

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
CRATER LAKE NATIONAL PARK

CRATER LAKE, OREGON  
September 19, 1932.

OFFICE OF THE SUPERINTENDENT

MEMORANDUM

For Superintendent  
Crater Lake National Park

The following report is in reply to your request for information relative to the animal life within Crater Lake National Park.

BLACKTAIL DEER Estimated Number 250

The number of deer within the park will vary considerably each year owing to their habit of migration caused by the severity of winters in this locality. The winter snows are so deep it necessitates all these animals to leave the park. There is two general directions used in their course of migration, the blacktail accept a west and northwesterly direction and use the lower Rogue bordering the Rogue River valley and Umpqua for their winter range. A close observation of their habits will disclose the time of their migration to conform to local weather conditions and the first storm of fall season will start their general movement toward their winter range and as winter advances, they gradually work to lower altitudes.

This general migration is reversed during spring months and as the snow recedes, deer follow snow line into the park and higher altitudes where forage is plentiful and they can enjoy the cool summer weather.

MULETAIL DEER Estimated number 60

The habits of mule deer who frequent the east rim area of Crater Lake, which marks their most westerly course of migration, make their way east during early fall months into the semi-arid country which is so characteristic of their general habitat. They also leave the higher elevations with the early fall storms and return in spring following the snowline. According to best information obtainable, a large number of these animals died last winter. Stockmen state that it is not uncommon to find the remains of from twenty to forty of these animals where they had gathered together and perished for lack of food during the past winter. Their number has decreased considerably thru the effects of last seasons heavy snowfall.

ELK Estimated number 19

These animals were introduced into the upper Klamath basin in January 1916 and have increased from the original number of fifteen to about two hundred last fall. Their winter range was established in the upper Klamath marshes where willows and wild grasses furnished sufficient forage and where they were least molested. Last year this area completely burned and destroyed their winter range. The herd foraged wherever they could, they were driven from ranch to ranch and finally, in desperation, and under eight feet of snow, left the locality entirely and headed west for the high Cascades, twenty five remaining and the others have never been seen again. An early investigation revealed that out of some two hundred animals about twenty five survived the winter. Nineteen of these were observed in different localities of the park last June and some have remained thruout the summer months.

ANTELOPE Estimated number 2

While the park area in general is not characteristic of the habitat of these animals, two were observed on the south rim area last summer. Their presence here is rather a puzzle as we have no record indicating that Antelope have ever frequented the park before and it is doubtful that they should be listed among the mammals of the park.

BEAR (black and brown) Estimated number 38

Last fall the shortage of feed seemed to have the tendency to hold bear within the park until very late into the season and the last one to leave, remained around Government Camp until November 29th. The habit of bruin during fall months is very similar to deer. Bear will remain in high country during summer where the cooler temperatures can be enjoyed and where food is plentiful until fall when frost and snows destroys some and makes other kinds of forage more difficult to obtain. At this time bear will leave for lower elevations gradually working their way to country where forage is easier to obtain. Observations show that their hibernating is generally done outside the park and in lower elevations where food can be obtained when emerging from hibernation. Six two-year-old bears remained within the park last winter and no doubt hibernated near Government Camp as they made their presence known when 15' of snow was still on the ground, their first appearance was made March 22nd. These bears remained around camp until about June 15th when their natural food could be obtained and few have been seen after that time. Observations show that their habit of migration is largely the same as deer, altho evidence of a few entering the park much earlier was observed.

A slight decrease has been noted in numbers in the park this year that may be the result of two things; First with the abundance of their natural food, it is logical to think they would accept that rather than the garbage pits. Secondly, due to the severity of last winter, they were driven lower into the valleys where, owing to THEIR gentleness they become an easy prey to the poachers gun.

MOUNTAIN LION Estimated number 3

These animals cover such a vast amount of range that it is difficult to tell whether any remain inside the park for any length of time. They too leave the park during winter months for places where their food is more plentiful.

COYOTES Estimated number 75

The coyotes are not in sufficient numbers to become a menace to the park. A few remain thru the winter months but most of them leave for lower elevations.

BEAVER Estimated number 12

The discovery of beaver in Copeland Creek a year ago was quite unusual. However to date, no data has been gathered with reference to their general distribution or their source of origin. This will be done as soon as time permits.

MARTEN Estimated number 400

The marten are quite numerous and have a general distribution thruout the entire high country of the park, as they are protected, it is generally thought that they are increasing in number.

BADGER No estimate

They are very scarce, fresh evidence of their work is seen occasionally.

WEASEL No estimate

Little is known of their presence in numbers or habits, altho they are often seen in winter generally around an area where the pine squirrel is wintering.

Of the rodent specie, no estimates are made and among those that are most numerous is the Marmont, Golden mantled squirrel, Chipmonk, Pine squirrel, Cottontail and Snowshoe rabbit and Rock Coney. The rodents seem to be generally on the increase, however the snowshoe and Cottontail were decreased considerably last winter due to heavy snow conditions of this locality.

#### GENERAL INFORMATION

General conditions here and the habits of our various game animals is distinctly adverse to good conservation principals and conservation itself. We have this condition existing; The game animals enter the park as soon as they can and consistant with forage growth in the spring months, here they remain all summer protected and undisturbed by their greatest enemy (mankind) This causes them to lessen their general precaution that they usually assume and during fall months, after having been around and associated with park visitors all summer without being harmed. As they leave the park during open hunting season, they have abandoned most of their usual precaution toward mankind, this makes the game animals that frequent the park unusually easy prey for hunters. As long as this condition exists it will be difficult for our game animals to effect a general increase.

This condition can be improved by the establishment of a Game Refuge on the East, West and South boundaries of the park. While the areas involved are not generally suitable for game refuges owing to the fact that game cannot winter there, it would bring about this condition.

bring about this condition. By using an area three miles wide on the east, three miles on the south and extending a line west from the south boundary of the refuge to the Rogue (using topographic features) thence north using the Rogue River as the west boundary, to the north boundary of the park. The deer and other game animals leaving the park, altho destined for much lower elevations, would not pass thru the boundaries of the area described until after the close of hunting season and the establishment of this refuge would cause their protection to be continuous and thereby giving an opportunity for a natural increase.

Respectfully submitted,

BY

  
Ranger.

## SURVEY OF ANIMAL LIFE OF CRATER LAKE

1 9 3 2

### 1. Black Tail Deer.

Actual census - 40, estimated number - 250. The number of black tail deer within the park varies each year owing to their habit of migration which is dependent upon weather conditions. The winter snows in the park are so deep that all of the deer move out to the northwest and use the lower Rogue River Valley and the Ompqua for their winter range. The time of the migration depends upon the local weather conditions. The first storm of the fall starts their general movement toward the winter range and as excessive snows come they have all reached lower elevations.

The migration is reversed in the spring time and as the snow recedes, the deer follow the snow line into the park and up into the higher elevations where forage is plentiful and weather conditions cool.

### 2. Mule Tail Deer.

Actual census - 18, estimated number - 60. The East Rim of Crater Lake marks the most westerly area of migration for the mule tail deer and with the coming of snows in the early fall they move easterly into the semi-arid country, the characteristic habitat of this animal. The numbers of mule tail deer also conform with local weather conditions, migrating down with the winter rains and returning in the spring after the snowline recedes to the higher elevations. The most authentic information indicates that the exceedingly severe snow fall and cold conditions of last winter caused many of these animals to die and to materially reduce the number in the park. Stock men state that it is not uncommon to find the remains of from 30 to 40 of these animals in a group where they gathered and perished for lack of food during the past winter.

### 3. Elk.

Actual census - 6, estimated number - 19. These animals were introduced to the upper Klamath Basin in 1916 having been brought from the Yellowstone National Park. The original number introduced was 15 and it is estimated that the herd had reached 200 by last fall. The winter range of these animals is the Klamath Marshes where willows and wild grasses furnish sufficient forage and where the swampy conditions cause them to experience very little molestation. Last summer the entire Marsh and swamp area was completely burned and the winter forage for the Elk was destroyed. As a result the herd foraged from ranchstead to ranchstead and the ranchers drove them away. In some cases it appears that the ranchers killed some of the

Elk. The herd foraged wherever they could and finally in desperation left the locality entirely and headed west for the Cascade Divide. Stock men claim that 25 remained and it is estimated that 19 of this herd were observed in different localities of the park last June and some have remained throughout the summer months.

#### 4. Antelope.

Estimated number - 2. The antelope is not indigenous to Crater Lake, this park not being considered a suitable habitat. Last summer two were observed along the south rim area by reliable park employees, who having lived in the plains region to the east, were familiar with the appearance and identification of the antelope. This visitation of antelope is unique and we have no record indicating that they have ever frequented the park before. It is questionable whether they should be listed among our animal inhabitants.

#### 5. Bear (Black and brown).

Actual census - 14, estimated number - 33. Last fall the shortage of food caused the bears to remain within the park until late in the season. The last one to be seen in the vicinity of Government Camp Utility Area was observed on November 28. The habit of the bears to migrate to lower elevations where food is more abundant and finally to hibernate. Outside the park area seems to be the prevalent custom. In the spring after they come out of hibernation, the bears are found at the lower elevations and they move to higher elevations. As an exception to this statement six two-year old bears remained in the park last winter and no doubt hibernated near Government Camp. They came out of hibernation and were seen on March 22, 1932 when 15 feet of snow was still covering the ground. These animals remained in the vicinity of Government Camp Utility Area begging food continuously until about June 15 when they left, probably finding their natural food.

It appears that many of the bears migrated below their normal range prior to hibernating and fell a prey to poacher's guns. Information was gained that many depredations were committed in sheep corrals and hog pens outside of the park and national forest areas and no doubt some of the bears were killed.

#### 6. Mountain Lion.

Estimated number - 3. These animals cover such a vast amount of territory in their ranging that it is difficult to ascertain whether or not they remain inside the park for any length of time. No actual observation of a mountain lion has been reported inside of the park this year.

#### 7. Coyotes.

Actual census - 10, Estimated number - 75. There is not a sufficient number of coyotes in the park to be considered a menace. A few remain in the

in the park throughout the winter but most of them leave for lower elevations.

8. Beaver.

Estimated number - 12. The beaver in the park were discovered along the west margin in the vicinity of Copeland Creek during the summer of 1931. It appears that they migrated upstream from the larger tributaries of the Rogue River. The problem of ascertaining more accurate information concerning the beaver in this park, their source and number will be investigated from time to time as opportunity permits.

9. Marten.

Actual census - 30, estimated number - 400. The marten are quite numerous and have a general distribution throughout the higher elevations in the park. It appears that they are increasing in number.

10. Badger.

No estimate. Badgers, if prevalent in the park at all, are very scarce.

11. Fisher.

There were two fishers in the park last winter. Actual census - 2, estimated number - 12. No accurate information has been obtained concerning the activities of these animals.

12. Weasels.

Actual census - 6, estimated number - 24. Little is known concerning the presence of weasels in the park. It appears that they winter in the vicinity of the winter habitat of the pine squirrel.

13. Rodents.

The Marmot: Actual census - 300, estimated number 800 to 1,000, probably more.

Golden mantled ground squirrel: Very prevalent, probably the number present in the park runs into the thousands.

Chipmunk: Very prevalent.

Cotton tail rabbit: Very prevalent. The severe winter and heavy snows appear to have reduced the number of cotton tail rabbits.

Snow shoe rabbit: Very prevalent but also reduced by the severe winter and heavy snows.

Pika or cony: Actual census - 40, estimated number - several hundred.

Observations:

The small area of Crater Lake National Park and the lack of adjacent game preserves seem to be inimical to the preservation of wild life in this

park. Many of the most desired animal inhabitants migrate out of the park during the period of heavy snow fall and are preys to hunters and poachers. This condition could be improved by the establishment of a game refuge on the east, west and south boundaries of the park. The animals would be to a great degree safe from hunters and poachers. The presence of such an extended game refuge area would prevent the deer particularly from reaching the lower elevations where there is no protection during the hunting season, which starts September 20 in Oregon. Such refuge areas would aid materially in causing a natural increase for animals of the park and aid materially in securing a favorable natural balance for the animal life of the park.



## SURVEY OF ANIMAL LIFE OF CRATER LAKE

1933

The nature of the area of Crater Lake National Park is such that it includes only a mountain top area without adequate winter range for the various park animals which migrate. No natural faunal unit exists within the area which in reality constitutes entirely inadequate range for many of the animals of the park and causes them annually to fall prey to hunters and trappers. The area immediately to the east of the park is adjacent to the Klamath Indian Reservation and the Indians, natural born hunters, recognize no closed season, and the east slope of the Cascade Range in the area of the park is becoming particularly depleted of the various animals. The west slope of the range, to a very slight degree within the park, and the area to the west of the park boundary in the Rogue River National Forest, constitutes a more favorable range for the various animals. Unfortunately the animals migrate in and out of the park into the adjacent forested area included in the Rogue River National Forest, or in timber lands of individuals or corporations, and there unrestricted hunting of deer, bears and lesser animals continues throughout the year with but slight restrictions prevailing as to open and closed seasons under the jurisdiction of local authorities.

If the park area was larger it would be possible to have many of the desired animals again become abundant. If the adjacent territory which constitutes a winter range was under proper supervision and enforced restrictions the various animal forms would naturally increase and again an abundance of animal life prevail.

A census, actual and estimated, for the various animals observed within Crater Lake National Park is as follows:

### Black Tail Deer, Columbia Black Tail Deer - (Odocoileus columbianus columbianus.)

Actual census - 48, estimated number - 242. The excessive snow burden of the past winter undoubtedly forced the deer to migrate much farther to the southern Rogue River Valley and the valley to the south branch of Umpqua River than is normal. But in spite of the long distance which the deer inevitably had to travel it appears that there is but slight evidence of a decrease in these animals in the Park. The late melting of the snow the past spring undoubtedly caused the deer to stay outside of the park confines until later in the season than is normal, and rumors have recurrently been brought to us of unlawful shooting of deer. The limited area of the Park, combined with the above situation, makes the maintenance of deer herd a very doubtful problem.

### Mule Tail Deer - (Odocoileus hemionus)

Actual census - 7, estimated number - 40. It is apparent that fewer mule tail deer have been observed this year than during previous seasons. The east rim of Crater Lake National Park marks the northwesterly area of migration for muletail deer. The coming of winter snowfall in October and

November causes the Mule Tail Deer to migrate into the semi-arid country, the characteristic habitat of this animal. The late receding of the snow line to the higher elevation undoubtedly has contributed toward the scarcity of deer being observed. Stock men in the semi-arid region of the Klamath Basin to the east report many of the Mule Tail Deer who have migrated during the exceedingly cold winter with its excessive snow fall.

Elk, Roosevelt - (*Servus canadensis occidentalis*)

Actual census - none, estimated number - none. The elk which have occasionally been seen in the Park are the American Capiti which were transplanted into this area from Yellowstone Park. The Capiti Elk which have been seen occasionally during past years in the vicinity of the Park caused severe damage to farmers gardens and field crops and have offered no appreciable attraction to the Park. As to the reintroduction of the Roosevelt Elk, which apparently became extinct in this area in 1853, there would be a very slight possibility of an attempt to reintroduce because of exceedingly limited Park area. Inadequate range would exist and the animals would range outside of the Park and again fall prey to hunters.

Antelope - (*Antilocapra americana*)

Actual census - none, estimated number - none. The late receding snow line prevented the antelope from moving into the eastern portion of the Park this season, and it appears extremely doubtful if any of these animals occurred within the Park. The semi-arid desert to the east is the natural habitat of the antelope and conditions prevailing this spring were unfavorable for the early migrating of this animal. It appears utterly impractical with the present Park boundaries prevailing to secure a permanent herd of antelope.

Bear, Black and Brown - (*Ursus a. altifrons*)

Actual census - 17, estimated number - 40 to 45. The last bear to go into hibernation was observed on December 30, and the first emerging from hibernation was on April 3. It appeared that the existence of a kitchen in the camp area during the winter months, with the resulting kitchen refuse, has caused an artificial situation to exist and has provided food for the bears late in the fall and early winter and again early in the spring. Numerous depredations were committed by the bears this spring when they came back in numbers too great to be adequately fed by the very limited kitchen waste. It appears that this Park is facing the necessity of having bear feed supplied early in the spring of each year. This is particularly demanded in the case of mother bears appearing with twin or triplet cubs as occurred this season, and the hungry mothers, in their frantic search for food, have refrained from practically no restraint in the effort to break in buildings so as to obtain sustenance. The limited Park boundaries again appear to be a very serious menace to the maintenance of our bear population in the Park. Constant watching has been necessary in order to prevent members of the enrolled personnel of the Civilian Conservation Corps within the Park from teasing the bears and causing them to become ill-natured and possible menaces to tourist visitors.

Mountain Lion, Cougar - (Felis oregonensis oregonensis)

Actual census - 1. As reported in previous years, the cougar covers such a vast range of territory that it is impossible for us to know whether there are cougars habitually remaining within the Park boundaries.

Coyote - (Canis lestes)

Actual census - 5, estimated number - 75. The coyote has been frequently observed in the Park but it appears that there is no necessity within this Park of attempting to kill them. In fact it appears that the presence of coyotes is desirable in order to maintain the balance of life within this area.

Red Fox - (Vulpes cascadenensis)

Actual census - 1, estimated number - 10. The red fox was formerly very common in Crater Lake area but it appears that they are becoming less numerous each year. The one observed was seen by the Park Naturalist along the west rim of Crater Lake last October. It is very probable that many of the foxes in the region of Crater Lake are of the "cross" phase and that very vigorous patrolling will be necessary in order to prevent eradication of the fox in this Park.

Timber Wolf (Canis griseus)

Actual census - none. It is doubtful if any wolves roam within the Park boundaries at the present time.

Beaver (Castor canadensis)

Actual census - none, estimated number - 12. The beaver was formerly found on all streams within the Park. Within the past few years there has been evidence of beaver work at various places along the streams in the western portion of the Park. Very careful protection will be required in order to preserve them within the Park area. It is apparent that the beavers migrate from place to place within the Park as the flow of water recedes from spring time to the less fluent flow of water in late summer and early fall. Copeland Creek, within the Park was particularly marked by beaver work during the current season.

Marten - (Mustella sibirica)

Actual census - 4, estimated number 360. The marten is one of the most abundant fur bearing animals found within the Park, and has a general distribution throughout the higher elevations of the Cascade Range. Spotting crews engaged in Pine Beetle eradication work discovered a trap line within the Park. The excessive snow of the past winter made it utterly impossible for the limited ranger force to patrol the Park and prevent poachers from entering the outlying boundary areas.

Badger - (Taxidea americana)

Actual census - none. Badgers, if present in the Park at all, are very scarce. It is apparent that there is adequate food for badgers in the Park since there are many pocket gophers, ground squirrels and other small rodents.

Raccoon - (Procyon Pacifica)

Actual census - none. The raccoon was formerly very abundant along the Park boundaries and to the area to the west.

Ring-tailed Cat (Bassariscus astutus oregonus)

Actual census - none, estimated number - doubtful. This animal was formerly found in the forested area to the west of the Park. It is doubtful if any are within the Park at the present time.

Otter - (Lutra c. pacifica)

The otter was formerly quite common in the lower reaches and in the Rogue River Valley to the west of the Park. It is doubtful if any are still to be found.

Large striped skunk - (Mephitis occidentalis)

The skunk is quite abundant in the Klamath basin to the east of the Park and possibly some migrate into the Park during the snow free season.

Little Spotted Skunk - (Spilogale p. latifrons)

This skunk was formerly common about the west boundary of the Park and in the national forest area including the head waters of the Rogue.

Pacific Mink - (Mustella v. energeunos)

The mink was formerly found around all the streams within the Park. With recent years very few have been observed and it appears possible that the mink has become extinct in this area.

Mountain Weasel - (Mustella arizonensis)

Weasels very frequently have been seen during past years. None were observed during the past winter but it is probable that some are still found within the Park area.

Alpine Flying Squirrel - (Glaucomys sabinus feliginosus)

The abundance of this squirrel makes it impossible to report an actual census. It is found in the lodgepole forest thickets throughout the Cascade Range.

Klamath Flying Squirrel - (Glaucomys sabinus klamathensis)

Many of the Klamath flying squirrels have been observed, but it is impossible to give an actual census or a probable estimated occurrence. This

animal is found on the east boundary of the Park in the vicinity of the ponderosa pine stand.

Cascade Pine Squirrel - (Sciurus douglassi cascadenis)

The pine squirrel is quite abundant and it is impossible to estimate the vast number found in the pine forests of the Park.

Allen Chipmunk - (Tamias townsendi sensu)

The Allen chipmunk is quite abundant and it is impossible to make an estimate. It is the larger dark colored chipmunk found within the park.

Alamath Chipmunk - (Tamias amoenus amoenus)

The Alamath chipmunk is quite abundant making it impossible to estimate the number. It is the small brighter colored species found in the ponderosa pine stand and more rarely in the Rim Area.

Douglas Ground Squirrel - (Callospermophilus g. douglassi)

This squirrel has been seen in limited numbers along the west boundary of the Park. It is quite common in the Rogue River Valley to the west.

Golden-mantled Ground Squirrel - (Callospermophilus g. douglassi)

The abundance of this animal makes it impossible to estimate its actual occurrence. It is the so-called popular "chipmunk" found in such abundance throughout the park.

Marmot - (Marmota f. flaviventris)

The common ground hog or woodchuck is so abundant that it is impossible to estimate its occurrence. The actual observation of this animal doubtless runs into the thousands.

Porcupine - (Erethizon erioxanthus)

The porcupine is very abundant. Excessive evidences of porcupine girdling of trees is found where the snow line exists during winter time and this animal is constantly observed in the Park.

Coney - (Ochotona f. fumosa)

The coney, pika or rock rabbit is very abundant in the talus slopes in the higher reaches of the Park and within the Rim Area.

Snowshoe Rabbit - (Lepus washingtoni)

The snowshoe rabbit occurs in the Park frequently. It is pure white in winter, brown in summer and is particularly abundant in the lodgepole pine forests.

Silver-haired Bat - (*Lasionycteris noctivagrans*)  
Or  
Large Brown Bat - *Eptesicus fuscus*

These are two wide-ranging species and both have been noted within the Park. Further study, of course, will undoubtedly disclose other species of bats as there are about eighteen varieties known to occur within the state.

Pocket Gopher - (*Thomomys mazama*)

The pocket gopher is seldom seen but exceedingly common within the Park and its little esker-like ridges on the surface of the ground occur at the time of the melting snow throughout the entire park area. It is causing excessive damage to the planting which is being carried on along the rim in an effort to restore primitive or natural conditions. It even appears practical that we should provide for the eradication of this particular form of life in the Rim Concentration Area so as to safeguard our transplanting or restoration work. The following rodents occur within the Park, a brief description as to their habitat is given in each case:

White-footed Mouse - (*Peromyscus m. gambeli*.)

This is the all-abundant "woods mouse" or "deer mouse" found nearly everywhere within the Park.

Western Wood Rat - (*Neotoma cinerea*.)

This is the common pack rat found about rock slides and soon invades cabins and outbuildings wherever they can gain entrance.

Round-tailed Woodrat - (*Neotoma fuscipes*.)

Common in the Rogue River Valley, where it builds its nests of sticks, grass and leaves at either the base of trees or as high as ten or twelve feet among the branches. It should be looked for about the west entrance to the Park.

Alpine Phenacomys - (*Phenacomys orophilus*.)

This is a small, grayish and chunkily-built mouse that lives principally in the heather meadows and damp, grassy alpine flats.

Red-backed Mouse - (*Evotomys mazama*)

This is the fairly common mouse found in the heavier timbered areas about rotten or decaying logs and down timber.

Long-tailed Meadow Mouse - (*Microtis mordax*)

Found commonly about streams and moist places and has a longer tail than most meadow mice and does not make conspicuous runways but wanders at will where it can find food.

Giant Meadow Mouse - (*Microtis arviculoides*)

This is the largest of any of the meadow mice found in the Cascades where they live in grassy meadows along streams or in springy places on the mountain slopes. Fully adult specimens are almost as large as the pocket gophers inhabiting that region. They make conspicuous runways about their homes and can easily be found by locating these runways and noting the cut sections of grass where they have been feeding.

Baird Meadow Mouse - (Microtis bairdi)

Not so common as the other mice and much the smallest of the group. Found in moist meadows and on the drier, grassy slopes. They make conspicuous runways on their feeding grounds.

Jumping Mouse - (Zapus pacificus)

One of the most interesting of the mice found within the Park, of a yellowish-brown color, with extremely conspicuous, long tail and long hindlegs. Found in moist meadow lands.

Alpine Mole - (Scapanus l. alpinus)

Fairly common but nowhere abundant. To be looked for in lodgepole pine timber where there is a good growth of squaw grass.

Gibbs mole - (Neurotrichus gibbsi)

This is the miniature edition of the common mole, in appearance being half mole and half shrew. Found about woody places and under decaying logs and vegetation.

Wandering Shrew - (Sorex vagrans)

The tiniest of the shrew family and fairly common over the entire area.

Water Shrew - (Sorex Navigator)

Another very interesting species, found along swift, clear streams where it has the unusual habit of skimming over the water in pursuit of insect food. The webbed feet with the stiff, bristly fringe of hairs is very conspicuous on the hind feet and make it an interesting mammal for study.

The information supplied emphasizes the introductory statement that the limited area of Crater Lake National Park does not provide the natural faunal and if we are to preserve any of our animals which annually migrate there is an immediate necessity of providing for a more extensive park area which will give us an adequate winter range.

July 25, 1933.

MEMORANDUM TO: D. S. Libbey  
Park Naturalist and Assistant Superintendent  
Crater Lake National Park  
Medford, Oregon

Pursuant to instructions contained in your memorandum of July 20 I am submitting the following concerning the animals of Crater Lake.

Due to the lateness of the season this year and the migratory habits of the mammals who range throughout the Park during summer, it is difficult to have accumulated field data quite so early, however, with the assistance of the Forestry crew working on insect eradication, the following is submitted for your information:

Blacktail Deer. Number observed 48. Estimated number 242.

In so far as we can tell at present there seems to be no decrease in numbers of blacktail deer ranging within the Park, however, winter poaching outside the Park was much heavier last winter according to reports received.

Muletail Deer. Number observed 7. Estimated number 40.

Observed in eastern section of Park. Reports indicate a slight decrease over last season.

Elk. Number observed 0. Estimated number 3.

Owing to the migratory habits of these animals and the large range over which they run, their presence in the Park in numbers is quite variable.

Bear. Number observed 17. Estimated number 45.

Coyotes. Number observed 5. Estimated number 75.

Beaver. Number observed 0. Estimated number 12.

The presence of beaver in some of the streams of the western section of the Park seems to be migratory and as the streams they are using are small, new evidence of their work may be found each spring, but, as the water recedes after the spring freshets, they seem to move to lower elevations where there is sufficient water for them to work. Fresh dams were observed in Copeland Creek this spring, however, their work is distributed among most of the creeks along the west boundary of the Park.

Marten. Number observed 4. Estimated number 360.

Badger. Number observed 0. Estimated number 10.

Red Fox. Number observed 1. Estimated number 8.

Cross Fox. Number observed 4. Estimated number 30.

We have no record of the Red or Cross fox having been seen before within the Park. However, rumors have it that both were observed three years ago. Three Cross Fox were observed during March near the Rim Village, so apparently some remain within the Park during the winter. Their distribution seems to be confined to the immediate Rim Area of the Lake.

C. H. SIMSON  
Ranger



## SURVEY OF ANIMAL LIFE OF CRATER LAKE

1934

The nature of the area of Crater Lake National Park is such that it includes only a mountain top area without adequate winter range for the various park animals which migrate. No natural faunal unit exists within the area which in reality constitutes entirely inadequate range for many of the animals of the park and causes them annually to fall prey to hunters and trappers. The area immediately to the east of the Park is adjacent to the Klamath Indian Reservation and the Indians, natural born hunters, recognize no closed season, and the east slope of the Cascade Range in the area of the Park is becoming particularly depleted of the various animals. The west slope of the range, to a very slight degree within the Park, and the area to the west of the Park boundary in the Rogue River National Forest, constitutes a more favorable range for the various animals. Unfortunately the animals migrate in and out of the Park into the adjacent forested area included in the Rogue River National Forest, or in timberlands of individuals or corporations, and there unrestricted hunting of deer, bears, and lesser animals continues throughout the year with but slight restrictions prevailing as to open and closed seasons under the jurisdiction of local authorities.

If the Park area were larger it would be possible to have many of the desired animals again become abundant. If the adjacent territory which constitutes a winter range was under proper supervision and enforced restrictions the various animal forms would naturally increase and again an abundance of animal life prevail.

A census, actual and estimated, for the various animals observed within Crater Lake National Park is as follows:

Black Tail Deer, Columbia Black Tail Deer - (*Odocoileus columbianus columbianus*).

Actual census - 35, estimated number - 150. Blacktail deer frequenting the Park during the summer are required to seek the lower elevations for winter range. The distance of migration will range from 20 to 40 miles, depending upon the severity of the winter. However, their winter range and habits are fairly well established.

It has been noticed that there are fewer deer frequenting the Park this year than formerly. This shortage can be attributed to the general economic condition of the country with a reasonable amount of assurance of its correctness. The areas that deer are required to frequent here for winter range are populated with settlers and it is unfortunate to report that many families are dependant upon deer for the sustenance of life during the winter. It has been reported that one deer a week is required for a few families living within the winter range of deer from this vicinity. It is therefore inevitable

that a decreased number of deer will frequent the park each year until a very pronounced improvement in general economic conditions of the country is enjoyed.

Mule Tail Deer - (*Odocoileus hemionus*)

Actual census - 1, estimated number 25. Since the habits of mule tail deer frequenting the Park are very much different than the Blacktail Deer with reference to both summer and winter range, it is not felt that they have been so badly depleted as the Black Tail Deer. Their summer range is confined to the east rim of Crater Lake and their winter range lies 30 to 40 miles to the east of this vicinity. This area is sparsely populated and is so vast that winter poaching would not be so noticeable.

Elk, Roosevelt - (*Servus canadensis occidentalis*)

Actual census - 3, estimated - 15. It is believed the species of elk ranging in this vicinity are Wapiti Elk, transplanted from Yellowstone Park a few years ago. Due to their destructive habits around farms in the valley regions, quite a number are killed each year. However, a few appear in the Park each year when suitable summer range can be found. A band of approximately 15 have spent the entire summer in the vicinity of Sun Creek basin where they are apparently unmolested.

Bear, Black and Brown - (*Euarctos Americanus*)

Actual census - 30, estimated number - 60. The last bear to hibernate last fall was observed on December 19, and the first to reappear was March 12. The habits of bears in this regard seem to be governed entirely by general winter conditions. Due, undoubtedly, to a mild spring, their appearance this year was <sup>one</sup> two to three weeks earlier than any previous year of record. Their early spring depredations were entirely absent this year which can be attributed to sufficient natural food as a result of an early spring and a deficient snowfall which was entirely gone in the lower elevations six weeks ahead of previous years. The absence of bears around camp this spring indicates their desire for a natural forage when it can be obtained, rather than the artificial food they are usually required to subsist upon during early spring months.

Mountain Lion, Cougar - (*Felis oregonensis*)

Actual census - 4. A female cougar and three young were reported in the Park this spring. It is doubtful if these or other individuals are habitual residents of the Park due to the wide range that they cover.

Coyote - (*Canis lestes*)

Actual census - 5, estimated number 60. Coyotes appear to be sufficiently numerous throughout the Park to insure the maintenance of the natural balance of life.

Red Fox - (Vulpes canadensis)

Actual census - 1, estimated number - 10. The one fox seen this year was of the "cross" phase and it was observed near the rim of the Lake. Fox sign has been reported in the northeast part of the Park, but the ability of the fox to survive in the Park at present is uncertain.

Timber Wolf (Canis gigas)

Actual census - none, estimated number - none. Neither sign nor sight of the timber wolf has been reported and it is very doubtful if there are any present within the Park boundaries.

Beaver - (Castor canadensis)

Actual census - none, estimated number 18. Since last year when an estimated number of 12 was reported for beaver living along the streams of the west slope, fresh beaver work has been found along Annie Creek in the southeast corner of the Park.

Marten - (Mustella courina)

Actual census - 16, estimated number - 300. Marten are seen frequently in the Park, particularly in the higher sections. If trapping in the winter time is prevented there seems to be little danger of the extinction or even decrease in the Marten in this area, since they seem to be as common near the habitations of man as elsewhere.

Badger - (Taxidea americana)

Actual census - 4, estimated number 35. This year badger have proved to be more common than it has been thought to be. Several have been seen and badger holes have been found in almost all parts of the Park.

Raccoon - (Procyon Pacifica)

Actual census - 2. Two raccoon were reported from a reliable source during the last week. They were seen crossing the road near Government Headquarters. This may be a sign that the raccoon may be becoming more common in the Park, since no others have been reported in recent years.

Ring-tailed cat - (Bassariseus astutus oregonus)

Actual census - none, estimated number - none.

Otter - (Lutra c. pacifica)

Otter may occasionally visit the Park area from the Rogue River Valley.

Pacific Mink - (Mustella v. energunenos)

Since Mink have not been reported in recent years in the Park it probably occurs only rarely within the area.

Mountain Weasel - (Mustella arizonensis)

This animal has been seen recently and is probably a common resident in the Park.

Large Striped Skunk - (Mephites occidentalis)

Although none have been reported this animal is probably to be found within the Park.

Little Spotted Skunk - (Spilogale P. latifrons)

This skunk has been reported to be present along the west boundary of the Park.

Alpine Flying Squirrel - (Glaucomys sabinus klamathensis)

While this animal is abundant, it is to be found throughout the Park.

Cascade Pine Squirrel - (Sciurus douglassi cascadiensis)

This squirrel is common in all parts of the Park.

Allen Chipmunk - (Tamias townsendi sensu)

The allen chipmunk is the larger dark chipmunk found in the Park. It is impossible to estimate its numbers other than to say that it is abundant.

Klamath Chipmunk - (Tamias amoenus amoenus)

This animal is found in abundance throughout the Park.

Douglas Ground Squirrel - (Onospermophilus g. douglassi)

The Douglas ground squirrel is reported to be rare along the west boundary.

Golden-mantled Ground Squirrel - (Callospermophilus g. douglassi)

This is probably the most abundant animal in the Park.

Marmot - (Marmota f. flaviventus)

The marmot is abundant and seems to be increasing in number.

Porcupine - (Erethizon epixanthus)

Porcupine are numerous throughout the Park. Their work on the trees of the Park is to be noticed in any locality.

Coney - (Ochotona fumosa fumosa)

These animals are common in all the rock slides and talus slopes of the park.

Snowshoe Rabbit - (Lepus washingtoni)

While not abundant, the snowshoe rabbits are fairly common in the Park

Silver-haired Bat - (Lasiurus noctivagrans)

or

Large Brown Bat - (Eptesicus fuscus)

Both of these species of bats are present in the Park along with other varieties which as yet have not been identified.

Pocket Gopher - (Thomomys mazama)

The pocket gopher is very common throughout the Park.

White-footed Mouse - (Peromyscus m. gambeli)

This ubiquitous species can be found everywhere in the Park.

Western Wood Rat - (Neotoma cinerea)

Common in rock slides and about dwellings

Round-tailed Wood Rat - (Neotoma fuscipes)

This rat has not been reported although it may occur rarely along the west border of the Park.

Alpine Phenacomys - (Phenacomys orophilus)

Fairly common occupant of mountain meadows and flats.

Red-backed Mouse - (Evotomys mazama)

Found in timbered areas of the Park.

Long-tailed meadow Mouse - (Microtis mordax)

This mouse is a common resident along the streams and the moist meadows of the Park.

Giant Meadow Mouse - (Microtis arviculoides)

These mice inhabit much the same area as the above species but they make conspicuous runways about the meadows.

Baird Meadow Mouse - (Microtis bairdi)

This inhabitant of the dry grassy slopes is smaller than the rest of the mice and not as common.

Jumping Mouse - (Zapus pacificus)

This mouse is also an inhabitant of moist meadow lands

Alpine Mole (Scapanus l. alpinus)

Fairly common in lodgepole pine areas.

Gibbs Mole - (Neurotrichus gibbsii)

The shrew mole is found about decaying logs and vegetation.

Wandering Shrew - (Sorex vagrans)

This shrew is common throughout the Park.

Water Shrew • Sorex Navigator)

This animal is seen often as it swims in the streams of the Park in search of food.

Robert S. Evans  
Wildlife Expert

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Charles H. Simson  
Acting Chief Ranger

## WILDLIFE SURVEY

CRATER LAKE NATIONAL PARK

Sept. 18, 1935

1935

The nature of the area of Crater Lake National Park is such that it includes only a mountain top area without adequate winter range for the various migratory park animals. No natural faunal unit exists within the area which in reality constitutes entirely inadequate range for many of the animals of the park and causes them annually to fall prey to hunters and trappers. The area immediately to the east of the park is adjacent to the Wlamath Indian Reservation, and the Indians, natural born hunters, recognize no closed season. The east slope of the Cascade Range in the area of the park is becoming particularly depleted of the various animals. The west slope of the range and the area to the west of the park boundary in the Rogue River National Forest constitutes a more favorable range for the animals. Unfortunately the animals migrate in and out of the park into the adjacent forested area included in the Rogue River National Forest, or in the timberlands of individuals or corporations, and there is considerable hunting in season, and some out of season, killing animals which had made their habitat in the park during milder months.

If the park area were sufficiently large to include a faunal zone, it would not be a difficult problem to have the desired animals again become abundant. It is, of course, always necessary to give consideration to the depletion of game by hunters during open and closed seasons, with usually a large number of animals killed during open season. There is also the problem of game killing by a number of mountaineers who believe it is their inherent right to kill at will. Some loss is also caused by predatory animals, such as cougars and wolves.

A census, actual and estimated, for the various animals observed within Crater Lake National Park is as follows:

Name	Actual No.	Estimated No.
Black tail Deer, Columbia Black Tail Deer ( <i>Odocoileus columbianus columbianus</i> )	40	155
Mule Deer ( <i>Odocoileus hemionus</i> ) A substantial increase over 1934.	10	35
Elk, Roosevelt ( <i>Cervus canadensis occidentalis</i> ) The number of elk remains consistent with past seasons.	3	12

Name	Actual No.	Estimated No.
Bear, Black and Brown ( <i>Ursus americanus</i> ) This easily seen and popular park animal was observed in greater number than it had been for several seasons. Quite a number of cubs and young bears were also observed.	40	70
Mountain Lion, cougar ( <i>Felis oregonensis oregonensis</i> )	0	2
Red Fox ( <i>Vulpes canadensis</i> )	1	10
Coyote ( <i>Canis latrans</i> )	5	70
Beaver ( <i>Castor canadensis</i> )	0	3
Marten ( <i>Martes caurina caurina</i> )	3	300
Badger ( <i>Taxidea taxus neglecta</i> )	2	2
Raccoon ( <i>Procyon lotor pacifica</i> )	0	2
Porcupines ( <i>Erethizon epimanthum epimanthum</i> ) Evidence of their activity is widespread throughout pine forests and open meadows.	10	100
Cross Fox ( <i>Vulpes fulva</i> )	3	25

Especially common in the park are the marmots (*Marmota flaviventris flaviventris*). They are familiar sights to all park visitors. The Golden-mantled ground squirrel (*Callospermophilus g. douglassi*) is probably the most abundant animal in the park and is especially in evidence in the Rim Area. The Allen chipmunk (*Eutamias amoenus amoenus*) is likewise abundant. The Alpine flying squirrel (~~Sciurus~~) (*Glaucocorys sabinus klanathensis*) is easily found in the park area.

Other common animals include the Coney (*Ochotona fuzosa fuzosa*) Pocket gopher (*Thomomys mazama*) white-footed mouse (*Peromyscus n. gambeli*) Western wood rat (*Neotoma cinerea*) Alpine Phenacomys (*Phenacomys orophilus*) Red-backed mouse (*Eutamias mazama*) Long-tailed meadow mouse (*Microtus mordax*) Alpine mole (*Scapanus l. alpinus*) Gibbs mole (*Neurotrichus gibbsi*) Wandering Shrew (*Sorex vagrans*).



WILDLIFE SURVEY  
CRATER LAKE NATIONAL PARK  
1936

A census, actual and estimated, of the animals observed in Crater Lake National Park is as follows:

<u>Name</u>	<u>Actual No.</u>	<u>Estimated No.</u>
Columbia Black Tail Deer ( <i>Odocoileus columbianus columbianus</i> )	33	135
Mule Deer ( <i>Odocoileus hemionus hemionus</i> )	5	25
Elk ( <i>Cervus canadensis canadensis</i> )	0	0
Bear, Black and Brown ( <i>Ursus americanus</i> )	26	50
Mt. Lion, Cougar ( <i>Felis oregonensis oregonensis</i> )	0	1
Red Fox ( <i>Vulpes cascadiensis</i> )	0	4
Coyote ( <i>Canis latrans</i> )	3	60
Beaver ( <i>Castor canadensis</i> )	0	3
Marten ( <i>Martes caurina caurina</i> )	4	200
Badger ( <i>Taxidea taxus neglecta</i> )	0	2
Raccoon ( <i>Procyon lotor pacifica</i> )	0	2
Porcupine ( <i>Erethizon epixanthum epixanthum</i> )	6	30

Especially common in the park are Marmots (*Marmota flaviventris flaviventris*). They are familiar sights to all park visitors. The Golden-mantled Ground Squirrel (*Callospermophilus* ? ) is probably the most abundant animal in the park and is especially in evidence in the rim area. The Klamath Chipmunk (*Eutamias amoenus amoenus*) is likewise abundant. The Alpine Flying Squirrel (*Glaucocorys sabrinus klamathensis*) is easily found in this area. Other common animals include the Pike (*Ochotona fumosa fumosa*), Pocket Gopher (*Thomomys mazama*), White-footed mouse (*Peromyscus maniculatus gambeli*), Western Wood Rat (*Neotoma cinerea*), Alpine Phenacomys (*Phenacomys orophilus*), Red-backed Mouse (*Evotomys mazama*), Long-tailed Meadow Mouse (*Microtus mordax*), Alpine Mole (*Scapanus latimanus alpinus*), Gibbs Mole (*Neurotrichus gibbsii*), and the Tending Shrew (*Sorex vagrans*).

CRATER LAKE NATIONAL PARK  
ANNUAL ANIMAL CENSUS REPORT

1937

	<u>Actual No.</u>	<u>Estimate</u>
Rocky Mountain Wapiti or Elk ( <i>Cervus canadensis nelsoni</i> )	2	6
Rocky Mountain Mule Deer ( <i>Odocoileus hemionus macrotis</i> )	6	20
Columbian Black-tailed Deer ( <i>Odocoileus columbianus columbianus</i> )	38	100
Oregon Snowshoe Hare ( <i>Lepus americanus klamathensis</i> )	0	Occasional
Cascade Cony ( <i>Ochotona princeps brunnescens</i> )	45	Common
Cascade Squirrel; Yellow-bellied Chickaree ( <i>Sciurus douglasii cascadiensis</i> )	13	Frequent
Allen's Chipmunk ( <i>Eutamias townsendii senex</i> ?)	?	Common
Klamath Chipmunk ( <i>Eutamias amoenus amoenus</i> ?)	?	Common
The two chipmunks are thought to be the species that are present in the park but more study is necessary for accurate reports.		
Golden-mantled Ground Squirrel ( <i>Callospermophilus chrysodeirus chrysodeirus</i> )	300-	Abundant
Douglas's Ground Squirrel ( <i>Citellus douglasii</i> )	1	Occasional
Yellow-bellied Marmot ( <i>Marmota flaviventris flaviventris</i> )	11	Common
Cascade Flying Squirrel ( <i>Glaucmys sabrinus fuliginosus</i> )	0	Occasional
Klamath Flying Squirrel ( <i>Glaucmys sabrinus klamathensis</i> )	0	Occasional
Gambel's Deer Mouse ( <i>Peromyscus maniculatus gambelii</i> ) May be <u>rubidus</u> west of us	500-	Abundant
Mazama Red-backed Mouse ( <i>Clethrionomys californicus mazama</i> )	2	Occasional
Mountain Phenacomys ( <i>Phenacomys intermedius intermedius</i> )	0	Rare
Cascade Meadow Mouse; Water Vole ( <i>Microtus richardsoni arviculoides</i> )	0	Occasional
Baird's Meadow Mouse ( <i>Microtus oregoni bairdi</i> )	0	Rare
Muskrat ( <i>Fiber zibethicus</i> sp.)	3	Occasional
Pacific Coast Beaver ( <i>Castor canadensis pacificus</i> )	0	Rare
Shasta Beaver ( <i>Castor canadensis shastensis</i> )	0	Rare
Brown Mountain Beaver ( <i>Aplodontia rufa rufa</i> )	0	Rare

1937 Crater Lake animal census, cont'd	Actual No.	Estimate
Yellow-haired porcupine ( <i>Erethizon epixanthum epixanthum</i> )	5	Common
Mountain Jumping Mouse ( <i>Zapus trinotatus montanus</i> )	1	Occasional
Mazama Pocket Gopher ( <i>Thomomys monticola mazama</i> )	6	Common
Oregon Cougar; Mountain Lion ( <i>Felis concolor oregonensis</i> )	0	Rare
Timber Wolf ( <i>Canis lycaon ssp.</i> )	0	Rare
Mountain Coyote ( <i>Canis latrans lestes</i> )	3	Occasional
Cascade Red Fox; Cross Fox ( <i>Vulpes fulvus cascadiensis</i> )	2	Occasional
Cascade Weasel ( <i>Mustela longicauda saturata</i> )	2	Occasional
Pacific Marten ( <i>Martes caurina caurina</i> )	9	Frequent
Western Badger ( <i>Taxidea taxus neglecta</i> )	2	Occasional
Northwestern Raccoon ( <i>Procyon lotor pacifica</i> )	0	Rare
Olympic Black Bear (Black and brown bears) ( <i>Euarctos americanus altifrontalis</i> )	24	35-40
Mazama Mole ( <i>Scapanus latimanus alpinus</i> )	0	Rare
Gibb's Mole ( <i>Neurotrichus gibbsii gibbsii</i> )	1	Occasional
Rocky Mountain Water Shrew ( <i>Sorex palustris navigator</i> )	1	Frequent
Bats At least 2 unidentified species	0	Common

In classifying the occurrence of the mammals in the park the following terms have been used:

Rare  
Occasional  
Frequent  
Common  
Abundant

In many cases mammals that are listed above have not been observed during the past year yet they are included in the list since they have been definitely noted in recent years in the area.

One animal that is no longer present in the park but which was observed here many years ago is the Oregon Pronghorn Antelope (*Antilocapra americana oregona*). It is possible that the Klamath Grizzly (*Ursus klamathensis*) was here at one time.

CRATER LAKE NATIONAL PARK  
ANNUAL ANIMAL CENSUS REPORT

1938

	<u>Actual No.</u>	<u>Estimate</u>
Rocky Mountain Wapiti or Elk ( <i>Cervus canadensis nelsoni</i> )	Tracks	6
Rocky Mountain Mule Deer ( <i>Odocoileus hemionus hemionus</i> )	2	20
Columbian Black-tailed Deer ( <i>Odocoileus columbianus columbianus</i> )	27	100
Oregon Snowshoe Hare ( <i>Lepus americanus klamathensis</i> )	11	Frequent
Cascade Cony ( <i>Cochotona princeps brunnescens</i> )	13	Common
Cascade Squirrel; Yellow-bellied Chickaree ( <i>Sciurus douglasii cascadenis</i> )	63	Common
Allen's Chipmunk ( <i>Eutamias townsendii senex</i> )	47	Common
Klamath Chipmunk ( <i>Eutamias amoenus amoenus</i> )	32	Common
Golden-mantled Ground Squirrel ( <i>Callospermophilus chrysodeirus chrysodeirus</i> )	150 plus	Abundant
Douglas's Ground Squirrel ( <i>Citellus douglasii</i> )	0	Occasional
Yellow-bellied Marmot ( <i>Marmota flaviventris flaviventris</i> )	23	Common
Cascade Flying Squirrel ( <i>Glaucomys sabrinus fuliginosus</i> )	0	Occasional
Klamath Flying Squirrel ( <i>Glaucomys sabrinus klamathensis</i> )	0	Occasional
Western Bushy-tailed Wood Rat ( <i>Neotoma cinerea occidentalis</i> )	0	Occasional
Gambel's White-footed Mouse ( <i>Peromyscus maniculatus gambelii</i> )	200 plus	Abundant
Mazama Red-backed Mouse ( <i>Evotomys mazama</i> )	0	Occasional

Rocky Mountain Phenacomys ( <i>Phenacomys intermedius intermedius</i> )	0	Rare
Cascade Meadow Mouse; Water Vole ( <i>Microtus richardsoni arviculoides</i> )	0	Occasional
Rocky Mountain Meadow Mouse ( <i>Microtus mordax mordax</i> )	?	Occasional
Baird Meadow Mouse ( <i>Microtus oregoni bairdi</i> )	0	Rare
Muskrat ( <i>Ondrata zibethica</i> sp.)	0	Occasional
Pacific Beaver ( <i>Caster canadensis pacificus</i> )	0	Rare
Brown Mountain Beaver ( <i>Aplodontia rufa rufa</i> )	Cuttings	Rare
Yellow-haired Porcupine ( <i>Erethizon epixanthum epixanthum</i> )	12	Common
Mountain Jumping Mouse ( <i>Zapus trinotatus montanus</i> )	2	Occasional
Mazama Pocket Gopher ( <i>Thomomys monticola mazama</i> )	6	Common
Northwestern Mountain Lion ( <i>Felis oregonensis oregonensis</i> )	0	Rare
Northwestern Timber Wolf ( <i>Canis gigas</i> )	0	Rare
Mountain Coyote ( <i>Canis latrans lestes</i> )	2	Occasional
Cascade Red Fox; Cross Fox ( <i>Vulpes cascadenis</i> )	8	Occasional
Cascade Bobcat ( <i>Lynx fasciatus pallescens</i> )	0	Rare
Cascade Weasel ( <i>Mustela longicauda saturata</i> )	0	Occasional
Pacific Marten ( <i>Martes caurina caurina</i> )	19	Frequent
Pacific Mink ( <i>Mustela vison energeus</i> )	0	Rare

Pacific Fisher ( <i>Martes pennanti pacifica</i> )	0	Rare
Western Badger ( <i>Taxidea taxus neglecta</i> )	2	Occasional
Oregon Spotted Skunk ( <i>Spilogale phenax latrifrons</i> )	0	Occasional
Northwestern Raccoon ( <i>Procyon lotor pacifica</i> )	0	Rare
Olympic Black Bear ( <i>Ursus americanus altifrontalis</i> )	23	35 - 40
Mazama Mole ( <i>Scapanus latimanus alpinus</i> )	0	Rare
Gibb's Mole ( <i>Neurotrichus gibbsii gibbsii</i> )	3	Occasional
Rocky Mountain Water Shrew ( <i>Sorex palustris navigator</i> )	2	Occasional
Silver-haired Bat ( <i>Lasiorycteris noctivagans</i> )	0	Occasional
Big Brown Bat ( <i>Eptesicus fuscus fuscus</i> )	0	Occasional

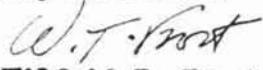
In estimating the occurrence of mammals in the park the following terms have been used:

Rare  
Occasional  
Frequent  
Common  
Abundant

In many cases mammals that are listed above have not been observed during the past year yet they are included in the list because they have been definitely noted in recent years in the area.

Crater Lake National Park is relatively untouched in-so-far as a study of the mammals is concerned and until such time as a systematic study is made (be it ever so short) this list can never purport to be a true census of the mammals of the area.

Respectfully submitted,

  
Wilfrid T. Frost  
Wildlife Ranger

September 28, 1938

## CRATER LAKE NATIONAL PARK

## ANNUAL WILDLIFE REPORT

- 1939 -

Species	Estimated Number	Comments
Badger	Rare	Not observed in 1939 although several badger holes were examined in the near vicinity of the Wineglass and one at the Rim Village near the operator's cabins. Two individuals were observed near the Rim Village last year.
Bear, Black	50	The increase in the number of bears reported herewith is due primarily to more and better observations rather than to a definite increase in the park bear population, although the latter seems evident. On August 26th at 4:30 P.M. 35 bears were counted at the Headquarters garbage pit. 33 of this group were black, the others, a mother and her cub, were brown. All of these bears were over one year old except for the one brown cub. On August 31st at 5 P.M. 32 bears were seen at the garbage pit. All of these bears were black with the exception of 9, 2 of which were the brown mother and cub seen on the 26th. Eight miles to the east of Headquarters at the Orino Construction Camp 3 bears, all black (2 yearlings and 2 she bears with 4 cubs), have been observed at a small garbage pit most of the summer. It is quite possible that some of these bears visit the Headquarters area from time to time but observations as to these movements are not available. Observations show that there are at least 5 litters of cubs this year as follows: 3,3,2,2,1. All five mother bears and cubs are black with the exception of one brown mother and her single brown cub. On August 31st at 5:30 P.M. at the Headquarters garbage pit one she bear was observed for 6 minutes while she nursed her three cubs. Six mammae were visible on the she bear. Of the 42 individuals observed this year 33 were black and 9 brown making a ratio of about 5 to 1. The last two weeks of September brought a slight reduction in the number of bears in the Headquarters area while an extensive patrol of the park in the last week showed fresh bear signs throughout with an occasional individual being seen. In the last week of September three bears were reported in the vicinity of Fort Klamath, 20 miles southeast of Park Headquarters. One incident worthy of record



here is the observation in the middle of August by Ranger-Naturalist Kartchner of a black bear at the edge of Crater Lake on the north shore. The bear did not attempt to fish at any time it was being observed.

Beaver, Pacific	Rare	One dead individual was observed by A. W. Stradling on July 25th while fishing in Bybee Creek about a half mile inside of the west boundary. This is the only park record known for the actual observation of an individual of this species in the park area. Fresh cuttings were found in Annie Creek, Bybee Creek and at Boundary Springs. Old cuttings are to be seen in many park streams.
Bobcat, Cascade	Rare	None observed but tracks have been reported in the vicinity of Red Blanket Creek.
Coyote, Mountain	5	Three individuals were seen during the past year along the highways in the south half of the park (2 between Headquarters and Annie Spring and one near the Ski Cabin on the Fort Klamath Road). No indications of any increase or decrease in population have been observed.
Deer, Black-tail	80	Although this year's estimate of 80 individuals is 20% less than that for 1938, it is felt that the new figure is a much fairer estimate of the present population. Last <del>year's</del> year's figure of 100 is now considered much too great. It is the consensus of opinion here that these deer have been more common in the park area this year than last. More deer have been observed along the park highways and motorways than in the past few years. Tracks and other sign have been found abundantly and practically throughout the park. Fewer fawns have been reported, however.
Deer, Mule	20	Fewer observations of this species have been made this year, although it is felt that the population remains practically unchanged. One old buck has been seen rather consistently near the summit of Cloudcap on the east rim of the crater.
Deer, White-tail	6	On August 24th at about 3 P.M. on the south and southwest slopes of Union Peak Rangers Frost and Dean observed two does and a fawn of this species as they raised their tails and ran off through the timber. This is the first substantial record for some years, although the species has long been considered a part of the park fauna by some individuals.

Elk, Rocky Mtn.	6	Tracks are still irregularly reported from parts of the park, particularly the southwest area. One uncorroborated report of a sight observation was made to Charles True, park truck driver.
Fisher, Pacific	Rare	Although not observed in the area for many years, some indications of the presence of this species were found and one individual observed by Ranger-Naturalists Aldrich and Huestis near Timber Crater in August of 1937.
Fox, Red	10	Observed infrequently throughout the park but especially between Annie Spring and the Rim Village. Seen frequently during the winter at Annie Spring.
Lion, Mountain	Rare	No sign, tracks, or individuals have been seen in the park area for several years but a few occurrences are noted yearly in localities nearby but outside the park.
Marten, Pacific	Common	Observations of individuals plus the abundance of tracks in the snow indicate a definite increase in the marten population this year. Young were observed at Annie Spring, Headquarters, and the Rim Village. This species is frequently caught in the deep snow cuts in the winter but is usually able to get out by itself when hard pressed by a car.
Mink	Rare	Not observed in the park but two were trapped just outside our west boundary on Union Creek two winters ago.
Muskrat	Rare	No observations this year but several individuals were reported in June 1937 by Ranger B. Hughes.
Porcupine	25	Porcupines were observed more frequently this year along park highways, especially on the Fort Klamath road where five individuals were seen by one observer in 3 miles in one evening in August. Although evidence of last winter's feeding was found on Lodgepole pines in at least a half dozen places, in no place in the park have these animals made any serious attack on park timber.
Rabbit, Snowshoe	Common	Probably more abundant last winter than for several years past. This species was frequently caught in the deep snow cuts last winter. Five individuals were aided in their escape from these cuts last winter. This species has great difficulty in extricating itself from the cuts and frequently may be picked up in the hands after being tired out by running from a car that is following it.

Weasel, Cascade	Uncommon	Three individuals were observed at Park Headquarters infrequently during the summer and two were seen at Annie Spring during the fall. One individual was seen last July near the Old South Boundary and it was still in its winter pelage being all white with a black tip on its tail.
Wolf, Timber	Rare	Not observed in the park for many years but one reported killed near Prospect in the winter of 1936-1937.

Respectfully submitted,

Wilfrid T. Frost  
Wildlife Ranger

October 3, 1939

## CRATER LAKE NATIONAL PARK

## ANNUAL WILDLIFE REPORT

- 1940 -

Species	Estimated Number	Comments
Badger	10	Observed 3 individuals on the motorway at the head of Castle Creek; 2 individuals, on two different occasions, near Goodbye Bridge, one mile above Annie Spring; 2 individuals south of Sharp Peak on the east boundary. Typical badger burrows have been observed fairly frequently on the lower east side of the park area this year and on the lake trail. A decided increase in the number of badgers occurring within the park is evident but a portion of this increase is due to more frequent field trips with resultant observations.
Bear, Black	50	Although the bear population in the vicinity of the Park garbage pit has been substantially reduced by the more rapid disposal of refuse by incineration, the number of individuals observed in the wild is greatly increased. An excellent crop of berries has undoubtedly accounted for part of the dispersal of the bear population. Twenty-three individuals were counted at the garbage pit and in the vicinity during one day in the early part of September. The year's bear litters were about the same as last year. Observations totaled 5 litters of cubs as follows: 3, 3, 2, 2, 1. In the late weeks of June reports were heard that 3 bears had been recently killed in the Wood River Valley north of Fort Klamath (possibly Park bears). A bear was observed on the shore of Crater Lake near the Wineglass late in June. The writer feels that the reduction in the number of bear "incidents" and damage is directly traceable in part to the reduction in amount of garbage available to the bears both at the main disposal pit and in the many garbage cans which have been emptied daily. It is hoped that a continual reduction in the availability of such food for bears can be made until all unnatural food is no longer available.
Beaver, Brown Mountain	Rare	Fresh cuttings in willows and herbaceous species, thought to be the work of this species, have been found in upper Annie Creek, Munson Valley, and Red

Blanket Creek. Ranger-Naturalist Palmer found fresh workings "at bottom of a vegetation covered hillside (west of Headquarters). Much cut material in various stages of drying piled around burrow entrance. Pile of fresh dirt 4" deep and 16" across thrown out this A.M. (July 18). Plants cut were Valeriana sitchensis (chief one), Veratrum viride, Collobium angustifolium, Erigeron sal-suginosis, Ribes erythrocarpum, Vaccinium membranaceum, Dicentra formosa, and some grass and sedges."

Beaver, Pacific	Rare	No observations have been made this year of any fresh cuttings or of any individuals. Old cuttings are to be found in many west-side streams.
Bobcat, Cascade	2	One individual was observed late in January along the Highway near the West entrance. Tracks were reported near Lost Creek Station and in the vicinity of Headquarters this spring.
Coyote, Mountain	5	More frequent observations of this species have been made this year but it is felt that no true increase in the number of individuals has occurred. This species has been reported from practically all parts of the park area but most commonly in the south half (This could be explained by the number of park employees in residence there and the consequent increase in number of observations. One coyote was seen on the southeast slope of Dutton Ridge within a quarter mile of the place where a Cascade Fox had been seen a few moments earlier (September 4, 1940).
Deer, Black-tail	30	This species has been reported probably more often than ever before but it is felt the population remains about the same. Eleven different fawns have been reported by reliable sources (This is a larger number than recorded last year).
Deer, Mule	25	The Rocky Mountain Mule Deer seems to be increasing in population within the park area. Many more observations have been reported, particularly in the southeast portion of the park. No fawns were observed.
Deer, White-tail	6	Although no observations of this species were reported this year, it seems reasonable to believe that the species is probably holding its own in the area.

Elk, Rocky Mountain	6	Still unreported in the park area for many years, this species is thought to be maintaining its population in spite of this fact. Unsubstantiated reports of this species in the Yawkey Tract in the southeast corner of the park have come from several of the loggers who were working there. Additional reports from residents of Fort Klamath indicate the presence of a herd of about 13 individuals in the vicinity of Seven-Hills Creek which lies about 5 miles south of the park. Tracks were reported along the west boundary on the west slope of Union Peak by the local Forest Ranger.
Fisher, Pacific	Rare	None observed since 1937 but probably still in the park area.
Fox, Gray	Rare	Den and young seen in 1936 and 1937 in talus above road fill west of Rim Area by Ranger Bernie Hughes (Huestis, 1938). Infrequent and unsubstantiated reports have been brought in but a few sight records by local residents continue to be reported. Most reports concern individuals seen on the West Rim Drive.
Fox, Cascade Red	10	More frequent observations are being made of this species, judging by the frequency of the reports, but the writer feels that the population figure remains the same. One of the most interesting observations was made on September 4, 1940, when two individuals were seen on the southeast slope of Dutton Ridge within 3/4 mile of each other. Another individual was seen the following day in the same locality. Rangers Finch and Hay reported (September 15, 1940) seeing a fox in the black phase on the West Rim Road near Hillman Peak. On December 7, 1939, a Cascade Red Fox was hit by a car near Annie Spring. The fox was paralyzed in both hind legs, was easily caught, clubbed, and killed by Rangers Finch and Crawein. The specimen was shipped by express to the Museum of Vertebrate Zoology at the University of California at Berkeley. This was a fine adult specimen in the red phase and measured as follows:

Weight: 8.5 lbs.  
Total Length: 42.5 inches    1075 mm.  
Body:            25.5    "            645    "  
Tail:            17       "            430    "  
Ear:             4.1     "            105    "

This specimen (M.V.Z. Accession No. 6030) was well

handled and will always be available for study at the Museum at Berkeley. The skeleton was saved in its entirety and the pelt was carefully tanned and now hangs in the special cold storage room with other valuable pelts.

Lion, Mountain	Rare	No observation of any individuals, sign, or tracks has been reported for several years, but two reports of individuals being seen at Diamond Lake were made this June.
Marten, Pacific	Common	The frequency of observation of this mammal by tourists is the best key to the abundance of the species in the park. Although the population has probably varied little during the past year, the number of young observed has been greatly increased. Young were seen early in July at Annie Spring, Headquarters, Rim Village, and at Bybee and Red Blanket Cabins. Ranger-Naturalist Huestis saw one in the Rim Campground on June 30th.
Mink	Rare	No observations have been made but the species is thought to occur as some were trapped outside the west boundary several winters ago.
Muskrat	Rare	Reported on several occasions on the south entrance highway by members of the road maintenance crew.
Porcupine	30	This species seems definitely to be increasing in numbers. Many observations are reported, both by tourists and by employees. No serious damage is being done in the park timber in any locality.
Rabbit, Snowshoe	Common	Fewer observations were reported in the winter but many were seen in early summer along the south and west entrance roads.
Squirrel, Gray	Rare	This species, long unreported in the park area, was observed on two occasions in the Yawkey Tract in the southeast corner of the park this summer.
Weasel, Cascade	Uncommon	Widely scattered and more frequent observations of this species indicated a real increase in numbers.
Wolf, Timber	Rare	No observations of this species in the park have been made for many years; however, one was taken near Prospect in the winter of 1936-37.

Respectfully submitted,

*Wilfrid T. Frost*  
Wilfrid T. Frost,  
Wildlife Ranger.

October 7, 1940.

## CRATER LAKE NATIONAL PARK

## ANNUAL WILDLIFE REPORT

-1941-

Species	Estimated Number	Comments
Badger	10	Observed 2 individuals below the Rim Road between Hillman and The Watchman Aug 10th; 1 in the vicinity of the old Ski Cabin on the South Road; 1 near Goodbye Bridge on July 14th; burrows have been noted irregularly in the park but most conspicuously on the lower east side.
Bear, Black	50	The park garbage pit near Park Headquarters continues to be the center of attraction for our bear population. On Aug 24th 11 individuals were observed at the garbage pit; 18 on Aug 31st; 15 on September 7th; and 8 on September 14th. This gradually reducing number indicated the tendency of the bears to spread out in the early fall. Observations of bear litters totaled as follows: 3, 3, 2, 2, 2, 1, 1, 1, 1. This is a larger number than we have ever reported before but much time was spent in an endeavor to make accurate observations on this one factor. The writer has seen no more than 6 brown bear during the whole period, this seems a great reduction. Four bears met accidental death in the following manner: 1 brown cub was run over and killed by a car; 1 black cub was also run over and killed; 1 black two-year old was shot after having a leg broken when hit by a car; 1 brownish female, a 3 year old, suffocated when she put her head into a 5 gallon cream can. This year was notable for the increase in the numbers of people actually bit or clawed by bears along our highways. A rigid enforcement of the regulation prohibiting the feeding, touching, teasing, or molesting of the bears is the only possible way to prevent such "accidents".
Beaver, Brown Mountain	Rare	This species either is being observed more frequently or it is becoming more populous in our area. Definite beaver colonies exist on lower Annie Creek and in the flower garden east of Park Headquarters. Ranger-naturalists watched the activities of one individual at the Rim Village



last summer. This species should be observed for its possible spread in the park area.

Beaver, Pacific	Rare	Another year passes with no new observations but reports from fisherman indicate it probably is present in some of our western streams.
Bobcat, Cascade	4	Increase in this species probably due to more observations but we are not sure. Many tracks were seen last winter leading us to believe that at least 4 individuals are present.
Coyote, Mountain	6	There seems to be more coyotes in our area than we listed last year. Many observations have been made this fall while on patrol. Tracks remain the best single clue to the presence of this species and this type of evidence seem to be most prevalent in the southwest part of the park.
Deer, Black-tail	80	Although many more observations of this species are being reported it does not seem wise to indicate any real increase in the numbers in the park. Reports covering 14 different farms indicate a possible increase.
Deer, Mule	30	A very definite increase in this species is apparent this year. However, the number of bucks seen is considerably less in ratio to the number of does. There has been more hunting on the east side of our boundary than for some years. Reports on hunter's luck have not been received.
Deer, White-tail	6	No observations this year that could be verified. Since this species is generally observed in the southwestern part of the park when seen, it is felt that it still is present as this is a more primitive area than most of the park.
Elk, Rocky Mountain	6	No observations in the park but forest officers have reported a herd of about 24 individuals north of the Seven Mile Guard Station. This is only a few miles south of the park and it is felt that an occasional individual wanders in to the area.
Fisher, Pacific	Rare	No observations since 1937. Possibly still in our area.
Fox, Gray	Rare	Not reported in 1941 but thought to be present in widely scattered areas.
Fox, Cascade Red	10	Year-round observations continue to increase and possibly our estimate should be raised but it is still felt that the number is sufficiently large. Observations of the red fox and the young coyote are frequently confused, hence care must be exer-

cised to verify or substantiate these observations.

Lion, Mountain	Rare	Tracks of two individuals were reported early in May at the Rim Area but no opportunity was presented to verify this report. It seem highly doubtful that t is species would be found in such deep snow and away from its more customary food. One report of tracks in the Union Peak area came from a reliable source this summer.
Marten, Pacific	Common	Only a few young were observed this year but the frequency of observation of the adults indicates that there is no diminution in the population. This species has been successfully photographed in the park on 8mm Kodachrome film at one of the park residences.
Mink	Rare	No observations this year.
Muskrat	Rare	Not reported this year.
Foreupine	40	This animal was commonly observed by the public last year and more so this year. Six were killed by cars on the south and west roads and two on the Rim Drive.
Rabbitt, Snowshoe	Common	Not so commonly observed last winter.
Squirrel, Gray	Uncommon	Individuals were observed frequently in the Yawkey slash area in the southeast corner of the park. They have not been reported elsewhere in the park.
Weasel, Cascade	Uncommon	Seen at the Rim Village, Park Headquarters and at Annie Spring occasionally.
Wolf, Timber	Rare	No observations for many years.

Respectfully submitted,

*W.T. Frost*

Wilfrid T. Frost  
Wildlife Ranger

October 8, 1941

UNITED STATES  
DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE  
CRATER LAKE NATIONAL PARK  
MEDFORD OREGON

OFFICE OF THE SUPERINTENDENT

Crater Lake, Oregon

October 4, 1942

ANNUAL WILDLIFE REPORT

-1942-

<u>Species</u>	<u>Estimated Number</u>	<u>Comments</u>
Badger	10	Two observations this year - Middle Fork of Annie Creek - near base of Red Cone. Burrows are noted irregularly in the park but most conspicuously on the lower east side.
Bear, Black	50	With the great reduction in park travel has come a consequent reduction in the amount of garbage to be disposed with in the Headquarters garbage pit. This has greatly increased the "bear problem" in the area since bears wander from the garbage pit in search of more food. In the last week of July 12 bears were seen at the pit; in mid-August the largest number seen at one time was 14; the last week in September not more than 6 individuals at any one time. Bear cubs reported this year included 3 sets of triplets, 2 sets of twins, and 1 single cub. It is probable that other cubs were present but fewer observations were possible this year and hence may account for the apparent reduction in the number of cubs. Not more than 8 brown bears were noted in the entire group this year. Four bears were shot as marauders, two in the park and two in the near vicinity outside. One other individual was known to have died. Bear "incidents" involving injury to people have been on the decrease but damage to property has increased due to individuals breaking and entering to obtain food.
Beaver, Brown Mountain	Rare	Limited observations of this species but well established colonies are found on lower Annie Creek and in the flower garden east of Park Headquarters. Careful search will undoubtedly reveal other areas in our area inhabited by this interesting species.

FOR DEFENSE



Beaver, Pacific	Rare	This species is reported this year for the first time in several seasons. Fresh cuttings were collected on lower Annie Creek and on upper Copeland Creek. The latter creek is dry at this writing with the exception of a few pools and so therefore cannot support a continuous population. It is interesting to record that these new observations have been made in the only two areas in the park which have shown any evidence in the past of such a population.
Bobcat, Cascade	6	Again the increase noted in this species is probably due more to increased observations than to any actual increase in population. However, the number of individual observations last winter together with the numbers of tracks found makes it necessary to increase this number as above.
Coyote, Mountain	12	Frequency of observation of individuals during the past winter and summer indicates that our former estimate has been much too low. This animal is frequently confused with the red fox by some of our park visitors but is seen sufficiently often to be reported on as increasing.
Deer, Black-tail	80	Holding their own very well but probably a few individuals are becoming used to man's presence since many tourists report them close at hand for pictures and observations. Three instances of twin fawns noted this year with a total of 9 observed.
Deer, Mule	30	Observations on this species have increased greatly but it is not felt that any more individuals are present in the park. It should be noted that observations of this species are generally of does and small individuals, only a few bucks are seen.
Deer, White-tail	6	Another year without observations of this species but they are believed present in the southwest quarter of the park where previous observations have been made.
Elk, Rocky Mountain	4	No observations in the park for some years. The estimated number is reduced as only two individuals have been observed east of the park this year. These are known to migrate through the park from the south west near 7-mile Creek on the Forest Service where a group of about 65 head are estimated to be maintaining themselves well. Formerly, greater numbers were present east of the park but poaching has made that area unsafe for the species.
Fisher, Pacific	Rare	No observations since 1937 but possibly still present in our area.

Fox, Gray	Rare	Not observed since 1940 but thought to be present in widely scattered areas.
Fox, Cascade Red	25	Many observations this last winter and summer with some individuals becoming tame enough to make frequent trips to park residences to get "handouts" from greatly surprised residents. Three individuals at Annie Spring and two at Park Headquarters have been frequently observed and fed this past winter. Park visitors frequently confuse this animal with small coyotes. This estimate has been upped from 10 because of the many observations near residences and in the field. Two litters of pups are known to have been raised but total numbers are unknown.
Lion, Mountain	Rare	No observations this year. Tracks were reliably reported in the Union Peak area last summer. This species undoubtedly wanders through our area from time to time but is very difficult to observe.
Marten, Pacific	Common	Young of the species were observed this spring at Park Headquarters, Annie Spring, Lost Creek, and at the Rim Village. Observation of adults throughout the winter and summer together with records of breeding indicate the species is doing well. No evidence of poaching this past winter was uncovered at any time.
Mink	Rare	An unverified observation was reported by a park visitor last winter who reportedly saw "several in the snow out near the West Boundary". This observation was made by a "local trapper" during a blinding snow storm.
Muskrat	Rare	Reportedly seen in Sun Creek on the Yawkey Slash area in the southeast part of the park by fishermen.
Porcupine	60	Probably on the increase but highway observations are definitely more frequent as are reports from rangers on patrol. The sedentary nature of this species coupled with the wide geographical distribution of observations can leave only the thought of abundance. No extensive damage to trees by this species has as yet been recorded in the park but a heavy concentration has existed in the past in the Bear Creek area on the east side.
Rabbit, Snowshoe	Common	Commonly observed last winter up until about mid-March after which time very few observations were to be made. Some individuals assumed the pure white pelage while others were spotted brown and therefore very conspicuous. One white individual was noted at the west boundary late in June - very conspicuous against the dark ground but easily lost against the numerous snow drifts which were still present.

Squirrel, Gray      ~~RARE~~      Uncommon      This species is definitely coming back in the southeast portion of the park. Rather frequently seen in the Yawkey Slash area and seen for the first time this year at the west entrance to the park.

Weasel, Cascade      Uncommon      Seen most frequently at the Rim Village but also on infrequent occasions at Park Headquarters, Annie Spring and at Lost Creek.

Wolf, Timber      Rare      No observations for many years. Perhaps this species should be eliminated from the list of animals still present in the area but the writer feels that some possibility of its presence in the area still exists. Some individuals are trapped each year on the west side of the Cascade range to the north of us.

*Wilfrid T. Frost*

Wilfrid T. Frost,  
Wildlife Ranger.

cc: The Director (with original)  
Regional Director  
Main File  
Ranger File  
California Academy of Sciences

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
CRATER LAKE NATIONAL PARK  
MEDFORD, OREGON

OFFICE OF THE SUPERINTENDENT

December 4, 1944

MEMORANDUM for the Director.

In accordance with section 307, report 709 of the Report Manual, there follows the 1944 Annual Wildlife Report for Crater Lake National Park:

Species	Estimated Number	Comments
Radger	10	One observed by motorway crew on northeast side of park. Burrows widely separated are scattered throughout east and north side. No noticeable change from last year.
Bear, black	25	This estimate is 5 below last year but is believed to be fairly close. The loss is attributed to the fact that at least 12 bears were killed immediately outside the park and one inside the park during the year. Others may have been killed or died in addition to the known dead. Except for about 8 or 10 which ranged the Annie Spring, Headquarters, and Rim Area, the bears of the park have reverted to their natural habitats and feeding ranges.
Beaver, Pacific	Rare	Lower Annie Creek supports the only known colony. The colony on Copeland Creek has apparently disappeared along with those on Ford Creek. The cause of their disappearance is unknown.
Bobcat, Cascade	10	Reports indicate a slight increase in this species.
Coyote	25	This animal has increased throughout the east and south sections of the park.
Deer, Black Tail	125	More deer were observed this season than last. This increase may be attributed to fewer hunters outside the park in the fall or else the deer are disturbed less due to the decrease in visitors to the area during the past two years.

Deer, mule	25	Truck trail workers and patrolmen along the north and east side of the park report an increase in the number seen over that of past years.
Deer, white tail	Rare	No observations of this species.
Elk, Rocky Mountain	Rare	No observations during the year.
Fox, Grey	Rare	Last observed in 1940.
Fox, Cascade Red	30	Probably increasing slightly due to decrease in the number of trappers along the park boundaries. Many observations were made during the year.
Lion, Mountain	Rare	An occasional lion probably enters the park as they are reported in the adjoining areas.
Marten, Pacific	Common	Regularly seen by park inhabitants and visitors.
Mink	Uncommon	This animal reported occasionally
Porcupine	Common	Although damage to park trees is negligible to date, scattered trees throughout the area show "porcupine markings".
Rabbit, Snowshoe	Common	Many tracks and an occasional rabbit seen by patrolmen last winter.
Squirrel, Grey	Uncommon	Several reported during the summer in the lower reaches of the park but they must still be rates as uncommon in the area.
Weasel, Cascade	Common	Although not seen regularly by visitors, these animals are quite numerous throughout the park. Numerous tracks were seen by ski patrolmen and several individuals were observed by workmen during the summer.

The Mountain Beaver is quite common in the park although it is seldom seen or readily recognized by the average employee or visitor.

Fishers were last reported in the park in 1937 but no signs have been seen recently.



Wolves have been reported again this year in the park by numerous individuals but their presence has not been verified by a competent observer.

Conies, marmots, and smaller rodents are common throughout the park in their favored habitats.

Local residents have reported muskrats in the extreme lower reaches of the park along Sun and Annie Creek but verification by park personnel is lacking.

E. P. Leavitt,  
Superintendent.

In duplicate

cc: Regional Director, Region Four

cc: File

cc: Chief Ranger's files

September 1, 1946.

MEMORANDUM for the Director.

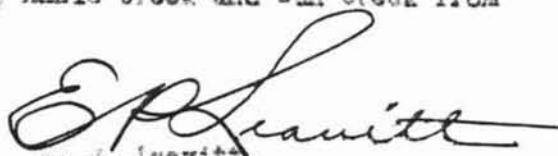
In accordance with Section 507, Report 709 of the report manual, there follows the 1946 annual wildlife report for Crater Lake National Park:

A special wildlife survey of portions of the park staff has been made this year, and the information contained in this report is chiefly the result of observations by the Assistant Superintendent and discussions with members of the park staff, employees, and visitors. If there is any evidence of variance with Naturalist Joseph Dixon's reports and findings, it is not as intended, and we would naturally accept his survey as more correct, as he is not only a competent and qualified observer but was in the field studying wildlife of the park and surrounding areas from May to August of this year.

Species	Estimated Number	Comments
Badger	10	None observed. Seems to be confined to north and southeast portion of the park.
Bear, Black	10	15 below last year's estimate. It is not believed that more than 5 individual bears were seen around park headquarters. There is evidence of bears ranging outside the park where food is more plentiful; moving the garbage pit 2½ miles from headquarters may have some bearing on numbers observed in the park, but it is believed that lack of garbage is the chief factor in the small numbers observed.
Beaver, Pacific	Nests	A small colony on lower Annie Creek seems to be holding its own. Mr. Dixon reports that the colony on Copeland Creek has migrated downstream outside of the park, but are working in that area.
Bobcat, Cascade	10	No observations during the year.
Coyote	25	Several reported seen throughout the park.
Deer, Blacktail	125	No evidence of decrease or increase, although it has been noted that fewer are seen this year.

Deer, Mule	25	No evidence of increase or decrease.
Deer, White Tail	rare	No observation of this species reported.
Elk, Rocky Mt.	rare	Ranger May reported seeing two big bulls near the south entrance; tracks were observed several times in south portion of the park.
Fox, Gray	rare	No observations of this species during the year.
Fox, Cascade Red	30	Several reported seen throughout the park; no evidence of increase or decrease.
Lion, Mountain	rare	No observation of this species reported.
Marten, Pacific	common	Often seen by employees and visitors.
Mink	rare	No observations reported this year.
Porcupine	common	This animal observed frequently.
Rabbit, Snowshoe	common	Many tracks seen and an occasional rabbit seen during winter months.
Squirrel, gray	rare	No observation reported this year.
Weasel, Cascade	common	These animals are frequently seen, and tracks may be found by competent observers most any time and place.
Beaver, Mountain	common	No evidence of increase or decrease of this species.
Fishers	rare	No evidence of this species in the park.
Wolves	rare	No observation reported; if a rare wolf is seen, it no doubt is traveling through the park.
Conies, Squirrels and such Rodents	common	No evidence of increase or decrease.
Muskrats	rare	No evidence of these animals inside park, although they could work up Annie Creek and Sun Creek from Klamath Lake.

In Duplicate  
cc- Regional Director, Region Four  
- Academy of Science, Calif.  
- Chief Ranger's Files  
- Files

  
E. J. Leavitt,  
Superintendent.

October 3, 1945.

MEMORANDUM for the Director,  
National Park Service.

The following report is submitted in accordance with the memorandum of September 24, No. F. C. 235, on the subject of wildlife conservation.

1. There is no important change in the status of the larger animals and important birds of this park.

2. No management measures were necessary or were taken during the past year.

3. There is no change in the range condition or management affecting wildlife forage or habitats.

4. There has been no fishing in Crater Lake during the war period, and as the Silverside Salmon were reproducing before the war, it is assumed that they have continued to do so, and that splendid fishing will be available during the season of 1946.

The other variety in the lake, namely, Rainbow Trout, was not proven to be reproducing. The average life cycle of four years for this fish has probably been reached or passed, and if no reproduction has occurred, the Rainbow Trout should be almost extinct in the lake, and good fishing could be restored again only by restocking. Previous to the war, from 50,000 to 100,000 Rainbow Trout were planted in Crater Lake every year.

The angling in the minor streams of the park was not nearly as heavy as during the pre-war years, and it is believed that there is sufficient reproduction to afford fair fishing for 1946, but a policy of restocking these streams should be established again as soon as practicable.

5. There is nothing to offer in the way of additional articles on wildlife conservation.

E. F. Leavitt,  
Superintendent.

cc-The Regional Director,  
Region Four.

AIRMAIL

EPL/fj

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
CRATER LAKE NATIONAL PARK  
MEDFORD, OREGON

OFFICE OF THE SUPERINTENDENT

October 25, 1946

MEMORANDUM for the Director.

In accordance with section 307, report 709 of the Report Manual, there follows the 1946 Annual Wildlife Report for Crater Lake National Park:

Species	Estimated Number	Comments
Badger	Rare	None observed since 1944 but number and distribution of burrows indicate no material change in population figures.
Bear, Black	20	Opportunities to observe individuals throughout the entire park area this year probably accounts for this increase rather than an actual doubling of the bear population. Only one old mother with twin cubs persisted in pursuing "civilized" tactics this summer. Her actions were such as to force closing of the tenthouse quarters maintained for rangers at the West Entrance.
Beaver, Pacific	Rare	Fresh workings were noted along lower Annie Creek. No evidence that the beaver has returned to Copeland Creek.
Bobcat, Cascade	Rare	This animal has not actually been observed for several years.
Coyote	20	Observed rather frequently early in the summer.
Deer, Blacktail	200	More numerous than at any time in the past decade. Several herds of a dozen or more observed often and individuals seen throughout the park. Exceptionally prolific faun crop. Three does and two fauns killed by automobiles during the summer. All animals were in splendid condition.

Deer, Mule	25	No appreciable change in status which is interesting in view of radical change in blacktail.
Deer, Whitetail	Rare	It is rather doubtful if this species range in the park at all.
Elk, Rocky Mt.	Rare	Observed tracks indicate several members of the herd which range south of the park drift across the park line for brief periods.
Fox, Gray	Rare	None observed this year.
Fox, Cascade Red	40	Several families of young, both frequently observed in the north rim section, coupled with observations of numerous individual adults warrant this estimated increase.
Lion, Mountain	3	Mother and cub observed by telephone crew just south of Park Headquarters on Munson Ridge. Visitors cars were checked out this season for the first time and rangers were instructed to make a hasty but careful visual search of the interior of all cars. A ranger on duty at the South Entrance one day did this to find a mountain lion cub on the seat by the driver. Unfortunately the ranger who had been on duty only a short time failed to notify Headquarters but did liberate the cub. The ranger learned that the cub had been picked up in the vicinity of Polebridge Creek. It is too bad full particulars were not obtained for this extraordinary incident. The writer observed in the course of the summer several "shells" of porcupines which was obviously the work of the big cats.
Marten, Pacific	Common	Many adults and families of young observed.
Mink	Rare	No observations.
Porcupine	Common	Many observed.
Rabbit, Snowshoe	Common	Signs and observed individuals indicate they are holding their own.

Squirrel, Gray	Uncommon	There were two observations.
Squirrel, Golden Mantled Ground	Moderately Common	Species listed due to a radical decrease in population, particularly in Rim Area. In 1938 about 150 squirrels by actual count inhabited this area whereas the past year saw one-fifth that number.
Weasel, Cascade	Common	Two families observed in Headquarters area during summer and individuals throughout park.

**J. Carlisle Crouch**

J. Carlisle Crouch  
Chief Ranger



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

CRATER LAKE, OREGON

July 15, 1947.

MEMORANDUM for the Director.

As requested in Mr. Tolson's memorandum of June 5th, following is a report upon recent observations of the larger mammals in Crater Lake National Park. The report is based upon conferences with park personnel who were in a position to make observations during the winter of 1946-47 and the remainder of the latter year to date:

1. Rocky Mountain Elk (Cervus canadensis nelsoni):

This introduced species was seen within the park area in May, 1947. Acting Chief Ranger Clyde E. Gilbert estimates that 30 to 50 animals are in a herd which winters in the Fort Klamath area and moves into Mount Scott or Red Blasket areas of the park. Last August, the park naturalist observed elk southeast of Mount Thielsen, but outside the park boundary.

2. Columbian Black-tailed Deer (Odocoileus columbianus columbianus):

Deer are numerous at present and appear to have increased in number during the last years. In late spring, they were especially abundant between Headquarters and Kerr Notch. The increase coincides with bear decrease. Deer have not been pauperized or fed by people within the park.

3. Rocky Mountain Mule-deer (Odocoileus hemionus macrotis):

Occasional reports, none authoritative.

4. Olympic Black Bear (Ursus americanus americanus):

A pre-war maximum population of 65 bears has been materially reduced in recent years. Estimated population, from 20 to 35 at the present time. Decrease may be due to dispersal of bears through war years when baiting or lure of visitor hand-outs and garbage was at a minimum.

5. Oregon Cougar (Felis concolor oregonensis):

Tracks of cougar were seen by the insect control crew on May 25, 1947. Whether questionable or not, several observations of cougars have been reported during the years 1946 and 1947 by park personnel.

6. Cascade Bobcat (Lynx rufus pallescens):

Reported as present during the winter 1946-47 by former Chief Ranger J. C. Crouch.

7. Timber Wolf (Canis lycaon gigas):

A large Canis reported by Assistant Superintendent T. C. Parker at South Entrance in 1947; may have been a timber wolf. This was reported in detail by the park naturalist in his January, 1947, report.

8. Coyote (Canis latrans lestes):

Seen repeatedly within the park area in recent months.

9. Cascade Red Fox (Vulpes fulvus cascadenis):

Many observations, notably during the winter when they visit the houses of resident park personnel.

10. Pacific Marten (Martes caurina caurina):

Common within the park area. Very fearless about homes of personnel.

11. Western Mink (Lutreola vison energumens):

Taken by trappers just outside the park area.

12. Shasta Beaver (Castor canadensis shastensis):

Fresh beaver sign on Copeland Creek reported by Chief Naturalist George C. Ruhle in July, 1947. Beaver evidence, mostly old, also reported on lower Annie Creek.

13. Badger (Taxidea taxus neglecta):

Seen on several recent occasions by Acting Chief Ranger Gilbert. First reports of badgers west of lake.

14. Yellow-haired Porcupine (Erethizon epixanthum epixanthum):

Porcupine are more numerous this year (1947).

(signed) E. P. Leavitt

E. P. Leavitt,  
Superintendent.

cc: The Regional Director, Region Four.

October 1, 1947.

Annual Wildlife Report for Crater Lake National Park, 1947.

Species	Estimated Number	Comments
Badger	Rare	Two observed this summer for first time since 1944. Seen on motorway west side of park by park ranger and one observed in main highway near park headquarters by park ranger.
Bear, Black	25	Bear population appears to be slightly on the increase. Bears have made nightly visits to Annie Spring Campground vicinity all summer while they never made an appearance in 1946 until late September. A few incidents were reported from the rim area of bears breaking into automobiles and trailers.
Beaver, Pacific	Rare	There is considerable evidence on Copeland Creek indicating that one pair of beaver have returned to this area. One full grown beaver was observed in a pool and on a dam. The willows, the principal food supply, have recovered sufficiently along Copeland Creek to allow increased activity. No new activity was observed along lower Annie Creek this year.
Bobcat, Cascade	Rare	Two or three observed during year.
Coyote	20	Observed several times during late spring and early summer.
Deer, Blacktail	220	Very good fawn crop. Numerous observations of herds and individuals throughout the park. Seem to be still on the increase. Two does and one fawn reported killed by automobiles during the summer.
Deer, Mule	25	No change in status.
Deer, Whitetail	Rare	One doe was reported by ranger-naturalist on east side of park, north of Mt. Scott during middle of summer.

Annual Wildlife Report for Crater Lake National Park, 1947 (Page Two).

Species	Estimated Number	Comments
Elk, Rocky Mountain	Rare	Several have been observed in the south part of the park, probably part of migratory herd drifting through and across east side.
Fox, Gray	Rare	None observed this year.
Fox, Cascade Red	40	Status unchanged over last year's report. Numerous observations in north rim area.
Lion, Mountain	5	Two observed crossing road by ranger on duty at north entrance checking station. One observed by ranger at east entrance checking station at Lost Creek. Reported on other occasions.
Marten, Pacific	Common	Many adults and young observed. One adult female was discovered killed by an automobile on north entrance highway, one mile south of Pumice Desert; one killed by automobile near park headquarters.
Mink	Rare	No observation.
Porcupine	Common	Many observed during year.
Rabbit, Snowshoe	Common	Observed individuals and signs indicate no particular change.
Squirrel, Gray	Uncommon	No reported observations.
Squirrel, Golden Mantled	Common	Appear to be on increase again, although slight.
Weasel, Cascade	Common	Numerous observations made around utility area at park headquarters where they have been preying on Golden Mantled Ground Squirrels.

*Thomas C. Parker*

Thomas C. Parker,  
Superintendent.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
CRATER LAKE NATIONAL PARK

OFFICE OF THE  
Chief Ranger

CRATER LAKE, OREGON

ANNUAL WILDLIFE REPORT FOR CRATER LAKE NATIONAL PARK, 1948

Species	Estimated Number	Comments
Badger	Rare	Probably several in park although none seen since summer of 1947.
Bear, Black	20	Decreased slightly from last year. No incidents reported of breaking into cars or trailers.
Beaver, Pacific	Rare	Probably increasing slightly but not more than 20-25 in park. There is a new set of dams on Red Blanket Creek with several dams across the creek and several on the spring. Fresh workings have also been observed on Copeland Creek but there is no evidence of any on Annie Creek.
Bobcat, Cascade	Rare	None observed during the year.
Coyote	10	Probably decreased from last year. None were observed and no tracks were seen during the year.
Deer, Blacktail	1000-2000	Ranger-Naturalist Donald Farner estimates the deer population to be increased 5-10 times over his last observations in 1946. Tracks have been reported from localities where they have never been noted before. As the top of Red Cone and inside the Crater Wall. More deer have been seen in Munson meadows than ever before. The estimate is based on 15 deer per square mile with deer probably found in 100 square miles of the park.
Deer, Mule	20	Probably decreased slightly from last year as there is no record of any being seen this year.

Deer, Whitetail	Rare	No record of any seen this year.
Elk, Rocky Mountain	Rare	None seen since last summer.
Fox, Gray	Rare	A few were observed during the year.
Fox, Cascade Red	40	Status remains the same as last year.
Lion, Mountain	Rare	None observed this year.
Marten, Pacific	Common	Quite a number observed however Farner reports fewer than 1946.
Mink	Rare	No observation.
Porcupine	Common	Probably increasing throughout area.
Rabbit, Snowshoe	Common	No appreciable change.
Squirrel, Pine	Quite Common	Population remains about the same.
Squirrel, Golden Mantled	Common	Species seems to have decreased slightly from the last two years. In 1938 150 were counted at one observation between the lodge and cafeteria on the rim. There were never more than 20 counted at any one time in this area during the past summer.
Weasel, Cascade	Common	Common but probably decreased slightly in the past two years.
Marmot	Very Common	By far more common than in previous years.
Mountain Beaver	Uncommon	The estimated number of uncommon should be qualified by stating that these animals are common as compared to many other areas. They are relatively abundant in Annie Creek Canyon, Munson Meadows, and Castle Crest.
Chipmunk, Klamath	Common	Population remains about the same as in previous years.
Chipmunk, Townsends	Common	Population probably increasing slightly over previous years.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
REGION FOUR  
SAN FRANCISCO, CALIFORNIA

October 13, 1948.

MEMORANDUM for the Superintendent, Crater Lake.

Thank you for the two copies of the "Annual Wildlife Report for Crater Lake National Park, 1948." One copy has been forwarded to the Director with no suggested changes, since we feel that the estimates of numbers are based on careful observations.

We offer the following comment: The estimate of between 1,000 and 2,000 blacktail deer is believed to be a great improvement over the figures used in previous years. However, we feel that the revised figure represents a better estimate rather than an increase of five- or ten-fold during the last two years. Such an increase would be without precedent and, if real, would amount to a deer plague with effects on the vegetation that by now would become extremely conspicuous.

If you take exception to this comment, please airmail the Director with copy to this office.

  
Lowell Sumner,  
Biologist.

cc Director (air mail)  
w/c report.

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE

December 17, 1948.

MEMORANDUM for the Regional Director, Region Four.

Following is a report on larger mammals and other wildlife in Crater Lake National Park covering the period July 1, 1947, through the calendar year 1948:

1. Rocky Mountain Elk (Cervus canadensis nelsoni):

There has been a slight increase in elk outside of the park. The animals have been seen in the utility area at the South Entrance. There has been successful elk hunting outside the park.

2. Columbian Black-tailed Deer (Odocoileus columbianus columbianus):

These deer have been seen with about the same frequency as last year. For the first time in the memory of personnel now in the park, they have observed deer eating from people's hands. Three deer persistently hung around the parking area at Vidua Falls accepting food from passing visitors. This area is remote from the observation of rangers so that the practice could not be readily broken at the start.

3. Rocky Mountain Mule Deer (Odocoileus hemionus macrotis):

No change in status from last report.

4. Olympic Black Bear (Ursus americanus americanus):

Bears were seen with a little more frequency than in the previous year. There is a possibility of a ten to twenty per cent increase in bears living in the park. A half-dozen of these mammals, mostly one and two-year-olds, lingered along the highway to be fed by passersby. These



individuals were scraggly and did not have the robust appearance of animals seen away from developed areas. One individual created disturbances in the campground and rim area throughout the summer.

5. Oregon Cougar (Felis concolor oregonensis):

Reports of cougar persisted throughout the period covered by this memorandum. This might indicate a slight increase of individuals, corresponding with the increase in deer mentioned in the report of July 15, 1947.

6. Cascade Bobcat (Lynx rufus pallescens):

These mammals have been reported seen by motorists with a frequency of one to two per month except during the coldest months of winter.

7. Timber Wolf (Canis lycaon gigas):

No additional authentic reports of wolves have reached the office during the sesquiannual period.

8. Coyote (Canis latrans lestes):

Uncommon reports of these animals come from time to time. They appear to be more abundant to the south of the park.

9. Smaller Mammals.

Members of the rodent family were not as abundant as during the summer of 1947, when they seemed to have reached their peak. Weasels were not as frequently seen during 1948 as in 1947. The Pacific Marten and the Cascade Red Fox are not uncommonly seen around Park Headquarters and on the rim. There was an unexplained dead badger in the road in the residence area during snow plowing operations at the beginning of the park season. Yellow-haired Porcupine appeared to be on the increase in the park, and the damage done to bark on trees is in considerable evidence especially in the Lost Creek area. However it does not seem that this damage should create undue concern or attention at this time.

10. Notes on Birds.

A single Cormorant was reported seen on the lake in 1948, the first since before the war. A White Egret and a Blue Heron were observed in the park during 1947. Rock Wrens have been noticeably rare or absent from the park.

11. Fishing.

Fishing has been at an all time low in the park. Studies are being continued to determine whether a stocking policy should be resumed, and if so, something about its extent and nature. It appears from analyses that stocking costs are excessive judged from the amount of catch even in the best years. While it is true that populations maintain themselves in the lake, it is not known how long they can do so and with what degree of success.

12. Studies and Investigations.

Study skins have been made of smaller mammals and birds for use in the park's zoology program. These collections have been made by members of the naturalist staff. Several unreported species of birds have been added to the park list. Further study has been conducted on food habits of Crater Lake fish and salamanders.

13. Measures for Protection of Wildlife.

While it probably is not necessary to have a staff member devoting all of his time to this important item, the number of men on the present protective staff is inadequate so that they can devote practically only casual time to this most important task.

(signed) E. P. Leavitt  
E. P. Leavitt,  
Superintendent.

In duplicate.

## WILD LIFE OBSERVATIONS

The following bird species were observed in the utility and rim areas or on hikes or caravans incidental to the interpretive service.

### DUCKS:

A mother and brood too far out on the lake for identification was seen from Kerr Notch late in August. Looked like merganzers.

### EAGLES:

Several golden eagles, both adults and young of the year were seen over Applegate Peak and Chaski Bay on many hikes. One adult bald eagle seen over Chaski Bay August 29, 1949.

### HAWKS:

Sparrow hawks and prairie falcons were seen all through the season. Red-tailed hawks were seen during the latter part of August. Two marsh hawks patrolled the rim area at Sinnott Memorial September 1 and 2. Cooper hawks were seen in the rim camp area at various times.

Spotted sandpipers were common along the lake shore in August (seen August 28 and 29.) Gulls were common on the lake this year all during July and August.

Rufous hummingbirds were observed sparingly.

Olive-sided flycatchers were relatively common in the utility area early in July. July 1 to 7.

Western flycatchers were heard below Sinnott during July.

### JAYS:

Oregon jays in small numbers and a few Steller jays were seen in the rim camp area every morning. At least one family of gray jays was seen.

Ravens were observed in various parts of the park area. This included one group of four feeding on cicadas on Bridle Path Trail.

Clark's nutcrackers were very numerous along the Rim until late August.

Mountain chickadees were seen on many Garfield Trail hikes.

Rock Wrens, uncommon this year. A singing bird on large talus slope of Garfield Trail; last observation September 5, 1949.

Robins were common in rim camp area. Several pairs with young were seen daily.

Mountain blue birds common along rim area and rim trail in July and August.

A Townsend solitaire was along Garfield Trail several times in late August.

Audubon's warblers were common in the utility area in early July. Many migrating Audubon's on Garfield Trail in August.

Western tanagers were fairly common in utility and rim areas in July.

A flock of pine grosbeaks were seen on Wizard Island. The day I took the College of Washington party on a trip there. Flock numbered about 15 and one female, perched, was observed under binoculars at 50 feet.

Leucostictes were seen on most Garfield Peak hikes, the last observation being September 5, 1949. Two young of the year were fed within 30 feet of the trail on one occasion.

Pine siskins were common along the rim walk in July.

One green-tailed towhee was near the rim camp drinking fountain August 27 and 28.

Chipping sparrows were seen daily in the rim area in July.

Oregon juncos were very numerous in the rim area all through July and August.

One immature white-crowned sparrow was seen at the head of the Lake Trail September 1, 1949.

Cassin purple finches were fairly common in the utility and rim areas during the season.

The usual mammal species were observed during the 1949 season.

Black-tailed deer were very numerous. One group of five were seen back of Hillman Peak while does with fawns could be seen along the highways any evening.

Black bears visited the rim camp area nightly and often in the day. Nine individuals were identified repeatedly, four adults, four cubs, and one two-year old.

Silver foxes were observed on two occasions along the rim near the Watchman.

A number of yellow-haired porcupines were seen on the rim drive at night; twon at one time.

Marmots were not numerous in 1949.

Pikas could be heard daily anywhere within the rim or along Garfield trail.

Golden Mantle ground squirrels were not as numerous as during certain years in the past but still present in fair numbers. Young of the year were observed to get established rather promptly after families broke up and were much in evidence later.

A pine squirrel was heard on Wizard Island near Skell Channel on August 29, 1949.

Townsend chipmunks were more numerous in the rim area than any time during my observation of the season.

Klamath chipmunks were about average in population number.

White-footed mice were common in the rim campground. Some live traps were set out at night for observation purposes and all adult females taken were either lactating or carrying young.

A pine marten was seen at Headquarters August 5 and several were reported by visitors at various times. A red fox was reported from the North Entrance house.

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Thousands of fish of various age groups were seen patrolling the shore shelf early in the season, easily seen because of the flat calm present almost every morning during the first few days of July. Fishing was spotty, some excellent catches alternating with days without a single strike. In 1940 Temporary Ranger-Naturalist Joe Nee put some Rainbow fingerlings in a little lake on the west lava flow of Wizard Island. On August 29, 1949 one big fish was still there surface feeding. It was uninterested in artificial flies.

Most of the fish taken were salmon males in fairly advanced breeding condition. One salmon femsle with large red eggs was caught on August 30, 1949. At times, during August, the lake surface was actually crowded with insects and these were poor fishing days.

R. R. HUESTIS,  
July-September 1949.

September 5, 1949

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
NATIONAL PARK SERVICE  
CRATER LAKE NATIONAL PARK  
MEDFORD, OREGON

October 7, 1949

ANNUAL WILDLIFE REPORT FOR CRATER LAKE NATIONAL PARK 1949

Species	Estimated Number	Comments
Badger	Rare	<del>Probably</del> several in park; 2 observed during past summer.
Bear, Black	25-30	<del>Increase over last year.</del> Estimate determined from observed individuals.
Beaver, Mountain	Uncommon	Populations very spotty. These animals are common in Annie Creek Canyon, Munson Meadows, and Castle Crest.
Beaver, Pacific	Rare	<del>Probably decreased from last year.</del> No new workings or sign observed. There are no beaver at Red Blanket Creek and <del>none</del> have been observed on Copeland Creek.
Bobcat, Cascade	Rare	<del>None</del> observed during past year.
Chipmunk, Klamath	Common	Population relatively stable. Same as 1948.
Chipmunk, Townsend's	Common	Numbers same as 1948 according to observations.
Coyote	10	Population about the same as last year. <del>No</del> individuals observed, but tracks and signs were seen.
Deer, Blacktail	1000	This figure has been reduced from that of last year. It is believed from observations of ranger patrols that this species is not as numerous as reported for 1948.
Deer, Mule	150-200	Population figure of last year considered to be very low. This year's figure based on actual field observations by ranger patrols. Mule deer are definitely increasing.
Deer, Whitetail	Rare	None of this species observed this year.

Elk, Rocky Mountain	Rare	Observed within the park this year were 5 cows and 1 bull. United States Forest Service estimates place size of herd at 30-40. May be increasing, but major portion of herd ranges south of park. Legal hunting season of 1949 will probably decrease size of herd.
Fox, Gray	Rare	No individuals observed this year.
Fox, Cascade Red	40	Several individuals seen this season. Population estimated equal to last year.
Lion, Mountain	Uncommon	This estimate changed from "Rare" reported last year. Two individuals were seen this year. Considering the range of this animal and nocturnal habits, it might be considered common.
Marmot	Common	Individuals commonly observed throughout the summer. Several found on highways killed by motor vehicles.
Marten, Pacific	Common	A considerable number of observations made at various points would indicate no decrease over 1948.
Mink	Rare	Status unchanged from 1948.
<i>Other</i> Porcupine	Common	<i>Specimen - date of collection</i> Probably increasing slightly.
Rabbit, Snowshoe	Uncommon	No appreciable change.
Squirrel, Pine	Common	Population about the same except in the southeast corner of the park where this animal is very abundant.
Squirrel, Golden Mantled	Common	Definite increase in population over 1948.
Weasel, Cascade	Common	Four observed at headquarters. Population assumed to be about the same as 1948.