

QUARTERLY REPORT

KUBY LAKE

MIGRATORY WATERFOWL REFUGE

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By-

**Herbert H. Dill
Refuge Manager**

Weather

According to reports received from various parts of the State of Nevada, the weather this fall has been milder than for many years. This was true of our area and immediate vicinity; approximately an inch and a half of precipitation was experienced on the refuge on October first and second which took the form of rain at the 6,000 foot level and snow from 8,500 feet to the peaks of the mountains at 11,000 feet. During the remainder of the month of October there was no precipitation and the weather remained uniformly mild.

Since precipitation was obviously below normal, it would naturally be thought that this would result in the water levels in the Lake falling off. However, the usually high rate of evaporation did not apply during the latter part of the summer and during the fall, with the result that water levels have been slightly above what they were a year ago.

In connection with data on the weather, precipitation, temperatures, etc., a full cooperative weather station will be established at the refuge headquarters through the courtesy of the U. S. Weather Bureau. At the present time approximate temperatures and the amounts of precipitation are being recorded, but in the future it is planned to obtain better results with more accurate instruments including an evaporation tank and anemometer. Two snow courses have been laid out in the mountains west of the refuge, one at 7,000 feet and the other at 8,500 feet. This will give us an index to the runoff the Lake receives from accumulated snow; the course at the lower elevation is designed to show the quantity of water to be expected as flash runoff. Snow sampling equipment will be obtained shortly and two recordings will be made, one March first and another April first from both courses. By correlating the data obtained

from the foregoing measurements with readings made from gauging stations on the Lake, much valuable information should be obtained which can be applied to proper water management on the refuge.

Waterfowl

The most of the time during this period was devoted to physical development of the refuge by members of the refuge personnel. As a result, no detailed studies were made in relation to wildlife on the area. Observations were recorded from time to time in the course of patrolling, fence maintenance, and so on.

In general it was our observation that there were about 30 percent less waterfowl on the refuge than last year during migration. The birds were never concentrated in large numbers; this is attributed to the fact that there were no storms during the fall. In fact there was hardly a day when the wind blew with a velocity greater than 10 miles an hour. It was generally reported throughout the County that there were birds on almost every little stream and marsh but that they were scattered.

Exception to the above was found in the number of Canada geese frequenting the refuge. During the period from July 15 to November 15, there were more than 1,500 geese here at all times. Also, there was a gain in the number of canvas-backs and redheads; these were most numerous from October 15 to October 25; about 500 of each species were present at that time. In the case of the Canada geese, there was no increase in the number of birds seen on the refuge at one time, in fact, there was about a 50 percent decrease as compared to last year. However, last year these birds appeared for a short time late in October, about 2,000 in number, and then left. Inasmuch as all species of waterfowl were scattered this fall (and geese were reported in several places in the County where they hadn't been seen the year before), our observations point to a possible

increase in the number of Canada geese migrating through this part of the State during the fall. The numbers of canvas-backs and redheads observed represented a 400 percent increase; both species nested on the refuge and three broods of young for each species were observed.

No great change was noted in the relative abundance of other species of waterfowl.

One interesting feature during the fall migration on this refuge that might be commented on at this point, is the regular order in which the various species of ducks appear; Early in October our local birds have all flocked; most common are mallards and pintails in about equal numbers. There is a scattering of redheads, gadwalls, canvas-backs, cinnamon teal, with an occasional ruddy duck. By the last of the month the pintail will have become the most common species and the redheads and canvas-backs will have reached their maximum number and will have departed. Then follows an intermediate period followed by the appearance of more pintails and mallards and large flocks of baldpates; about a week later the green-winged teal show up but not in large numbers. By the last of November only mallards and baldpates are really common on the refuge, a good number of which winter in the springs along the west side of the refuge. And most interesting of all, at this time more species of ducks can be observed than at any other. Several kinds of the divers appear including: Golden-eye (both American and barrows), ring-necked duck, bufflehead, lesser scaup, American merganser and hooded merganser. The following species were observed on a small pond near the refuge headquarters during January, 1939: Baldpate, mallard, green-winged teal, pintail, bufflehead, American golden-eye, lesser scaup and ring-necked duck; also present were a great blue heron and a white-faced glossy ibis.

Upland Game

All four species of upland game commonly found on or near the refuge had a very good season. As was noted in a previous report, our mourning doves showed a remarkable increase over last year. By Labor Day, however, they had nearly all migrated, much to the concern of the local sportsmen. The dusky grouse and mule deer were found to be very abundant; hunters frequenting an easily accessible portion of the Humboldt National Forest adjoining the refuge on the west, had excellent luck. Twenty seven male mule deer were checked out by members of the refuge personnel; all were killed over an area of about five square miles near the south end of the refuge (on the National Forest). Almost every hunter known to have gone out got his buck. Old residents state that mule deer are now more abundant than they ever were in the history of the country. To date we have not observed any food shortage for deer. However, it would seem that if they continue to increase at the present rate, that a deer problem will develop similar to those experienced on Murderer's Creek in Oregon and in other localities. The season was open on dusky grouse for two weeks during the deer season, late in October; reports secured from some of the hunters indicated that grouse were abundant. From our own observations they show an increase of from 15 to 20 percent over last year. Most encouraging, a pair nested near Cave Creek at the refuge headquarters. The increase of this species is attributed to favorable weather during the nesting season. Incidentally, the number of grouse killed by deer hunters is small and also the number of grouse hunters in deer season is limited; deer hunters will not usually shoot at a grouse for fear of scaring a big buck; also, the average sportsman would rather go forth with a large rifle after deer than with a shotgun after grouse. Therefore, it would seem that

the grouse season is opened at the proper time as far as the preservation of that species is concerned. Sage grouse are truly very abundant all over the County of Elko and in the northern portions of White Pine County. Several old timers have been heard to say that the "chickens" are coming back in Elko County to something like their former numbers. No hunting season has been allowed for the past three years; however, it is understood that a one day season will be permitted in 1940. According to County officials, better observance of the law is obtained by allowing a short open season than by keeping it closed altogether. We have a flock of approximately 200 sage grouse on the refuge at the present time.

Predator Control

No special project was conducted relative to this phase of refuge work. Members of the refuge personnel accounted for three coyotes in the course of patrol work; the coyotes were shot with large rifles. Many more were shot at, and it is believed that they were driven off to a certain extent through such activities.

Other Animals

It is becoming very evident that muskrats are increasing on the refuge quite rapidly. At the present time it is hard to get an estimate of the total number due to the inaccessability of the marsh area. With the coming of winter and ice on the Lake, it will be possible to get a count on the number of houses and burrows and form some sort of idea. However, every small pool on the west side of the refuge is occupied by muskrats and there is a string of houses all along the west side of the Lake proper. Judging from the number of muskrats known to frequent other similar marsh areas, there are at least 3,000 muskrats in Ruby Lake at the present time. This is a very conservative estimate. It may be that

the present muskrat population will cause damage enough to the system of dikes it is planned to construct that a trapping program will have to be started. On the other hand, we are advised that the Lake formerly produced an annual fur crop of from four to five thousand muskrats. Obviously if such a population can be reconciled to our construction program, it would be better to let the muskrats go on multiplying until a maximum population is reached.

We were recently advised that otter were once found in the Lake; since these mammals occur fairly commonly in the northern part of the County, it might be possible to re-stock them here. Such a project would, of course, be offered for consideration and approval by the Washington office prior to execution.

A new colony of beaver was discovered about three miles west of the refuge in the mountains. They have dammed a small stream at the 8,000 foot level and are feeding on aspens. To the best of our knowledge there are five beavers living in this colony. That makes a total of three different colonies known to exist within 15 miles of the refuge. There are no beaver on the refuge proper.

Mountain lions are becoming more numerous, four different tracks being found in one day a little over one half mile west of the refuge. It is believed that the tracks represent a litter of young and two adults. A colt belonging to the refuge manager was scratched up one night; whatever sort of animal that was doing the scratching was driven off before he could succeed in killing the colt. Judging from the size of the scratches on the young horse and from tracks left in the mud, a puma was responsible.

Badgers are coming to be a nuisance about the refuge headquarters

and in the wrangle pasture. They have increased rapidly and are quite commonly seen; their burrows are numerous and a bad threat to an incautious rider. They have a beneficial action however, in that they constantly pursue the ground squirrels which are too numerous.

Refuge Development and Maintenance

Physical development of the refuge centered on two main projects: Namely, the completion of the residence at refuge headquarters, and the construction of buildings for a CCC camp one quarter of a mile north of the refuge headquarters at Cave Creek.

The refuge manager occupied the residence built on November 15; it is a type G house, one and one half stories. Part of the labor was furnished for this project through WPA. Earlier, in August, the major part of the construction work was started; the basement walls had been completed at that time, but the most of the building was put up between August fifth and November 15. There still remains a number of odd jobs to really complete the house, which it is planned to accomplish using CCC help in the spring. The residence has been supplied with light, heat, and water (including sewage disposal); water is taken from Cave Creek by gravity on a temporary hookup. In the future a 5,000 gallon tank constructed by the Army for the CCC camp will be shared with the camp. This tank will provide fall of 120 feet to the headquarter buildings which will give ample pressure for all needs including fire suppression.

An excellent set of CCC camp buildings were nearly completed by the Army during the period. Work started on the camp early in October and at the date of this writing (Nov. 15) about ten days more time is needed for completion of the buildings. This camp is larger than the average having room for 250 men; there is one full-sized extra barrack, a barrack-sized

building for educational use, a blacksmith shop, oil house, two full sized barracks for personnel quarters, two separate office buildings both with ample storage space, and four large garages calculated to house all of the Army's and technical service's equipment. The buildings are well lighted and even have convenience outlets enabling the men to plug in radios, electric razors and so on. The camp area is well drained and some of it can be irrigated by gravity flow from Cave Creek which will provide grass in front. It is far enough from the Lake to escape many of the flies and mosquitoes.

Another physical improvement consisted of working out a cooperative agreement with the Division of Grazing whereby they furnished about 100 enrollees, two tractors with bulldozers and one grader for the purpose of improving the road leading from the refuge north 38 miles to the State highway running into Wells, Nevada. Proposed improvements consist of straightening out the bad turns, filling over rocky places, raising the grade and widening the right-of-way to reduce drifting from blowing snow, and the construction of nearly six miles of snow-fence. Good progress is being made on this project; work will continue until spring if the weather permits.

Cultivated Crops

Fall plowing was done on 40 acres of newly broken ground (last spring). This will be put into barley and oats next spring.

Public Relations

The usual information regarding open seasons on various species of game coming into the open season for hunting during the fall months was made available to the public in the cities of Wells, Elko, and Ely, Nevada.

Our greatest problem in public relations has always been, and prob-

ably will continue to be, the matter of keeping the refuge in the status of an inviolate sanctuary; every fall there has been considerable agitation among the sportsmen to open part of the Ruby marsh for waterfowl shooting. This fall it was pointed out to the sportsmen that they were fortunate in having a good supply of small streams and marshes, other than those to be found at Ruby Lake, where waterfowl could be hunted. It was learned that the duck hunters of the County enjoyed good shooting on opening day, but due to the unusually mild fall weather, that the shooting fell off during the remainder of the season; this condition was characteristic of the season in most western states, and the Elko County hunters were advised accordingly.

A project has been approved covering the construction of a fish hatchery near headquarters on the refuge. This hatchery was to have been built by the County and operated by the U. S. Bureau of Fisheries. The funds made available for use by the federal agency could not be continued, however, and the County was faced with the necessity of shouldering the entire burden of construction and maintenance; consequently the start of building operations was postponed until the spring of 1949; it is planned to go ahead at that time requesting the Bureau of Fisheries to render what assistance they can, the County footing the bills.

This project has several excellent features from our standpoint: It carries the assurance that the County will always maintain the roads between the hatchery and the cities of Wells, and Elko, Nevada; also, there will be a tendency for the sportsmen to expend their energies in furthering the hatchery project rather than plotting to obtain shooting rights on the refuge and generally making things unpleasant for our program; it will insure the stocking of every stream and spring on the refuge with trout, which should make some of the best fishing in the State; this

feature can be used to very great advantage in maintaining favorable public relations.

Economic Use of the Refuge

Permittees holding the two Special Use Permits issued for grazing last spring turned in about 800 head of cattle onto the west side of the refuge August first. The number of animals grazing will be regulated by members of the refuge personnel and by the requirements of the permittee as the season advances. No revenue was realized from any economic use during this period.