperatures is as follows:

	<u>Snowfall</u>	<u>Precipitation</u>		<u>Max.</u>	<u>Min.</u>
		<u>This Month</u>	<u>Normal</u>	<u>Temp.</u>	<u>Temp.</u>
January	T	T	.60	56	- 9
February	12	.87	.52	70	-10
March	19	1.00	.95	50	- 9
April	9	2.03	2.02	83	18
Total	40	3.90	4.09	Extreme 83	-10

The above information was obtained from the official weather sub-station maintained at Refuge headquarters.

B. Habitat Conditions.

1. Water. As the period ends, our lakes stand at the highest level in several years. Ground water is abundant and small potholes are to be found in most of the low places in our meadows. These small water areas are extremely important on this area during migration and they receive heavy use as the birds pass through.

For the first time in several years, water flowed over the Smith Lake structure before the period ended. The wooden stop log structure at the outlet of this lake has apparently been sanded in for a number of years. On April 16 of this year, the structure was cleaned by hand and several stop logs were removed to effect a flushing action

in the channel leading to the structure. The stop logs were then replaced and as the period ends a shallow head of less than one inch is going over the top plank.

In general, the abundant moisture has made the area as attractive as possible for waterfowl this spring.

2. Food and Cover. With the exception of the month of March, we experienced little severe weather this winter. As a result, food and cover were in almost all cases sufficient to meet the needs of all species of wildlife. As mentioned elsewhere, there is some possibility that a shortage of food utilized by pheasants did exist during the period of snow in March but this shortage was not severe and a sizable population of birds survived.

II. WILDLIFE

A. Migratory Birds.

1. Ducks and Geese. As mentioned elsewhere in this report, the first two months of this period were comparatively mild and although most of our lakes were frozen, we had little snow cover. On February 6 a group of six pintails and eighteen mallards was noted flying over Hackberry Lake. These birds had apparently moved off the North Platte River to the south and were searching for open water. Our lakes remained frozen until later in the month when a few open areas began to appear. On February 20 two mallards were noted over Gimlet Lake.

On February 21 a group of 47 flying Canada geese was noted near Gimlet Lake. These birds did a considerable amount of exploring of Refuge lakes and finally settled on the northwest shore of Island Lake.

On February 24 another small group of twelve mallards was noted on a small open water area on Gimlet Lake.

The snow and cold of March drove most of these early moving birds back south and it was not until the 27th of that month that the first small group of migrating snow geese was noted over Gimlet Lake. This particular group of birds attracted the attention of our crippled snows and much calling and answering followed. The migrants wanted very much to stop and investigate but the pen in

which the captive birds are confined was too close to the headquarters buildings for the birds to feel safe. A short time later this same day another group of approximately 100 snow geese and five blues passed over. A few hours later a group of nine Canadas was noted passing to the west.

From this time on, the duck population also steadily mounted until it reached its peak during the last three weeks of the period. Numerous bunches of geese ranging from a very few to upwards of 500 birds were noted passing over the Refuge but very few, if any, of these birds stopped. We are located some thirty miles north of the North Platte River and apparently the geese use the river as a starting point and then go a considerable distance before they make their first stop.

The bulk of the goose movement seemed to occur between March 27 and April 2.

2. Waterbirds. The first group of eleven great blue heron was noted over Gimlet Lake on April 3. This same day a small group of twenty sandhill cranes was noted passing over headquarters.

On April 9 the first group of sixteen white pelicans was noted on the south end of Hackberry Lake. This same day another group of twelve pelicans was noted on Goose Lake.

On April 10 the first arriving cormorants, a group of six birds, was observed over Gimlet Lake. This same day a neighbor of ours, Mr. Paul Dietlein, reported seeing what he believed to be two whooping cranes. This observation occurred shortly after daylight but we did not receive word of this sighting until almost noon. A complete check of all of the larger Refuge lakes failed to disclose the birds but we believe that there is a reasonable chance that this report was authentic. Mr. Dietlein has previously observed these birds and is familiar with their appearance.

Black-crowned night herons were first observed over Smith Lake on April 13. This first sighting consisted of nine birds.

3. Shore Birds. As usual, killdeer were the first shore birds observed this spring. On March 27 two of these birds were noted just below the outlet structure on Smith Lake.

On April 9 the first upland plovers, a pair, were noted

on the meadow area of Unit # 5.

Common snipe first appeared around the small pond just east of Quarters # 1 on April 13. This was the first sighting of this species this year.

On April 15, two avocets were noted near the small lake in the Jones meadow near the eastern end of the Refuge.

As the period ends, the main shore bird migration is still not under way but it is expected to pick up considerably as the days get warmer.

4. Doves. The first mourning dove, a single bird, was noted in the headquarters area on March 23. Thereafter, these birds gradually increased. However, at the end of the period they were still not abundant.

B. Upland Game Birds.

1. Grouse. During the period April 9 to 15, the annual grouse booming and dancing ground checks were completed by Messrs. Kirsch, McGlauchlin, and Refuge personnel.

The following is the summary of the information obtained as compiled by Messrs. Kirsch and McGlauchlin:

CRESCENT LAKE GROUSE SURVEY - 1958

Ground Number	Sharptail Males			Prairie Chicken Males			Hybrids		
	1956	1957	1958	1956	1957	1958	1956	1957	1958
1	10	11	16					1	1
2	4	2	3	4	2	2			
3	2	1	1	1					
4	13	7	13					2	2
5	8	5	3						
6				8	7	5			
8	3	12	10	11	4				
9	10	13	16						
10	5	6	7						
11	9	6	17		1				
12	8	11	6				1	1	
16	6	6	18						
17	6	4	7	1		1			
18				4	2				
19	11	9	11	2	1	3			
20	13	NC	11						
22	7	6	15						

CRESCENT LAKE GROUSE SURVEY - 1958 (Continued)

Ground Number	Sharptail Males			Prairie Chicken Males			Hybrids		
	1956	1957	1958	1956	1957	1958	1956	1957	1958
23				5	3	3			
24	4	5	13	1		1			
25	7	NC	5	1					
26	7	11	17						
27	15	NC	20						
28	NC	NC	16						
29	NC	8	16						
31	-	-	8						
32	new		3			1			
33	new		3						
34	new					1			
35	new		19						
36	new		10						
37	new		3						
Total	114*	123*	287	38	20	17	1	4	3

* All dancing grounds located were not counted and this figure is not accurate.

NC = No count.

COMPARATIVE COUNTS ON GROUSE, 1956 - 1958

Ground Number	<u>Sharptails</u>		
	Number of male grouse		
	1956	1957	1958
1	10	11	16
2	4	2	3
3	2	1	1
4	13	7	13
5	8	5	3
8	3	12	10
9	10	13	16
10	5	6	7
11	9	6	17
12	8	11	6
16	6	6	18
17	6	4	7
19	11	9	11
22	7	6	15
24	4	5	13
26	7	11	17
Totals	116	113	173

COMPARATIVE COUNTS ON GROUSE, 1956 - 1958 (Continued)

Percent change based on 1956: 1957 +2%
1958 +53%

Prairie Chickens

Ground Number	Number of Male Grouse		
	1956	1957	1958
2	4	2	2
3	1		
6	8	7	5
8	11	4	
11		1	
17	1		1
18	4	2	
19	2	1	3
23	5	3	3
24	1		1
25	1		
32			1
34			1
Totals	38	20	17

Percent change based on 1956: 1957 -47%
1958 -55%

Calculated theoretical prairie chicken population by years, assuming an even sex ratio:

1956 - 75 birds	10 occupied grounds	3.8 males per ground
1957 - 40 birds	7 occupied grounds	3 males per ground
1958 - 34 birds	8 occupied grounds	2.1 males per ground

Calculated sharptail population on Refuge in 1958, assuming even sex ratio:

574 birds Average ground - 10.3 males 20.6 birds 28 grounds

Sixty-five square miles of grassland habitat = 9 sharptails per square mile and 0.5 chickens per square mile.

These figures speak for themselves; sharptails are gaining rapidly and pinnates are losing ground.

During the last winter, we noted with interest that during the periods when we had complete or nearly complete snow cover the sharptails immediately started budding in the few tree

groves that are scattered throughout the hills. This appeared to be the case even though the snow was often not more than several inches deep and much ground vegetation was still available to the birds. We attempted to entice the birds that were using the headquarters grove to the ground by the use of feeding stations but our efforts were unsuccessful. Apparently these birds have no idea that grain is food.

During the period, one of our rancher neighbors reported that a single bird, either a pinnate or a hybrid, regularly fed with the sharp-tails that used the grove near his ranch buildings. This is the only report of a pinnate being seen this period on other than dancing grounds.

On April 15, Mr. Harvey Nelson met with Messrs. Hammond, Kirsch, McGlauchlin, and the Refuge Manager and a long term grouse study plan was evolved (See Section V).

2. Pheasants. Although only one dead bird was found, it is possible that a few pheasants died during the long and relatively cold period in March. In spite of this, a sizable population survived and as the period ends the cocks are very aggressive and much in evidence in all the suitable habitat on the Refuge. If the hatch this year matches that of the preceding year, we will have a definite surplus of these birds.

C. Big Game Animals.

1. Rocky Mountain Mule Deer. Mule deer using Refuge lands continue to expand their territory and they are now regularly seen in the treeless eastern portion of the Refuge.

The feed for our captive goose flock was in feeders this year and thus not available to the deer so they were not nearly as numerous in the immediate headquarters area as has been the case in the past. All of the animals observed appear to be in good condition although as the period ends they are losing their winter coats and they appear to be rather spotted and shaggy.

During the last few days of the period, the grass on the meadows started vigorous growth and most of the deer started moving to these areas to take advantage of this succulent vegetation. The animals exhibit little or no fear and they apparently have no set preference as to feeding times for they can be seen feeding at any hour of the day.

2. Antelope. On April 4 a group of fourteen antelope was noted in the choppy sandhills between Meeker and Red Kate Valleys. On this same day, nine antelope were observed southwest of Camp Valley. These were the first observations of these animals this year. As has been mentioned in previous reports, because of the erratic movement of these "goats" in the sandhills, the numbers using the Refuge fluxuates a great deal.

It is normal for antelope to leave the vicinity of the Refuge in late fall and move to the flat wheatlands immediately north of the North Platte River some twenty-five miles south of the Refuge where they pass the winter on or near winter wheat fields. Depending upon the spring weather, the animals leave this area and start to drift back north. The antelope observed on April 4 were apparently the vanguard of this movement.

As the period ends, a few animals have moved to their normal spring and summer range in the eastern part of the Refuge.

D. Fur Animals, Predators, Rodents and Other Mammals.

1. Muskrats. Because of the mildness of the winter, the muskrat population apparently came through in excellent shape. Active rat houses are not abundant as yet but they are more numerous than in the immediately preceding years. Evidence of feeding by these rodents can be seen on Goose, Smith, and Gimlet Lakes.
2. Mink. During our attempts to construct nesting islands on Gimlet Lake this winter, signs of several large mink were noted. Apparently these large mustelids are more numerous than our muskrat population would indicate.
3. Coyotes. Our coyote population has apparently increased by some slight degree. During January and February these animals were running and groups of from two to six individuals were seen on the ice of our lakes quite commonly. Most of these sightings took place along our south boundary near the Eldred holdings. The fact that the Eldred's lost a number of calves last fall to pneumonia may be the reason that most of these animals were concentrated in this particular area. No animals were removed although we would have done so if the opportunity had presented itself.
4. Raccoons. This particular animal is the arch villain of all of our predators on this Refuge. During this period

we again experienced losses among our winter penned geese because of these animals. During the period we lost two snow geese, one blue goose, and two Canada geese to raccoons. We were able to trap two of the raccoons and one other was cornered by a dog and shot.

During the period we submitted a request for the use of strychnined eggs for the control of these predators around our goose pen but our request was denied. We have contacted the Assistant District Agent of the Predator and Rodent Control Division for technical assistance in helping us to trap these animals but we fear that trapping is not the answer, especially in country such as this where these animals move a great deal. It is extremely difficult to construct 'coon proof fences and because of the large size of our enclosure a raccoon can enter and cause considerable damage before his presence is discovered. We have declared unconditional war on these beasts but we fear that our rather small goose production will not keep up with predation.

5. Badger. Badger diggings have been observed on several occasions during the period. These animals are not abundant, in fact they are not as numerous as desired. As always, our meadows and uplands are infested with pocket gophers and as these rodents apparently furnish the bulk of the diet of the badger, we could use a great many more diggers to advantage.
6. Skunks. Only onestriped skunk was observed during the period and one spotted skunk was found in the headquarters barn. Apparently both of these species are at low ebb.
7. Rodents. As mentioned above, pocket gophers are present in huge numbers on all Refuge lands and their workings can be seen everywhere.

The workings of small rodents, such as mice, are much in evidence in the areas of heavier vegetation.

8. Rabbits. Cottontails have been far too numerous around the headquarters area and late in the period we found a number of them dead. Unfortunately, those that were found were too far gone to be examined for pathological symptoms but we suspect tularemia or an associated disease.

The jack rabbits, both the white-tail and black-tail, were commonly seen during the period but they are not overly abundant. They appear to be following a steady

decline.

E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies.

1. Hawks. As usual, marsh hawks stayed with us all winter. On February 12, a ferruginous rough-legged was noted in the meadow just east of headquarters. It seemed that hawks in general were somewhat less common this year than last year.
2. Eagles. Golden eagles are year round residents on this area and they were seen from time to time throughout the period. They seem to be most abundant in the highlands of the eastern end of the Refuge.

Two bald eagles were noted on Hackberry Lake on February 15 and they were seen for several weeks thereafter. They then moved on and we received no additional reports.

3. Owls. Great horned owls are also year round residents on this Refuge and during the period one pair made their home in the headquarters grove. They were seen almost every night and their calls became a nightly serenade. Towards the end of the period they constructed their nest in the large maple just west of Quarters # 1. We found no evidence under their roost or around their nest of arian predation although rabbit hair was very abundant. We will keep a close watch on these individuals and if anything other than rabbits shows up in their diet, they will be controlled.
4. Crows. On March 27 the first group of nine crows was observed passing over Refuge headquarters. We have few trees on this area and, to our knowledge, we have no crow nesting. This is exactly as we like it and we are glad that this particular species does not call this area home.
5. Magpies. Magpies are also year round residents on Refuge lands but their habits are such that they travel a great deal and we often go for considerable lengths of time with no observations being recorded.

F. Other Birds. Species and first sighting dates for some of the lesser birds are as follows:

Loggerhead Shrike, February 7
 Yellow-shafted Flicker, February 17
 Robin, March 10
 Mourning Dove, March 23

Downy Woodpecker, March 25
 Song Sparrow, April 3
 Bohemian Waxwing, April 3
 Yellow-headed Blackbird, April 9
 Brewer's Blackbird, April 9
 Myrtle Warbler, April 29
 White-crowned Sparrow, April 30
 Spotted Towhee, April 30

- G. Fish. We assume that, because of the comparatively high water levels that were carried over, little if any carp die-off was experienced during the winter. We have found no large numbers of these fish around our lakes.

The money for the purchase of toxaphene for treatment of Island and Crane Lakes is still available and as the period ends we are waiting a visit by Fisheries personnel. Present plans call for the purchase of the treating material before the end of this fiscal year with the actual treatment of the lakes to be accomplished during September.

As stated previously, very few, if any, game fish remain in any of the Refuge lakes.

- H. Reptiles. As the period ends, garter snakes are being commonly seen around the lowland meadows. As yet, no bullsnakes have been reported.

The warm days during the latter part of the period encouraged the box and snapping turtles inhabiting our lakes to sun themselves and they were commonly seen on logs and banks that protrude above the water.

- I. Disease. As stated elsewhere in this report, several dead cottontail rabbits were found around the headquarters buildings. None of these animals were in condition to be examined by the time they were found but we suspect tularemia or some associated disease.

To our knowledge, no other disease was active among our wildlife populations during this period.

III. REFUGE DEVELOPMENT AND MAINTENANCE

- A. Physical Development. No projects under this category were undertaken during this period.

B. Plantings.

1. Aquatic and Marsh Plants. None this period.
2. Trees and Shrubs. During the last week of April, 793 trees were planted in a grove in the headquarters area. In an effort to accomplish more livability in our planting, established trees of from two to six feet in size were planted. Two hundred Russian Mulberry ranging from 18 to 24 inches in height were the only seedlings planted. The remainder of the trees consisted of 250 Caragana arbarescens 3 to 4 feet high, 153 Bella Rosa Honeysuckle 3 to 4 feet high, 40 Laurel-leaf Willows 3 to 4 feet high, 50 Chinese Elm 5 to 6 feet high, and 100 Russian Olives 2 to 3 feet high. The trees and seedlings received were in very good shape. We are unable to tell how they will do at this early date. However, with the high water levels we now have, the precipitation we have been receiving, and the use of established trees, we are hopeful that our success will be greater than that of previous tree planting attempts.
3. Upland Herbaceous Plantings. None during this period.
4. Cultivated Crops. No cultivated crops are planted on this Refuge.

C. Collections and Receipts.

1. Seed or Other Propagules.
 - a. On 7 January, 185 bushels of mixed grain were picked up from Sand Lake Refuge for use as goose feed. This load of grain consisted of 40 bushels of oats, 45 bushels of wheat, 50 bushels of millet, and 50 bushels of barley.
 - b. Two hundred fifty-eight pounds of red clover seed were received from Mud Lake Refuge on 16 January.
 - c. One hundred one pounds of alsike clover seed were received from Mud Lake Refuge on 2 April.
 - d. Five hundred sixty-five pounds of millet seed were received from Lake Ilo Refuge on 2 April.

D. Control of Vegetation. None during this period.

E. Planned Burning. None during this period.

F. Fires. No fires occurred on or near the Refuge. The threat

of fires was slight as a result of the abundant moisture received during the period.

IV. RESOURCE MANAGEMENT

- A. Grazing. During this period all of our winter permits were terminated as is normal procedure and as the period ends no cattle are found on Refuge lands. The abundant moisture of last year produced a great deal of hay and in almost all cases our permittees had an excess of feed. Because of the liberal feeding that resulted and the comparatively mild winter, practically all of the stock on Refuge lands were removed in excellent condition.

During the period, a series of amendments dealing primarily with the changing from mowing to summer grazing were submitted and approved. Also, two permittees were set up on a rotational basis, i.e., their summer pastures were so divided that their herds could be moved at three times during the summer grazing season thus benefiting the various classes of forage growing on the respective pastures. We plan to divide all of our summer ranges in the near future and place them all on a rotational basis. Because of the many considerations involved, this program will take several years for completion.

In addition to the rotational changes mentioned above, we are also cutting the allowable AUM's on all but a very few of our summer pastures. Most of these summer ranges are still not in the most desirable condition and the cuts are therefore necessary. To date, only comparatively mild opposition has been shown by the ranchers.

- B. Haying. As mentioned above, we have in some cases changed what in the past has been haying to summer grazing. This procedure is in line with our current policy of leaving more available cover on all lands. In the eastern portion of the Refuge where very little water and thus waterfowl use, is experienced, these changes will be of more benefit to grouse than any other species.
- C. Fur Harvest. Although our muskrat population seems to be increasing gradually, it is still below the point where enough animals are available to attract competent trappers. Because of this, no fur trapping has been undertaken on this Refuge for a number of years.

- D. Timber Removal. There is no timber on this Refuge.
- E. Commercial Fishing. No commercial fishing take place on this area.
- F. Other Uses. No special use permits other than those listed above were issued.

V. FIELD INVESTIGATIONS OR APPLIED RESEARCH

A. Captive Goose Flock.

1. Pinioned Birds. Our pinioned birds and their flying offspring apparently came through the winter in excellent condition. Only one bird was lost and this death was caused by a raccoon.

Last fall a large, 90 bushel, self-feeder was constructed and grain was kept available in this device throughout the winter. The birds were able to eat all of the grain they desired and they were also allowed to range in a fenced enclosure just outside the headquarters area. The grain in the feeder consisted of a mixture of wheat, barley, oats, and millet and although the birds apparently did not particularly care for the barley, they consumed it because it was mixed with the other grains. The feeders were so constructed that it was impossible for deer to get at the grain and although blackbirds could enter the feeder they did not do this as readily as they did with the open type device.

On April 2 the entire flock of pinioned birds and their offspring, with the exception of three flying birds which could not be driven into the enclosure, were driven into a completely enclosed pen where they were caught and checked for condition and bands. There were 126 birds in the flock and of these 19 were fliers. Of these 19 flying birds, 17 were young birds raised by the captive flock and banded last fall and two were migrants that simply stopped in and decided to stay.

We continued our efforts to neck band all known pairs among the pinioned flock with plastic bands. We were able to separate and band seven more pairs this spring. These bands appear to be holding up very well and some have been in place for over a year now. The neck bands that did show signs of wear and tearing were replaced.

On April 10 we turned ten neck banded pairs into the large summer enclosure. On April 14 we turned an additional 41 birds loose in the enclosure. On April 16, 50 more birds were turned loose.

During the period April 10 to 15, geese were noted exploring all of the nesting islands in Gimlet Lake. On April 15 one egg was noted on Island # 1. First signs of incubation were noted on island # 1 on April 22. This same day geese were also noted on islands # 2, 3, and 4. As the period ends, geese are incubating on islands 1, 3, 4 and 6. Geese are also nesting on a "rat" house near the outlet of the flowing well and on a small ridge in the meadow just southeast of the headquarters buildings. We also suspect that several other pairs are nesting around the lake but so far we have been unable to locate the nests.

Although the woven wire fence surrounding the enclosure was thoroughly checked this spring and all holes under the fence were blocked, it is almost impossible to keep raccoons from crawling over the fence any time they wish. Because of this, we have little hope for success for any of the nests that are not located on the islands.

2. Clipped-wing Birds. Of the thirty-nine clipped-wing birds we received in the fall of 1956, ten remain. Of these, nine are wing-clipped and confined in a small pen just south of the office building and one bird that is capable of flight moves in and out of the pen at will. This latter bird which is neck-banded, as were all of these birds, has taken up with a flying bird, apparently the offspring of the pinioned flock, and they are now usually seen together. Although these two birds spend a great deal of time by themselves at various places on the meadow that surrounds Gimlet Lake, we have seen no evidence of nesting. This does indicate, however, a firm pair formation at two years of age.

Of the 43 wing-clipped birds received from Swan Lake in December of 1957, 41 are still within the enclosure. One bird was killed by a raccoon during the winter and one bird escaped to the pinioned flock while the birds were being shuttled from one pen to another.

As with the pinioned birds, this flock of geese had access to a large self-feeder in which mixed grain was present at all times. The birds came through the winter in excellent condition and all of them appear to be in very good shape. As the period ends, the birds have been shifted from their winter pen to the large pen normally

occupied by the pinioned flock. This will give their wintering pen a chance to revegetate so that it will be better able to handle them during the winter months next year.

- B. Nesting Islands. We had intended to construct additional goose nesting islands in the enclosure during this period but a lack of ice prevented us from doing so. The islands were to be of a prefabricated type (see photo section). The necessary materials were purchased and we will continue with the project next winter; if we get enough ice to carry the weight of a truck that must be used to haul the necessary fill. The response to the islands we constructed two years ago have been excellent and we feel that we would have even more nesting if the sites were available.

Although we will not know for sure until we run our clutch size checks in early May, it appears that in most cases the same geese returned to the same islands to nest this year. The colored plastic neck bands will enable us to determine this for sure.

- C. Grouse Studies. On April 15, following the completion of the survey of grouse dancing and booming grounds, Mr. Harvey Nelson of the Regional Office met with Messrs. Hammond, Kirsch, McGlauchlin, and the Refuge Manager to formulate a grouse study plan for the area. A year ago a suggested study plan was submitted but it later became evident that some changes and modifications would be needed, thus the formulation of the new plan.

The following changes and modifications of the existing plan were decided upon:

1. Study area # 1 in grazing Unit # 1 was to be expanded to include an additional 20 acres of lowland that lies outside of the main meadow fence but which is adjacent to and just north of the existing study area. No mowing will be permitted but winter grazing on a free choice basis will be allowed.
2. Area # 2 in the west end of Boyd Valley is to remain as it now is. This area consists of approximately 47 acres of true lowland meadow which is completely fenced. No grazing or haying is to be permitted within the area.
3. Ground # 3, which is located in Unit # 6b, is to be enlarged to include an even 40 acres. This area is to be completely fenced and will lie in the southeast corner of

this particular grazing unit. As with study area # 2, no use of any kind will be allowed within this unit.

4. The use of the meadow of the Camp Valley Unit, study area # 4, will depend somewhat upon the plans of the present permittee. The permittee involved has recently received notice to vacate the ranch he is presently occupying and his future plans are somewhat in doubt. If he chooses to retain the winter permit in Camp Valley this year, a cross fence separating the eastern one-third of the meadow from the remainder will be placed across the meadow and the smaller part of the meadow will not be mowed and baled as in the past but will be lightly grazed in late summer. If the permittee does not wish to retain the permit, the entire meadow area will be late summer grazed rather than hayed. It will be stocked at the rate of 1 AUM per acre.
5. Study area # 5 is to remain as it is. The area consists of a meadow approximately one-half mile northeast of Hackberry Lake. As was done last year, a part of this meadow will be mowed but the surrounding area will be left uncut.
6. Study area # 6 is a ten mile transect that runs north from the Refuge boundary to the vicinity of the E.V. Eldred Ranch along the main county road. Listening points at one mile intervals have been established and dancing and booming grounds within one mile of each side of the road have been located. These areas will be checked each year and they will be used as control.
7. Study area # 7 will consist of the western most portion of the East Jones Meadow. Mowing will be reduced in this meadow area and limited to the eastern part of the meadow. Winter grazing on a free choice basis will be permitted.
8. The isolated tract on the south side of Swan Lake, presently under an on-and-off permit to Mr. E.M. Eldred, will not be mowed this year as it has been in the past but winter grazing will be allowed on a free choice basis.

We feel that we are now taking positive steps in establishing at least a study plan for grouse on this area and that information that we will obtain will be sound basis for future management. We feel that some of the steps already taken will be of benefit to sharp-tails but because of the very low population level of the pinnates it may be that we will not be able to save this species on this area.

VI. PUBLIC RELATIONS

A. Recreational Uses. Practically no recreational use experienced during this period.

B. Refuge Visitors.

<u>Name</u>	<u>Organization</u>	<u>Purpose of Visit</u>	<u>Dates</u>
Clair T. Rollings	RO	Refuge Inspection	17-18 Jan
Harvey Nelson	RO	Refuge Inspection	17-18 Jan
Edwin S. Kimmel	Nebraska Department of Water Resources	Courtesy call	17 Jan
C.D. Christensen	Nebraska Department of Water Resources	Courtesy call	17 Jan
Gordon B. Jamison	U.S. Geological Survey	Courtesy call	17 Jan
T/Sgt Norman Cornelia	USAF (G.O.C.)	Courtesy call	28 Jan
Leon J. Cunningham	Nebraska Warden Supervisor	Take trophy Mule Deer (off Refuge)	30 Jan
Mr. Rider	University of Nebraska	Take trophy Mule Deer (off Refuge)	30 Jan
Dave McGlauchlin	Lake Andes Refuge	Grouse census	9-16 Apr
Leo Kirsch	Swan Lake Refuge	Grouse census	9-16 Apr
Harvey Nelson	RO	Grouse Management Plan	15 Apr
M.C. Hammond	Lower Souris Refuge	Grouse Management Plan	15 Apr

C. Refuge Participation.

2 Jan: Refuge Manager made bird count in conjunction with National Audubon Society.

22 Jan: Refuge Manager attended meeting of Sandhills Sportsmen Club, Alliance, Nebraska, and gave a twenty minute talk and showed slides concerning captive goose flock.

30 Jan: Refuge Manager attended meeting of Sandhills Telephone Company where proposed line improvement was discussed.

3-8 Feb: Refuge Manager attended Regional Conference in Minneapolis, Minnesota.

1 Apr: Refuge Manager attended county road meeting in Oshkosh, Nebraska.

- D. Hunting. No hunting during this period.
- E. Violations. None noted or recorded during this period.

VII. OTHER ITEMS

- A. Photographs. The attached photos were taken by the Refuge Manager in the Government-owned camera. The processing was accomplished by a commercial firm.
- B. Personnel. Mr. Christ R. Schuler, Jr., our maintenanceman, suffered partial paralysis affecting his left side during the night of March 4. He was driven to Oshkosh and from there taken to Denver, Colorado, where he was admitted to the hospital. He remained on sick leave until March 31. After returning to duty, he improved very rapidly and now seems to be almost completely recovered.

For the first time in several years, temporary labor was employed on this Refuge. On 20 January Mr. Lloyd L. Keller was given a temporary-intermittent appointment for a thirty day period. Mr. Keller's services were utilized in the overhaul of our Jeep pickup. He had experience with this type of work during World War II when he served as a mechanic in an Armored Division.

Mr. Keller is one of the local ranchers and was unable to work full days. He helped us out during the time between feeding his cattle and calving, thus the intermittent appointment.

- C. Acknowledgement. This report was authored as follows:

Sections I B
 II
 IV
 V

Richard S. Rodgers

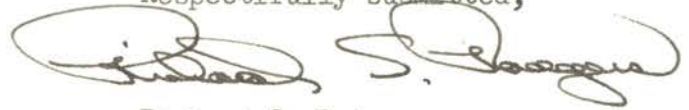
Sections I A
 III
 VI
 VII

Fred R. Rusch, Jr.

Typing and final assembly were accomplished by Mr. Rusch.

Report completed 9 May, 1958

Respectfully submitted,



Richard S. Rodgers
Refuge Manager



Regional Office Approval

Chief, Division of Wildlife

5/20/58

Date

W A T E R F O W L

REFUGE Crescent Lake Nat'l Wildlife Refuge

MONTHS OF January TO April, 1958

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard										
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>										

LAKES FROZEN: NO WATERFOWL PRESENT ON REFUGE

3 -1750a

Cont. NR-1

(Rev. March 1953)

WATERFOWL
(Continuation Sheet)REFUGE Crescent Lake Nat'l Wildlife RefugeMONTHS OF January TO April, 19 58

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	11	12	13	14	15	16	17	18		
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	LAKES FROZEN: NO WATERFOWL PRESENT ON REFUGE								10	
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard				650	2000	2,400	1800	475	49,850	
Black										
Gadwall				685	3500	2700	2400	170	65,675	
Baldpate				95	500	400	150	50	8,215	
Pintail				750	500	600	400	180	17,010	
Green-winged teal				145	200	800	500	40	11,795	
Blue-winged teal						200	300	345	5,915	
Cinnamon teal										
Shoveler				1480	2000	3500	1400	238	60,326	
Wood										
Redhead				335	150	75	50	7	4,319	
Ring-necked										
Canvasback				160	75	125	50	4	2,898	
Scaup				1650	3000	4000	2000	405	77,385	
Goldeneye				70	75	75	20		1,680	
Bufflehead				60	100	50	25	14	1,743	
Ruddy				75	100	200	175	146	4,872	
Other										
Mergansers				35	25				420	
Unidentified				50				1135	8,295	
Coot:				350	600	1000	800	399	22,043	

(over)

	(5)	(6)	(7)	
	Total Days Use	Peak Number	Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas <u>Refuge lakes frozen until</u>
Geese	10	1	:	<u>31 March.</u>
Ducks	320,398	15,125	:	Principal nesting areas <u>No nesting this period.</u>
Coots	22,043	1,000	:	
Reported by				<u>Richard S. Rodgers, Refuge Manager</u>

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

3-1751

Form NR-1A

(Nov. 1945)


MIGRATORY BIRDS

(other than waterfowl)

Refuge Crescent Lake Nat'l Wildlife Refuge Months of January to April 1958

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Great Blue Heron	16	Apr 3								
White Pelican	12	Apr 9								
Double-crested cormorant	6	Apr 10								
Black-crowned night Heron	9	Apr 13								
II. <u>Shorebirds, Gulls and Terns:</u>										
Ring-billed gulls	100	Mar 26								
Killdeer	2	Mar 27								
Upland Plover	2	Apr 9								
Wilson's Snipe	7	Apr 13								
Avocet	2	Apr 15								
Wilson's Phalarope	1800	Apr 30								
Long-billed Curlew	3	Apr 4								
Common Tern	8	Apr 31								
Black Tern	6	Apr 31								
Western Willet	2	Apr 31								
Franklin's Gull	75	Apr 31								

(over)

(1)	(2)		(3)		(4)		(5)		(6)
III. <u>Doves and Pigeons</u> :									
Mourning dove	1	Mar 23							
White-winged dove									
IV. <u>Predaceous Birds</u> :									
Golden eagle		Year long resident							
Duck hawk		Year long resident							
Horned owl		Year long resident							
Magpie									
Raven									
Crow	9	Mar 27							
Bald Eagle			2	Feb 15	2	Feb 15			
Marsh Hawk		Year long resident							
Farruginous Rough-legged	1	Feb 12							
Reported by  Richard S. Rodgers, Refuge Manager									

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Crescent Lake Nat'l Wildlife Refuge Months of January to April, 1958

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant	Low and highland meadows, 3000 acres					None			525	Good winter survival.
Pinnated Grouse	Meadows and Up- lands, 8000 acres					None			34	Gradual decline.
Sharp-tailed Grouse	Meadows and Up- lands, 40,000 acres					None			574	Sharp increase.
Sharp-tail- pinnated Hy- brid						None			6	Slight decrease from last year.

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge Crescent Lake Nat'l Wildlife Refuge Year ending April 30, 1958

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total Popula- tion	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Raccoon					6								6	70
Mink					None									20
Muskrat					None									800
White-tailed Jack- rabbit					None									100
Black-tailed Jack- rabbit					None									500
Cottontail					None									150
Weasel					1								1	100
Stripped Skunk					1								1	40
Spotted Skunk					None									15
Coyote					None									20
Badger					None									15
Bobcat					None									3

* List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

Reported by  Richard S. Rodgers, Refuge Manager

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
- (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
- (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprime-ness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

REFUGE GRAIN REPORT

Refuge Crescent Lake Nat'l Wildlife Refuge

Months of January thru April 1948

(1) VARIETY	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF			(6) ON HAND END OF PERIOD	(7) PROPOSED USE		
				TRANS- FERRED	SEEDED	FED		SEED	FEED	SURP.
Oats	35	40	75			32	32	43	43	
Wheat	40	45	85			32	32	53	53	
Millet	45	50	95			33	33	62	62	
Barley	45	50	95			33	33	62	62	
Shelled Corn	50					5	5	45	45	
Alsike Clover		101#	101#		15#		15#	86#	86#	
Red Clover		258#	258#		65#		65#	193#	193#	
Millet		565#	565#		30#		30#	535#	535#	
Blue Grass	200#		200#		4#		4#	196#	196#	

- (8) Indicate shipping or collection points. Truck load of oats, wheat, millet, and barley-Sand Lake Refuge; Alsike clover seed-Mud Lake Refuge; Millet seed-Lake Ilo Refuge; Red clover seed-Mud Lake Refuge.
- (9) Grain is stored at Refuge headquarters in self-feeders and granary.
- (10) Remarks _____

NR-8a REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)--55 lbs., Corn (ear)--70 lbs., Wheat--60 lbs., Barley--50 lbs., Rye--55 lbs., Oats--30 lbs., Soy Beans--60 lbs., Millet--50 lbs., Cowpeas--60 lbs., and Mixed--50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately: Corn, wheat, proso millet, etc. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share-cropping, or harvest from food patches.
- (4) A total of Columns 2 and 3.
- (6) Column 4 less Column 5.
- (7) This is a proposed breakdown by varieties of grain listed in Column 6.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters grainary", etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

High humidity combined with a cold wind produced the ice crystal effect shown here. This particular situation occurred several times during this period. The group of trees in the center of the photograph are in the main winter enclosure of the pinioned geese. The cattle in the background are feeding on the largest meadow within the summer goose enclosure. A tip of Gimlet Lake, which also lies within the summer enclosure, can be seen at the top right corner of the picture.

The light foreground and far background contrast sharply with the darker portion of this picture. The lighter areas are summer ranges and the darker area is winter range. The difference in coloration results from the more abundant vegetation that is found on the winter ranges. Grouse study area # 7 lies within the darkest portion in the background.



A partially completed nesting island is shown. Because of the sandy nature of our soil, it is essential that some type of wave breaking device be employed or the fill erodes very rapidly. A structure such as is shown can be towed out on the ice, filled with dirt, and then allowed to settle through when the ice thaws. Because of the shallow nature of our lakes, this type of construction is practical. We had planned to place ten of these islands within the goose enclosure this year but because of the lack of sufficient ice, we were unable to do so. They will be constructed next year if the ice permits.

This particular cottontail was carrying an extremely large tumor, part of which can be seen under his neck. The animal appeared active and reasonably fat but extremely repulsive to look at.



Our ever present enemy, the raccoon. This particular individual killed several of our geese before we were able to entice him into a trap. A group of geese was driven into a completely enclosed pen and traps were set at all corners. The raccoon could not resist the temptation to walk around the pen looking for an opening. Even though caught, he was able to pull up the stake that can be seen looped over the fence and almost made it over the woven wire fence before he became entangled. If he had made it over the top wire, we would have lost the trap as well as the 'coon.



NORTH PLATTE NATIONAL WILDLIFE REFUGE
NARRATIVE REPORT

1 January to 30 April, 1958

TABLE OF CONTENTS

I. GENERAL	Page
A. Weather Conditions	3
B. Habitat Conditions	3
II. WILDLIFE	
A. Migratory Birds	3
B. Upland Game Birds	4
C. Big Game Animals	4
D. Fur Animals, Predators, Rodents, and Other Mammals	4
E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies	4
F. Other Birds	4
G. Fish	4
H. Reptiles	4
I. Disease	4
III. REFUGE DEVELOPMENT AND MAINTENANCE	5
IV. RESOURCE MANAGEMENT	5
V. PUBLIC RELATIONS	
A. Recreational Use	5
B. Hunting	5
NR FORMS	Appended

I. GENERAL

A. Weather Conditions. Because this Refuge is located only 65 miles northwest of Crescent Lake, the weather it receives is usually very similar to that experienced at the parent area.

B. Habitat Conditions.

1. Water. Following a normal procedure, last fall the Irrigation Board that controls the water levels of the lakes on this Refuge withdrew most of the water from Lake Alice, the reservoir uppermost in the chain, and consequently it was almost dry until very late in the period.

Lake Minatare, the main reservoir within Refuge boundaries, remained much higher during this period than it has for several years.

In early April, all the reservoirs started to fill and as the period ends, the water levels are rising rapidly.

Because of the severe, unpredictable nature of the water fluctuation on the reservoirs of this Refuge, very little if any nesting is realized. The water areas do, however, serve as an important resting area for migrating birds both in the spring and fall.

2. Food and Cover. With the possible exception of the shoreline surrounding Winter Creek Lake, no waterfowl food exists within the Refuge boundaries. The birds normally use the water areas only for resting and do their feeding in the fields and along the river that lies to the south of the Refuge. Food and cover for species such as pheasants and deer appear to be adequate in the woody fringe that surrounds the reservoirs. This fringe is probably most important as escape cover from which the birds and animals can move to the surrounding farming areas.

II. WILDLIFE

A. Migratory Birds. Comparatively few birds stopped on this Refuge during the spring migration. The migrants followed their normal pattern and those that did stop did so only for a short time.

A few Canada geese occasionally stop on the area but only on a casual, erratic basis.

- B. Upland Game Birds. On our patrol trips, we normally see a few pheasants in the areas that surround the reservoirs. It seems that they are slightly more abundant than they were a year ago.

No recent sharp-tail sightings have been reported but we assume that, as in the past, a few birds moved into the trees during the periods of snow cover.

- C. Big Game Animals. A few mule deer are still holding on and they appear to be adept at dodging the general public. On April 17, nine mule deer were observed just outside of the trees on the south side of Lake Minatare.
- D. Fur Animals, Predators, Rodents, and Other Mammals. The woody cover on this Refuge furnishes excellent habitat for both raccoons and skunks and a few of these animals are present. Because of the lack of nesting, these animals probably do comparatively little damage.
- E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies. Again, because of the tree cover, avian predators find this Refuge much to their liking. During our few patrol trips to this area during the winter, no eagles were observed but it is probable that a pair or two stayed during the winter.

Owls, crows, and magpies are year round residents but they move a great deal. They become more abundant as the tourist season picks up and the pickings become easier.

- F. Other Birds. No unusual bird observations were reported this period.
- G. Fish. Although we have no first hand information, we understand that ice fishing was comparatively good on Lake Minatare during the winter months. On April 17, after warmer weather had arrived, a total of fourteen cars, all carrying one or more fishermen, were parked along the inlet to Lake Minatare.

Fishing success and fishing use has increased considerably during the last few years.

- H. Reptiles. Nothing to report this period.
- I. Disease. To our knowledge, none of the wildlife species inhabiting this Refuge were afflicted by any disease during this report period.

III. REFUGE DEVELOPMENT AND MAINTENANCE

All development and maintenance on this particular area are supervised by the Bureau of Reclamation and our Bureau is concerned only with wildlife interests.

IV. RESOURCE MANAGEMENT

All summer home development, trailer parking, concessions, grazing, etc., on this area are administered by the Bureau of Reclamation.

V. PUBLIC RELATIONS

- A. Recreational Use. Because we are concerned only with waterfowl aspects of this particular area and have no direct concern with the recreational uses, as long as they do not conflict, we keep a little more than a casual record of the recreational use upon the area.

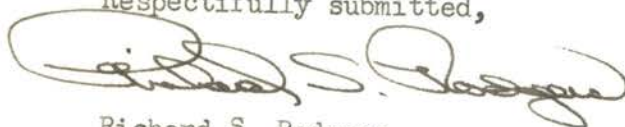
As has been stated in each report, recreational uses such as boating, picnicking, swimming, and lately, fishing are growing each year. This is because this is the only good sized water area within a reasonable distance of the city of Scottsbluff and the surrounding heavily populated farming area.

So far, the recreational use has not interfered a great deal with waterfowl use because the bulk of this latter use occurs during the cold weather months of late fall. As long as we can keep people from living in their summer homes and trailers on a year round basis, we should be able to satisfactorily discharge our responsibilities and still allow a very considerable amount of recreational use.


- B. Hunting. No hunting of any kind is allowed on this Refuge.

Report completed 9 May, 1958.

Respectfully submitted,



Richard S. Rodgers
Refuge Manager


Regional Office Approval

5/20/58

Date

W A T E R F O W L

REFUGE North Platte Nat'l Wildlife Refuge

MONTHS OF January TO April, 19 58

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard										
Black										
Gadwall										
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other										
Coot:										

NO WATERFOWL PRESENT ON REFUGE LAKES.

(Rev. March 1953)

MONTHS OF **January** TO **April** , 19 **58**

(1) Species	(2) Weeks of reporting period								(3) Estimated	(4) Production	
	11	12	13	14	15	16	17	18	waterfowl days use	Broods: seen	Estimated total
Swans:					*		*	*			
Whistling											
Trumpeter											
Geese:											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard				1500	1200	500	500	400	28,700		
Black											
Gadwall											
Baldpate											
Pintail				75	50				875		
Green-winged teal						150	150	100	2,800		
Blue-winged teal											
Cinnamon teal											
Shoveler											
Wood											
Redhead											
Ring-necked											
Canvasback											
Scaup											
Goldeneye											
Bufflehead											
Ruddy											
Other											
Mergansers				500					3,500		
Coot:						100	100	100	2,100		

*Estimated - no count.

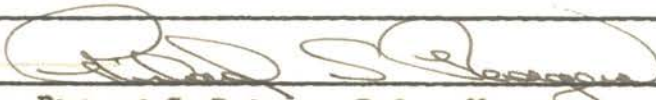
(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans			
Geese			
Ducks	35,875	2,075	
Coots	2,100	100	

SUMMARY

Principal feeding areas are North Platte River and fields to the south of Refuge.

Principal nesting areas No nesting during this period.

Reported by 
Richard S. Rodgers, Refuge Manager

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

UPLAND GAME BIRDS

1613

Refuge North Platte Nat'l Wildlife Refuge Months of January to April, 19 58

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specificoally requested. List introductions here.
Ring-necked Pheasant	3,000 acres					None			275	Good winter survival.
Sharp-tailed Grouse	3,000 acres					None			25	Oecasional visitor during deep snow

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1751

Form NR-1A

(Nov. 1945)


MIGRATORY BIRDS

(other than waterfowl)

Refuge North Platte Nat'l Wildlife Refuge Months of January to April 1958

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Double-crested cormorant	75	Apr 3								
Great Blue Heron	5	Apr 3								
White Pelican	15	Apr 17								
II. <u>Shorebirds, Gulls and</u>										
<u>Terns:</u>										
Ring-billed gulls	750	Apr 3								

(over)

(1)	(2)		(3)	(4)	(5)		(6)
III. <u>Doves and Pigeons</u> :							
Mourning dove							
White-winged dove							
IV. <u>Predaceous Birds</u> :							
Golden eagle							
Duck hawk							
Horned owl							
Magpie	25	Apr 17					
Raven							
Crow	25	Apr 17					
				Reported by 			

Richard S. Rodgers, Refuge Manager

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge North Platte Nat'l Wildlife Refuge Year ending April 30, 1958

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs						(5) Total Popula- tion
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Muskrat				None										150
Raccoon				None										50
Skunk, Stripped				None										50

* List removals by Predator Animal Hunter

* List removals by Predator Animal Hunter

REMARKS:

Reported by Richard S. Rodgers, Refuge Manager

INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i. e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
- (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
- (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.