

ANNUAL REPORT

Crescent Lake Refuge

Year ending

June 30, 1939

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Refuge Personnel

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Junior Refuge Manager

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Under Refuge Manager

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Foreword:-

This refuge has experienced a very successful year. Water levels have held their own, and in some lakes the levels are higher than last year. Food and cover plants have made a "comeback" from the drouth⁶ period. All physical improvements are completed, with the exception of a boundary fence, and perhaps, a week's work to complete the water system at the secondary headquarters.

Fifteen thousand fence posts from a Bureau W.P.A. project in Idaho, are now stored at this refuge, awaiting the expiration of the present grazing lease; and some contemplated land trades to round out our boundaries.

One of the largest wild hay crops in years is expected, and range land is producing more feed than recent past seasons. Buck brush and wild rose are again seen over the sand hills.

Wildlife:-

We can report no exceptional gain in wildlife, nor do we see any decrease in all species combined. The fall migration of 1938, and also the spring migration of 1939, we believe to be rather exceptional, in that one specie arriving at one time. In August 1938, a large migration of Shovellers and Blue Wing Teal came, remained until September, then they passed on, with other species closely following. It was almost impossible to make an accurate senses of the Waterfowl using the area.

We do not believe there were over 50,000 waterfowl on the refuge at any one time, but with the pronounced concentration of one species at a given time, we would estimate a total of 200,000 waterfowl in the aggregate that used the area during the fall migration.

It seems, from our observations of the migration, that the early arrivals, assisted by the countless Coot, depleted the supply of the early ripening pondweeds, and then moved on. The next arrivals would do the same with their favorite food.

A small increase was noticed in the numbers of Canvasbacks, from the fall migration of 1937. But a decrease was seen in the numbers of Green Wing Teal.

A large migration of birds, not included in our total estimate, was the Mergansers. Countless thousands came just before the freeze. When one would drive up to one of the lakes, the entire lake surface would look like it was covered with small whitecaps as they would take wing.

Our estimate of the total waterfowl at the height of the spring migration was also 50,000 birds. Many of the early migrants passed by as all lakes were frozen until after March 15. Large flights of Pintails were seen passing over, or alighting for a short time along the shores or in open fields, where small pools had formed from melting snow. Sand Hill Cranes were by far more abundant than the past season. At the peak of their migration, flocks were in sight for hours passing high over head, sending back their wierd calls.

White Pelicans were also more numerous this year. Our estimate being 15,000 birds, using the refuge lakes, and lakes bordering the refuge. These birds stayed in the area over a month longer than the previous season. Last year they left on May 20, while this year they stayed until June 15.

The Snow Geese were either not as abundant as the past season, or else failed to stop.

A lone American Egret was seen on the shore of Crescent Lake on March 29, but this was the only time it was sighted. We find no record in the refuge files of this bird being seen here before.

Many Long-billed Curlews are again nesting over the area. A few Upland Plover are seen, and the usual amount of Avocets, and other shore birds.

A slight increase is noticed in both Sharp-tail and Pinnated Grouse. Two broods of Prairie Chicken, and one brood of Sharp-tails, have been observed on the refuge, and others reported having been seen by neighboring ranchers.

Pheasants are abundant over all the refuge; many young birds are seen.

About the usual number of Antelope are on the refuge. Six head were seen at Camp Valley, and five head were using the area east of Crescent Lake. No fawns have been seen this year by any of the refuge help.

Recreation Areas:-

Many fishermen visited this area at the opening of the fishing season. One Sunday, 42 cars were counted, this one day more people were on the recreational area, than the total for the season of 1938.

Limit catches were made of "Bullheads", (the only specie on the refuge) during the first of the season.

Many cars came from the eastern part of the state, some 400 miles, and 30 of these miles over sandy trails, to fish for this type of fish. One can only wonder at the trend toward outdoor recreation.

Plantings:-

Since the completion of the physical improvements, on the refuge, all efforts have been directed toward the Biological development of the area. This is severely handicaped by the present grazing lease that does not expire until May 1942.

We have areas where grazing is prohibited. On these restricted areas, we now have a good stand of aquatic vegetation, well bordered with Bullrushes. Behind these rush borders we have shown wild Millett and Smartweed. The areas that need the most development, are now open to grazing. The limit of cattle (4000 head) are now grazing on the refuge. This stock will be allowed to go into nesting areas, lake shores, and pot-hole areas on July 16, according to the lease. During hot weather these cattle will wade

out in the lakes, pulling up aquatic vegetation and trampling down the Bullrushes. Any tree plantings would be destroyed.

These difficulties are just being quoted to show the impossibility of fully improving the area until after the expiration of the present lease.

The following plantings have been made on areas that can be protected:

13750 Willows	2750 Honey Locust
500 Choke Cherry	1150 Black Locust
200 Buck Brush	2000 Ash
5000 Indigo Bush	6000 American Elm
100 Clamatis	1550 Chinese Elm
1000 Red Cedar	1000 Russian Olive

Of the aquatic plantings the following were transplanted to barren areas:

20,500 Hard Stem Bullrush root stocks
3,900 Arrowhead roots

Eight hundred pounds of Wild Rice were planted during May, as were 200 Smartweed and 8 bags of Wild Millett.

All of the above aquatic plantings are showing a good growth. Wild rice has made a growth of 23 inches, but on our last test, it showed an unhealthy condition. This may be not a serious condition, but a close check will be kept. Both Smartweed and Millett are making a rapid growth.

Choke Cherry and Buck Brush were transplanted during the winter months. These plants were dug up, leaving the frozen earth on the roots, and transplanted under Willow groves, and around our upland game shelters. These plants are making a good growth and are bearing

fruit this season. At least 75% of the willows planted are growing. About the same percentage of the Indigos are alive and making a good growth. The Clematis are all growing with the loss of a single plant. Red Cedar are alive only where planted under the willow groves where they are well shaded. Russian Olive and Chinese Elm are showing a good survival, especially where protected by other growths. Ash is also doing fine where planted in Willow groves. Locusts are also showing about a 75% survival. American Elm has shown the largest loss. But all plantings that were made as an under-planting, are showing a good growth. We are pleased to state, that there is no loss from grasshoppers this season. With ample rainfall, and the freedom from the grasshopper plague of last year, all trees planted on this area this year, should get a good start.

Predator Control:-

From records available from the nesting studies which are being conducted by the Research Division, they show we will have to carry on a relentless control of predators. The Bullsnake is the outstanding predator on nesting waterfowl. Skunks are also taking their toll of eggs. But only one record of Coyote damage has been recorded, to nesting ducks.

We expect the records to show a 70% loss of non-divers nests by Snakes. This loss of 70% is just an estimate, final figures will not be available until after nesting season, but we do know the loss to be enormous.

We have experimented with several types of snake traps, and have

found the funnel type, as planned by Mr. Imler of the Research Division, to be very satisfactory. Over 200 Bullsnares have been caught in these traps. It is our belief, that this control work, will show results in another season. It will also be necessary to control skunks, at all seasons. We also plan to keep the Coyotes down to a minimum. Forty-three Coyotes were trapped, and fifty-two skunks, during our Predatory Animal control program, ending December 31, 1938.

Refuge Improvements:

With W. P. A. funds and labor, secondary headquarter buildings were completed. A combination garage and coal shed was built. The storage cave was rebuilt, the yeard fenced, and the residence painted.

The residence at the Secondary headquarters has been piped for water and a hot water tank installed. A windmill and water tank was erected, but is not completed at this date.

This will complete all contemplated improvements on this area. At least, until the expiration of the present grazing lease, as mentioned earlier in this report.

Law Enforcement:

In taking the Test Well and Lake Gauge reading each week it is necessary to visit all parts of the refuge. As no certain days are set aside for this work it gives us a good check on any trespasses. During hunting season a strict patrol was made daily, but not one violation was observed.

North Platte Refuge:-

This area located 110 miles west of the Crescent Lake Refuge, has been supervised from this station.

As all grazing leases expired December 31, 1938, it was necessary to construct six miles of fence to enclose the Lake Alice unit. This work was done with W. P. A. labor, and the materials were furnished from the Crescent Lake supply.

The Lake Alice area, since the exclusion of grazing, we believe, will be of some value as a nesting area. This lake is filled each year in May, and holds a staple water level until November. At this time, the water is let out to fill Lake Minatare, only leaving a small amount of water in the lake during the winter months.

The water fluctuation in Winter Creek Lake and also, in Lake Minatare, is so great that these areas are worthless as a nesting area.

While the refuge as a whole, is not of value as a breeding ground, it is of value as a nesting ground. We believe a conservative estimate of both Geese and Ducks resting on the area during the fall migration was 40,000 birds.

These birds would rest during the day on these lakes and go into the corn and grain fields at night. This area again proves it worth during hunting season. As soon as the birds were disturbed on the North Platte River, they could be seen going to the refuge lakes by thousands.

The Lake Minatare area has been highly developed as a recreational area by the Reclamation Bureau's Veteran's C. C. C. camp at Lake Minatare. This has worked some hardship on upland game, as several good brush areas were cleared for camp sites. This problem has been

worked out, and will not happen again in the future.

With the closing of the Lake Alice unit, both to stock and to the public, this area will become attractive to wildlife, both upland game and waterfowl.

The recreational area on Lake Minatare is closed to the public from September 15 to May 15, thus leaving wildlife undisturbed during the spring and fall migrations.

Respectfully submitted

A handwritten signature in dark ink, appearing to read "J. H. Harwood", is written over the typed name. The signature is stylized with a large, sweeping initial "J" and "H".