

# JOURNAL.

Vernon Bailey

1906.

March 15. Packed up and took  
midnight train on B. & O. for  
Opal Wyoming via St. Louis, Kansas  
City, Denver & Cheyenne to study  
methods of exterminating wolves.  
Acting in co-operation with Forest  
Service. A 3 days snow & rain  
storm has covered most of the U.S.  
beginning to snow as I left Washington.

March 14. Woke up near  
Cumberland, train late. Snowing  
fast, about 3 inches on ground.  
About 6 inches at Deer Park.  
Only about 1 inch at Grafton & the  
rest of way to Cincinnati where it got dark.

March 17. Daylight as we came near St. Louis. Cold & clear, snow about one inch. Melts ice in rivers. Arrived St. Louis 7:30 A.M. Left for Kansas City 9 A.M. Warming up, snow disappearing on warm slopes. A few Meadowlarks, flickers & robins seen. Two bobwhites were very conspicuous standing on snow among weeds under R.R. fence. stood very still as the train went by. Lots of ducks in Mo. R. but could not identify them. A few gulls seen. lots of crows. one sparrow hawk. Sparrows in weeds not identified. Reached Kansas City at 5:15 & left at 6:20 on U.P. for Denver. Even dark.

March 18. Wake up on open plains - nothing but snow in sight on all sides. apparently 3 or 4 inches deep - cold. wind blowing, air full of fine snow, blown up from surface. seems like cloud or fog.



3. Journal.

Reached Cheyenne Wells about 8 AM.  
for breakfast. A few rabbit & coyote  
tracks, lots of horned larks. Fences  
full of tumble weeds. Cattle drifted  
into humped-up bunches along  
fence toward wind, hair full of snow,  
tails to wind, heads down & backs up  
look boney & sad.



Prairie Dog holes full of snow  
but the wounds show plainly.

None of the P D's have been out since  
the snow. No tracks or signs.

Lots of the Group hills & some pretty fresh  
ones apparently made while I was away.

At Kit Carson saw one jack rabbit  
but was not sure whether campstris or  
melanotis. It was light but not white  
& probably was melanotis. Ran into a

weed patch near a ranch & not far  
from brushy bottom. Coyotes are  
reported by the brakeman as common  
along here.

Hugo - Colorado - Snow getting  
deeper, 5 or 6 inches on a level &

#### 4. Journal

drifted to top of snow fences in places. Air thick with snow. Can't tell whether it is snowing down or blowing up.

Horned larks are the only live and happy things to be seen - they run over the snow or snuggle up behind a weed & puff their feathers till they look like snowballs. Lots of flocks, large & small, go bobbing along with a jolly swing to their plight. In every way they seem happy.

There is said to be a herd of antelope in the big pasture north of Hugo.

The train runs smoothly & noiselessly - with only a muffled purr, there is no dust or dirt. The air outside is purity itself, in the car clean but a little too warm. The car is only half filled, so I have a section to myself. I never enjoyed such luxurious travelling - Just for comfort travel in winter. If you have seen all the country in summer go over it again in winter & you will see a new world.



5. Journal.

Was Denver a fine old golden eagle  
sat on the snow fence & quietly watched  
the train go by.

Reached Denver at 1 P.M. an hour & a half  
late, train doesn't leave till 4:10.

Spent several hours trying to find Mr.  
Woodard, game warden, & his attorney

Mr. Sackett, but only to find they were  
both out of town for several days.

Was tired & wet from tramping in the  
snow & snow drifting inside of my clothes  
so went back to depot & waited for train.

Heard a flock of evening grosbeaks near  
the capitol, saw lots of *Otocoris* &  
english sparrows in town.

Still snowing & blowing when I  
left Denver at dark

Ge. Journal.

March 19. Woke up at Hanna, west of Laramie. Clear & cold. Snow much blown but apparently 8 or 10 inches deep. covers through brush in places, all blown off from smooth ground, drifted over fences & roads.

Otocoris abundant & happy.

Cottontail tracks numerous

Rawlins - 7:30.

While at breakfast some herds of sheep were passed & many dead sheep seen along fences. Some had been partly eaten. Saw lots of coyote tracks & two coyotes

standing 20 rods from R-R. They looked big & plump & well fed. One trotted over & began eating a dead sheep.

Cottontails seen happy, sitting on sunny slope in the snow nibbling bushes. They are plumped up in furry balls. Saw one Lepus campestris sitting by a sagebrush - looked like a snowball. Saw another running & a good many tracks.

Prairie dog mounds are all filled with snow.



78. Journal.

Creston - some sheep near station.

Wamsutter - About a 100 sheep skins in corral  
+ sheds. Unloading baled hay for cars.

Sheep wagers out over valley + trans hauling  
hay. In next 10 miles, to Red Desert,

a dozen bands of sheep seen, apparently  
1000 in each, usually a woyone herder.

No shelter. open valley country, wading  
in snow.

8. Journal

Rode Springs - Saw the first junipers, a few scrubby trees along high slope south of R.R. Saw Ephedra along base of cliff. Farther along saw several miles of junipers along high cliff on the north nearly to Green River. Eutamias minimus, lots of little tracks, evidence of this little chipmunk along cliffs & ledges between Rode Springs & Green River. Reached Green River at 11 & had to wait till 3 P.M. Went up to store and talked with freighters & sheep men & got some good notes. The river is frozen over & covered with snow. It was 10 below zero here <sup>this morning</sup> ~~last night~~, 17 below ~~night~~ <sup>before</sup> yesterday morning and 20 below the day before. Atocoris are very numerous all over town & you almost step on them in the streets. They are also abundant all along the way, often in flocks of 50 or more. Green River is as desolate in winter as in summer. It couldn't be more so.



9. Journal.

Between Green River & Granger saw 2 Falco  
mericurus and an owl, apparently a short  
eared flying over the snow at 5 P.M.  
Near Granger saw 3 White tailed prairie-  
dogs out on the snow near their holes &  
saw several other holes where they  
had been out. This was near 5 P.M.  
clear & still but no signs of  
thawing - temperature probably near  
zero, as was 18 below at Opal this  
morning. Saw dozens of cottontails  
sitting on the snow - all seemed to  
be long eared - probably L. baileyi.

Opal Reached Opal at 6 P.M. and got my  
baggage over to little hotel & started for  
starting on stage trip at 8 A.M.  
tomorrow for Big Piney & Cora.  
Road said to be bad & it may take  
several days to get through.  
Said to have been 18 below zero here  
this morning. Clear & beautiful weather.

March 20. - Left Opal at 8 AM on the Big Piney stage. Clear and cold, 22 below ~~below~~ zero, snow varying from 4 to 12 inches, road scarcely broken & very poor. Climbed to top of mesa and then struck north over open desert slopes. Reached the Graham Ranch at 1:30 - 17 miles - got dinner, changed teams & went on to Fontenelle for the night, 30 miles north of Opal. Opal is 6675 feet, Graham's Ranch 6750, Fontenelle to 800. The snow has increased in depth to one and two feet, roads bad. Country barren & sheepled to death. Short sagebrush, no grass, no timber in sight except black patches said to be pines on the range of high hills to the west. A few willow bushes along creeks.



11. Journal -

Cynomys lucarius - ~~Common~~ out on the snow. Said to have been out all the time for 2 weeks & seen on coldest days. Not barking - very tame. 2 killed, both males in fine fur with big bushy pure white tails. Moderately fat, stomachs contained a little yellow vegetation that seems to be twigs of sage or strips or ~~some~~ of the little bushes.

Peromyscus - One caught in road on 2 feet of snow. Tracks seen all along.

Citellus elegans - Said to be ~~common~~ but not out yet -

Citellus t. parvus - Said to be ~~common~~ but not out yet.

Eutamias minimus - Said to be ~~common~~ but not out yet.

Lepus bairdii - Very abundant, hundreds seen sitting in the snow, often sit within 10 feet as we go by. seen nibbling bark & weed tips, one killed was very poor but very heavily furred. They sit near holes & tracks run into holes - rocks & under snow in scrub brush. *Biglyria eaton.*

Lepus campestris. Very common & often seen sitting in the snow close by as we passed. Tracks numerous. Most of those seen are gray - One shot pure white. Usually sitting in deep depressions or back level with top of snow. They also have burrows deep into snow under the sagebrush.

Canis griseus - Tracks of apparently 3 or 4 big wolves seen on the ridge a few miles north of Opal - no more seen. Said to be fairly common.

Canis latrans rufarvensis. Numerous all the way but most so near the ranches. About 12 seen and numerous tracks. One bunch of 4 seen together. In another place two seen together, <sup>seen</sup> one carrying something the size of a jack rabbit & its water trotting along at a respectful distance on one side.

Faxidea taxus. One mound of earth through shot before the snow - no fresh tracks. Said to kill some lambs & many lambs fall in their burrows & die.



13 Journal

Lutra lutrocephala - Tracks of a large  
mink are fresh in the snow along the creek  
at Fontenelle. Mink are said to be common  
here.

Lutra hudsonica - Mr. Holden says he  
has never known of an otter here on  
Fontenelle Creek but has seen their  
tracks & slides over on Birch Creek,  
a few miles north of here.

Lynx baileyi - Bobcats are said to be  
common here and to kill a few sheep.

Aquila chrysaetos - at least 6 and probably more golden eagles were seen on the way from Apof to Fontinella sitting on rocks, bare peaks, telegraph poles ~~on~~ on the snow or flying overhead. They were usually seen in the neighborhood of prairie dogs and one was eating something on the ground (or snow) that probably was a P.S. Jack rabbits & cottontails & sage grouse were also numerous but the sage grouse seemed to pay no attention to the eagles, which were stupid & seemed to be stuffed full of something. Several let us come close enough for a shot but I only cut a bunch of feathers off of one.

15 Journal.

Archibuteo s. ferrugineus - Rough legged hawks were about as common as the eagles & were usually seen in the prairie dog towns. One<sup>?</sup> shot fat at 6 P.M. had both stomach & crop stuffed with Cynomys leucurus & Lepus baileyi in about equal quantities. I saw a bunch of sage hens fly up as one of the hawks passed over them, but the hawk paid no attention to them.

Centrocercus urophasianus - Sage grouse are numerous all the way in flocks of 5 to 20. They walk about on top of the snow and can be seen nearly a mile away, look almost as big as coyotes. They are very tame & twice let me photograph them at 40 feet distant. A boy got out of the sleigh & threw stones into the midst of one bunch. But as the stones



## 16. Journal

struck close to them they would raise + spread their tails but would not fly. They were often seen picking leaves from the bushes + apparently feed exclusively on leaves of sage brush. The excrement lying on the snow is apparently all of one material + swells strongly of sage. The old cocks are in fine plumage.

Anas boschas - Mallards were seen flying out of + into holes in the snow at Grabane where a little spring brook keeps open. They are said to stay there all winter. I saw only 3 at a time. Part of the time they were sitting on the snow.

Otocoris A few seen at each of the two ranches, none between.

Agelaius phoeniceus - Half a dozen red-wings are singing around the ranch at Fortunells + roosting in the willows.

17 Journal. Warmer, 32 above at 8 AM.  
minimum the thermometer read 18 above.

Remained at the ranch, Made a pair of skis, skinned hawk & prairie dog & Peromyscus, Talked wolves & other animals with the ranch men & got lots of good notes. In P.M. went 5 or 6 miles over ridges on skis saw two coyotes together but the snow has settled & they could run on the crust, so I did not follow them. They kept close together & evidently were a pair. A warm west wind has cut the snow down rapidly today & made a fairly good crust.

March 22. 30° rose past at 8 A.M. 10 above  
 by minimum. Clear - no wind.  
 Started about 8 & reached La Barge at  
 12 - stopped for dinner, photographed the  
 Ranch - valley & a wolf carcass  
 on the fence. Several carcasses  
 of dead clothes on a cross pole were  
~~put~~ on the fence and one on the  
 house to keep wolves from the cattle  
 in the pasture. Had a good dinner  
 with a nice Mormon family & started  
 on at 1 o'clock. Snowed for an hour or  
 so, having a half inch of fine freezing  
 snow on the crust. Made leather  
 & wooden glasses to protect my eyes  
 from the glare. Saw no game except  
 one P.S. Reached Midway at 5 P.M.  
 & stopped for the night. Have come 24  
 miles & it is 17 from here to Big Piney.  
 Stopped with Mr. Bird, who runs the stage line.



Had been in the house only a few minutes when a rosy finch flew in the open door. Mrs. Bird & a boy caught it and put it out the door before I could get more than a glimpse of it. I was provoked that they were in such a hurry, but afterwards Mrs. Bird said they had heard that I was collecting specimens and were afraid I would want to kill it.

It sat on the bare earth roof of the bunk house & I watched it through the glass at 20 feet as long as I wanted to.

Then went out to the barn & found a male, male-female, sitting on the pole of the shed roof with feathers fluffed up sunning themselves. The boy said there were big flocks of them down at the straw-stack in the pasture where the cattle were fed, & that flocks came around the barn & house.

That morning found a lot of birds out of hay in straw yard. Another on barn at Big River, same later in day. 234

I am not sure of the species but the males have dark brown breast blackish forehead and a broad hood of ashy gray covering top & back of head and sides down onto cheeks. The bill is light, whitish or gray. The female is paler. Horned larks are also abundant at the ranches, but not one have we seen between ranches. They are unusually tame here, hardly get out of the path for you to pass.

Mrs. Bird is daughter of the Holdens, whom I visited yesterday & is typical of the ranch woman - probably 30, naturally strong & fine looking, but tired & worn. Has 5 bouncing children, the eldest a girl of 7 & the youngest about a year. Does all the work & has been washing today. Have 2 or 3 hired

men + kups stage stations with usually one or two or three or more ~~to~~ passengers to meals + to stay over night.

The snow has settled so the sage brush comes up through it in places. Both Artemisia tridentata and canadensis are fully evergreen as also Larix confertifolia. The tips of Bigelovia \_\_\_\_\_ are covered with evergreen bark that the rabbits eat extensively.

March 23. A moderately cold morning, probably about zero. Drove on to Big Piney - 18 miles - and located at hotel. Got mail, wrote letters. Warmed up and thawed through middle of day. Saw coyote tracks in pairs 3 or 4 pairs. A big dog at ranch caught a coyote, an old ♀ containing 9 half developed embryos. Snow about 2 feet deep.



March 24 - Warm + snowing in morning.

Bubo hooting, Otocoris ~~common~~,  
 a snow bunting on fence, 2 longspurs,  
 Golden eagle down in pasture +  
 later a rough legged hawk.

Started on skis for the hills  
 east of Big Piney, followed 2  
 coyotes onto the hills + found  
 an old lobo on top of butte,  
 He barked and howled till I  
 was near enough to see his  
 eyes, then I sat on the snow  
 + watched him for half an hour.  
 Saw lots of tracks. Shot 5  
 Jack rabbits for bait. Saw  
 one prairie dog. Cleared off  
 about 10 + warmed up with  
 snow stuck to my skis + nearly  
 now out.

March 25. Sunday, Took a run on skis before breakfast but it was snowing so fast I could not see anything and all the tracks were covered up. Came back and staid in house the rest of day to let my face get well. My nose, ears & lips are badly blistered and swollen from the sun on the snow.

Most of the men here wear black hats and all are now or less burned. The stage driver's face is in bad shape.

Saw a <sup>great northern</sup> shrike & 3 juncos, the first I've seen of either.

March 24. Crust hard enough to hold me most of the way. Good for skins. Started right after breakfast + did not get back till 5 P.M. Went over the buttes east of Piney, then across Green River and back several miles over the high mesa.

Found my lobo at his old quarters and followed him around for some time at moderate rifle range. He trotted around, watching me + following me when I got out of sight. I left him on the next ridge but found his track with that of a wate going to the butte where he started, which probably means



a pair and a litter of pups.

~~Saw one coyote~~ Found fresh droppings on this trail made up of jack rabbit fur & bones & teeth.

Saw one coyote & many tracks, mostly in pairs. Followed 4 fresh coyote tracks & a Lynx track as long as they went my way, then as I turned back homeward saw the lynx under a tree & shot him.

He had eaten a jack rabbit and I found the fur of a cottontail that he had made a previous meal on. Saw one Lepus snyderi

& lots of campestris. Lots of old & one fresh Thompson hills on the mesa, where the snow has blown off. Saw old but no fresh porcupine gnawings on the Pinus flexilis,

26.

which is common along the high cliffs across Green River.

Saw 9 roughlegged hawks, that were feeding on the jackrabbits I had shot for Coyote bait. Saw 2 golden eagles, heard sparrow hawks in the cottonwoods, lots of magpies, saw 2 ravens, lots of bluebirds (arctica) 2 redwing blackbirds at ranch, lots of Otocoris. Found plenty of sage grouse tracks & one sage grouse that had been eaten all but its feathers & crop had the crop enormously distended with leaves of *Artemisia tridentata* & nothing else, was as large as my two fists.

Saw numerous badger tracks, the first I have seen on the snow. Saw plenty of prairie dogs and heard them bark as usual.

27. Journal

March 27. - Went up to Mr. Blades place & got some wolf bait for scenting traps, then to Mr. Swans & got the forequarters of a dead horse & hauled it over east of Piney where the wolves are & left it on the mesa & a piece on the river flats.

Saw fresh wolf tracks & 3 coyotes if they were not wolves.

Saw 5 meadow larks & heard them sing - the first. Saw plenty of roughleg hawks. Did no hunting.



28. March 28 - Went on skis to my  
wolf bait and found where both  
Coyotes & lobos had crept  
around it at a distance  
but of course had not touched it.  
Went quarters of a mile from it  
& began putting out poisoned  
baits, along general runways  
where the coyotes & wolves pass  
from one ridge to another or  
along the crest of the highest  
ridges. Carried <sup>1/4 lb.</sup> slices of the  
bass's heart & without touching  
it cut a hole into each piece &  
put a curse death capsule into  
it, then buried it in the snow.  
Put Galloway's wolf decoy on  
sagebrush, not near but  
between the poisoned baits.

Put out 6 poisons along a line of a mile in length. Where the 2 lobes cross the ridge I put 2 poisons about 20 rods apart so each can have one.

Didn't set any traps. One experiment at a time is enough & this is the best one. Didn't work my baits but can find them all if it doesn't snow. Didn't have any red cloth along to mark them with - but have some in my pocket now.

One of the lobe tracks is much larger than the other. Most of the pairs of coyote tracks are too.

I kept well back & did not scare up the lobe, but heard him howl. Saw 2 big coyotes & heard others

30. Killed only a cottontail, L. baileyi which I intended to make up, but a cat got it in my room & spoiled it. I skinned it to eat and was going to save the skull, but laid it down while I carried in the meat & as I turned around a stray gray hound grabbed the head & ran. Got back at 1 P.M. & didn't go out again - Wrote on my reports which I keep bringing up to date as fast as I can.

Got my poison & bait from the Northwestern Hides & Fur Co. but my castoreum from S.F. Lewis has not come. A cold morning but warm day & thawing fast in P.M. Snow about a foot deep. Bare patches coming through on ridges & sidehills.



March 29. Found one of my baits gone and coyote tracks around where it had been but no dead coyotes. This was one of M.C. Call's sure death capsules in a piece of horse heart. The coyotes dug up and ate the remains of a sage grouse & cottontail that had been partly eaten before, and came to about 20 feet of my horse's head. Saw 4 sitting on the side hill & saw when my friend the lobo trotted into the bunch they scattered & gave him plenty of room but barked & howled at him and in concert with him.

Found an old dead horse that the coyotes & lobos have been feeding on for a long time.

31. The coyotes had eaten some of my jack rabbits and scattered the fur around. Shot another jack & left him on the ice.

The creeks are all running and the water spreads out over the flats, making a good deal of ice. The river has not yet begun to rise over the ice & the best roads are on the river.

March 30 - Got up early & started to my traps before daylight while the crust was hard & the glare on the snow was severe on the eyes. Got back at 8 o'clock for breakfast after an 8 mile run. Found only one bait gone & it was taken by a bank or raven. Plenty of fresh wolf & coyote tracks. One of my eyes has become inflamed so I have to stay in during the day & can not write or read much!

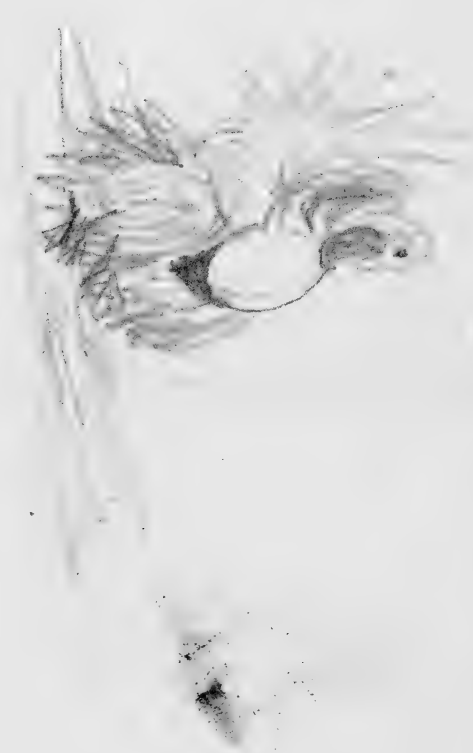
March 31 - Started before daylight for my line of wolf baits but found none of them touched. Put out more and used McCalls Seey. Found my old lobo at his regular stand on the point of mesa above the gulch where the den is. He looped away & howled to get me to follow him off.

Found lots of coyote tracks but they had not been nearer than 10 feet of my horse bait.

Heard wild geese - the first, and killdeer. Saw redtailed hawk, the first I have seen but one was killed 2 days ago & brought in. Meadowlarks are abundant & singing over the bare patches where the cattle have been fed.



Sage grouse were strutting & crowing  
 on the crest soon after sunrise.  
 I could hear only a chuck, somewhat  
 like that of the sharp tailed grouse,  
 but suspect they have not yet  
 fairly started, as this is the first  
 time I have seen them even strutting.  
 About an hour after sunrise I saw  
 ten on top of a ridge against the  
 sky & thought it was a drove of  
 horses, but the glass showed  
 sage grouse. These were part  
 cocks & part hens and on another  
 ridge not far away was one  
 old cock with 2 hens. He was  
 spreading & strutting to "bust" but  
 the 2 hens paid no attention to him.  
 He would stand up straight, erect  
 - spread his tail to a wheel, <sup>drag his wings,</sup> raise



his side crests, puff out his big white muffs, bring his head back till nearly touching his tail, then make a pumping motion with his neck - emit a chuckling sound. His strutting was much like that of a gobbler.



This one with the 2 hens was the best, but several in the other flock were going through the same antics.

I have found where 2 sage hens were eaten by coyotes - Both had crops stuffed with leaves of A. tridentata.



35 Journal

April 1 - Started before daylight in a snowstorm, but warm & no crust & bad snowdrifts. Went to my wolf den for the first time and for the first time saw Mrs. Lobo as she creaked out and glided over the ridges out of sight. Mr. Lobo was as usual on his butt, doing picket duty & he evidently warned her as she was out watching & they creaked off in the same line, around the sides of the badland slope, not over the top of the mesa as he usually does. I found the baby wolves in a little cave back 4 or 5 feet under a shelf of sandstone & in easy reach of my arm by poking my hand into the cave. They were

Whimpering - crying at being left by their mother, or else at the sound of my footsteps which they mistook for their mother's. They were in plain view and ~~there~~ were piled up, about half a bushel of them, of the size of prairie dogs. There were nine - as nearly as I could count, ~~fully~~ funny little puppies with their eyes just open, almost black in color tho both parents are light gray. I left them undisturbed and set traps for the old wolves. Photographed the den + the gulch + tracks.

Well worn trails follow the ridges out onto the mesa + the place could easily ~~be~~ be found even if there was no snow.

April 3. Started at daylight taking E. C. Carrington, a forest ranger with me. Went to the wolf den about the old wolves had not gone to the den or near the traps.

Stationed Carrington on a line of buttes with a rifle - tried to drive the wolves to him but they evidently knew he was there & would not drive. I followed them for miles but they kept well out of reach. Would stop and sit down and howl when they got well ahead. They went our way so we followed them on to the antelope country about 6 miles east of their den & then got



Remains of food, mainly jack rabbits & cottontails are scattered over the snow banks in front of the den and half a cottontail was in the den with the cubs. A piece of skull of a young ~~animal~~ <sup>calf</sup>, freshly killed was lying just below. It ~~seems~~ to be a young sheep or antelope, & in this case must have been brought ~~over 8 miles~~. The question comes up whether the male has been bringing food to his wife while the pups were small and I am inclined to believe he has. He has certainly for the past 9 days that I have known him been a very watchful parent & has risked his life many times to draw me away and has even thought strongly

of eating me up to get rid of me.  
 I hate to kill them but may not  
 be able to, as they have refused  
 all of my baits so far, & paid  
 little attention to the scents used.  
 Will probably catch the female but  
 have little expectation of getting  
 the male.

Mr. Charles Budd telephoned  
 down yesterday that he had caught  
 10 young wolves & had 4 of them  
 alive. I heard that there were 2  
 old wolves which they did not get.  
 but will find out the details  
 later.

April 2 The wolves came back near the  
 den but did not go to it. Will leave  
 the traps out another night & see if I  
 do not catch one or both.

then up and followed the trails of about 20 or 30 antelope for long distances over the ridges to see if any had been killed by the wolves. Found no signs of dead antelope, but a skull piece of skull picked up at the wolf den looks like that of a very young antelope but proves to be a calf.

The antelope follow bare slopes of ridges, but go across snow country, wading when it is thawed or going on the crust when it is frozen. They can get plenty of grass.

Saw two very large coyotes & lots of tracks. Saw 3 ravens, one eagle, lots of sage grouse, some jackrabbits & many Cynomys.



Brought home 7 of the wolf pups, left 2 in den to try and catch the old one. Photographed them all at den. The old one had not been to them for 2 days & nights & they were very hungry. We fed them milk & they ate ravenously & went to sleep in this basket with a gunny-sack for a bed.

We were pretty tired after a 20 mile run on skis, but for most of the time the crust was good. Stopped at noon & built a fire of sage brush & melted the candle grease on the skis to make them slip. They ran much easier for it.

Had some good long slides.

Saw the first Eutamias minimus I have seen. It was on the road near the wolf den.

40. April 4. Went to my wolf den  
but the old wolves had not come  
to the young, the tracks were all  
around near the den. Fed the  
young milk from a bottle & put  
them back. Put strychnine in 6  
pieces of cottontail & placed them  
around when the wolves came.

Photographed tracks of lobo, coyote,  
jack rabbit & sage grouse. Saw  
the first tracks of a Citellus (probably  
elegans) that I have been sure of.

Saw a fine male marsh hawk & a rough leg.

Saw a tiny weasel track that must  
be of a P. rivosus -

Sent expense account & wrote Pinchot &  
other letters - a cold morning & bright  
warm day, thawing fast.

April 4 - Took up my line of poisoned baits and put them on the creek so they will wash away as soon as the ice breaks. Meanwhile they may get a coyote. The boys had not been back to their den.

Saw a few Citellus elegans out on the snow. Caught one and made it up. Made up the <sup>northern</sup> shrike I killed yesterday & found a prunus in its stomach. It was shot soon after sunrise in the morning & had eaten nothing else.

Packed up some specimens & got ready to leave on stage in morning for Coza & Pinedale.

A cold morning & hard crust. Thawed rapidly during day.



April 7. Left Big Piny on the stage about 11 a.m. and reached Carea at dusk. Then drove down to Pinedale and had a 10 o'clock supper. A very chilly wind blew most of P.M. - it was cold in evening. Roads bad most of way and slow travelling. Saw little sign of game, some old wolf tracks, plenty of sage-grass in fine long plumes, lots of prairie dogs & some *C. elegans*. Saw some sharp-tailed Grouse along the creek at Burns, lots of old hawk & blue heron nests in the cottonwood trees along the river ~~at~~ where we crossed at Burns.

The snow was soft and having fast most of the way and fresh tracks did not show. Some old wolf tracks seen.

Snow about a foot deep on starting but full 2 feet deep on an average between Burns & Carea and down the New York valley to Pinedale. This is a broad willow valley with numerous ranches & lots of hay. Burns is a miserable little ranch.

April 8 - Woke up late Sunday morning <sup>at Pinedale</sup>  
 + had breakfast at 8, after refusing a cordial  
 invitation to go over to the saloon + take a  
 drink with the proprietor, Mr. Red, and chief  
 ranger Geo. Glover. Took a walk the whole  
 length of Main St., instead and sized up the  
 town - On one side of the street a log residence,  
 the hotel (part boards), the printing office, Wood-  
 mans Hall (both log) and school house.  
 On the other side of the street a saloon,  
 a residence + the store. But the log  
 houses are well built, & the town has a  
 beautiful location at edge of broad valley  
 close to Pine Creek and at edge of  
 a long strip of muskrump that follows  
 down the creek bottom from the Mts.  
 The creek is a beautiful stream, draining  
 Fremont lake with unlimited supply of  
 water and power. It has apparently  
 more than 100 feet fall in the 3 miles from  
 the lake to town. Large ditches have been  
 taken out - carried over beautiful sage  
 brush meads of good soil. Good grass +

hardy crops do well but it is close to edge  
of Canadian zone, as shown by *P. marianus*, &  
*Populus tremuloides* along the stream.

The barometer read only a hundred feet higher  
than at Big Piney, making it approximately  
7200 feet. The ranches depend mainly on  
cattle & these have to be fed hay for a large  
part of the winter. Still enormous quantities  
of good wild hay is cut along the valley &  
cattle look well. Just back of Pinedale  
the foothill ridges begin, steep boulders  
heaped various with 2 lines of direction,  
the lower parallel with the valley, the higher  
plowed out of the canyons at right  
angles to it. Back of these the Wind River  
Mts. rise steep and grand, far above  
timberline with a broad black belt of  
timber along the middle slope. Fremont  
Peak, the highest in the range is a little to  
the north.

Had a talk with Mr. Brandon, secretary  
of the wolf county association & Geo. Gloor, chairman.  
Then went over & talked with Zeph Jones.



supervisor, who wants the Forest Service to pay a bounty on wolves on the reserves.

Geo. Glover knows where young wolves were caught last year in Soda Lake basin so I persuaded him to go there with us tomorrow + secured a team to take us to his ranch tonight, a mile N.E. of Cora. Got to the ranch a little before dark + planned for an early start in the morning.

April 9. Had breakfast at 4 and started

before daylight with skis + snowshoes, on a hard crust that held us perfectly.

Stevens a fresh wolf track about a mile from the ranch heading for Soda Lake basin.

~~and~~ ~~over~~ The wolf was carrying something that dragged on the snow, and making a fine line. We followed the track past Soda Lake into a rough basin of glacial dump near the N.E. corner of Fremont Lake + found the den of 8 pups under a huge boulder <sup>half way up</sup> a steep, warm, <sup>in Butler Basin</sup> south slope where the

snow had been gone for some time & the ground was dry & grass starting. We had no trouble in locating the den by the numerous tracks on bare ground, but both old wolves had run us ~~over~~ over the ridge and slipped out before we saw them. Their tracks went off side by side over the snow toward the head of Trout Lake.

The den was a natural cavity under two rocks as big as small houses. It was a flat & wide cavity but not deep enough for me to crawl in until we dug a new entrance at back of rock & enlarged it by scraping out dirt till I could squeeze in flat way.

The pups were back in the far corner packed in a shallow place & with the candle I could see their eyes shine - & ~~to~~ could hear them growl & snarl.

By stretching I reached the hind foot of one & pulled him out till I could let go & grab his neck, then passed him

out to gloves who killed him. The next one was a scrapper + got me by the thumb + nearly made holes through my buckskin glove before I could get him by the neck. Two others got hold of my hand + bit pretty hard but did not get through the glove. Their little teeth are very sharp + pretty long, but the muscles of their jaws are not very strong. They were the size of big cats + later were found to weigh  $6\frac{1}{4}$  lbs to about 7 lbs apiece. Were probably 6 weeks old at least.

- We each took 4 or our traps + started for Pinedale. Had ~~some~~ about 8 miles in finding the den + it was about 11 to Pinedale, so we started went there with them. Struck out from lake + made a sledge of my skins + trotted down the lake on the ice about 6 miles, then had 3 miles of rough ridges, soft snow + slow hard work to town. Got in at 3 P.M., skinned 4 of the wolves + started back to ranch with mail carrier fastway, walked about 2 miles.



Fremont lake is a glacial trough one to 2 miles wide + 12 miles long, reaching back into the mts. between great lateral moraines 1000 feet high in places + farther back into rock walls. It offers superb camping grounds toward the upper end.

Elk tracks were fresh all around the way down and Glover showed me ~~two~~ steep rocky slopes on both sides of the lake where elk winter and find good feed out of reach of stock. The grass on these steep slopes of moraines was abundant and is ~~already~~ <sup>becoming</sup> green from this years growth. A few bones in the wolf den may have been of elk, but the trail compassing the old wolf droppings seemed all to be of horses + cattle. The old wolf caught + ate a rough grouse on her way in to the den. She had eaten a jack rabbit on the trail at a previous meal. Some old feathers of a blue grouse were found in the den.

As we came near Pinedale, very tired from our loads of wolves + sat down on a stone to rest. Glover remarked that he was sorry I didn't drink, because if I did we'd have a "hell of a drink of whisky when we got in". He did have with the rest of the boys while I was skinning my wolves.

April 10 - Started for Glover's ranch, near Coia, at sunrise on a hard crust (too hard for good tracking), picked up Mr. Borum, another ranger at Bennings ranch - 3 miles above - & went up to the sawmill 15 miles north of Coia on Willow Creek. Here the rangers have a cabin in the aspens + Murray pines on the side of the mts. with a beautiful body of timber around them. The cabin is just within the lower edge of the timber which extends back up the slope in a dense growth of Murray pine, scattered *P. flexilis*, *Pseudotsuga*, *Picea canadensis*, *Abies concolor*? + aspens.

The snow measured 29 inches in the woods at the cabin and the snow held all day under the trees. Found lots of pine squirrels but no chipmunks or porcupines had gnawed and seriously injured or killed thousands of trees of *P. amuriana*.

Snowshoe rabbit tracks were common.

Old beaver dams were numerous, we counted 12 dams in succession within 300 yards along Willow Creek. Flying squirrels are said to be common. Several *Peromyscus leucopus* were caught in the camp bed where they had cut the blankets into mats & had cut a big hole in the flour sack. A *Lynx canadensis* had crossed the meadow just above camp today. Coyote tracks were common & the coyotes were howling above camp in evening, a fine serenade. Mr. Glover estimates 125 to 150 Martens caught in the range during the winter & Mr. Perino at Cara says he has sold about 2000 dollars worth of Martens fur this season, also a few cranes & red foxes.

Went to bed under a load of blankets after a good camp supper of potatoes, beans, bacon biscuits & coffee.



April 11 - Got up before daylight & found half an inch of fresh snow, but much to our disappointment found ~~that~~ it had not frozen & the old snow was <sup>too</sup> soft for good snowshoeing. The rangers decided not to leave camp so I started alone for Alexander's ranch, over on Green River, 6 miles N.W. Found it slow travelling & reached the ranch about 10 A.M., Staid to dinner & talked wolves & examined 3 beautiful skins the boys had taken during the winter. They had followed them - rap & shot them, but at Charles & Frank Alexander's ranches lower down the valley I found 5 more wolf skins of wolves shot or run down on horses. Unlike most of the ranchers the Alexander boys are energetic, intelligent fellows & they get more wolves than any one else in the country. The old people at the upper ranch, are fine types of intelligent frontier people. Their youngest son, Will, is still with them. The boys have lots of fine photos & many interesting specimens of heads & skins.

Bought 2 wolf + a panther skin of Frank Alexander + started from his place to Cora - 7 miles - on foot with about 40 lbs on my back besides gun + skins. The snow was so soft I could scarcely use the skins + followed an old slight track on foot most of the way down to Clark's ranch. There got a boy to take me the remaining 5 miles to Cora - horseback with my packs. Reached Cora at 8 P.M. tired + chilly + went to bed at the little ranch hotel.

A hard day's work, but I learned much of wolves + wolf hunting, got some good specimens, saw a lot of interesting country, met several well informed people and consider the day well spent.

April 12 - Took stage at 7 A.M. for Big Piney + arrived there at 4 P.M. Roads bad, Green river high, a cold wind blew all day. Got chilly. Used wagon for last 5 miles. Found lots of mail at Big Piney.

April 12 - Visited my wolf den and found fresh tracks near it but the den had not been entered nor the trap touched.

The snow is nearly gone here now so I go on horseback instead of skis. Ducks & geese are numerous.

Saw a pair of Mountain Hares killed one.

April 13 - Toke basin went over into dry Piney Basin but found no tracks of wolves.

Saw 115 antelope in one bunch and another small herd of 6 or 8.

Saw a big Lynx baileyi + got 3

Eutamias minimus. Ground

wet & muddy except on dry south slopes. Travelling slow & hard.

Grass starting on warm slopes & stock is being turned out.



April 15 - Sunday - Wrote reports and packed up part of my specimens.

April 14 - Finished packing and my ~~wannual~~ report. Took stage for Opel at 3 P.M. and came as far as Birds ranch near Midway - 12 miles. Ground drying off rapidly & roads good. Snow on north slopes only. Lots of *Citellus elegans* out. Shot 3 for the wolf pups, also shot a big white Jackrabbit.

April 17 - Reached La Barge at 9:30 but the trapper I wanted to see, Hal Gibbs, was 8 miles up the creek so I decided to lay over a day & try to get beaver castor from him. Got a banner started

for Gibb's camp but met him about a mile from the ranch. He was on his way down to a beaver trap and agreed to send me the castor if he caught it and sent it up before dark. In afternoon I went back 3 miles on the stage road to try and get photograph of a flock of about a dozen sage grouse seen crawling on a flat as we came by in the morning, but they had gone.

It was interesting to watch the old wales puff up their big white muffer, spread their tail and drag their wings and then get down on their crop & slide. I could hear no sound at a distance of 40 rods.

Saw lots of sawbills & wallards & 3  
female buffleheads - La Barge.

Saw two antelope halfway from  
Midway to La Barge.

Gibbs says there are more beavers  
on South Piney than on La Barge Creek.  
He is catching them - right along  
and is going to South Piney soon  
to trap for them.

Found a few *Betula occidentalis* among the  
willows on La Barge Cr. *Artemisia*  
*tridentata* - *cava*, *crispa* & *pedatifida* are  
common. *Tetradymia spinescens*, *Atriplex*  
*confertifolia*, *nuttallii*, and *Grayia*?  
grow on south slopes. *Sarcobatus*  
is the principal alkali valley plant.  
The meadows are largely salt grass &  
tule.



April 18 - Stage came along at 9 and put me at Fortenalls at 12. Shot 2 chipmunks & a *Lepus baileyi* & a prairie dog. Left Fortenalls at 1 P.M. & reached Opel at sundown. Roads good but a chilly wind blowing. Got 3 prairie dogs & killed others that slid down the burrows.

Country alive with sheep, saw numerous large herds and sheep wagons dot the valleys. The ground is eaten and trampled bare and most of the bushes eaten except sagebrush. Grass is just beginning to start. About 10 percent of the sheep were lost during the late storm. Hay or grain was fed where ever it could be procured.

57. Used up the forenoon boxing and shipping my young wolves + other specimens, writing a few letters + talking with the ranchmen.

In P.M. got a saddle horse and followed the long mesa east of Opal, looking for wolf tracks.

Found none but found two dens of young coyotes, which I did not disturb as I had no shot.

Saw both old coyotes at one den and fresh tracks of both at the other.

One was carrying a muskrat which it dropped + I skinned. It was

a ♀, not yet with young + must have been caught in Hans Fork, 2 or 3 miles distant. Could tell long before I reached a den by the abundance of tracks of coyotes.

58.

Found fresh tracks of 5 or 6 deer along the foot of the mesa slope. Saw lots of Lynx tracks & some in caves, where the lynx are probably breeding. The slope is steep and full of holes & hollows and caves. It is a typical badland slope, bare & either adobe or sandstone. The mesa is 200 or 300 feet high and extends for many miles. I followed about 5 miles and hope to go farther tomorrow.

Saw one jack rabbit, still mainly white, but turning yellow to match the soil. Saw great numbers of *Lepus texianus*, both along the cliff and out in the sagebrush, where they run to badger holes. Saw lots of *Eutamias minimus* & a few *Citellus elegans*, some prairie dog holes, lots of gopher hills, plenty of *Zeonora* nests in cliffs. Saw 4 *Sayornis*, the first.



59. Journal

April 20. Took a team and driver  
+ went after my Coyotes. Crawled into  
the first den without digging at  
all but found only 2 young. They  
were back about 12 feet in a hole  
washed out of the side of a bad-  
land butte, were on a bed of soft  
sand. Their eyes were not yet  
open + they probably were a week old.  
I think the old coyote had taken  
away the rest of the pups after  
I scared her out of the den  
the night before. Photographed  
the den + the pups + the side hill.  
Then went to the other den and  
had to dig a hole through the side  
of the bank to get in.

46.

Found 5 pupes back at end of a  
badger hole in a sand bed.

Opened the hole so I could crawl  
in my length and reach them.

They did not try to bite tho  
probably a month old, with teeth  
coming through + bright eyes.

I photographed them + the den

Made specimens of the two

little ones + 2 of the larger litter.

Kept 3 alive to send to the zoo.

Got back at 1 P.M. + then hunted  
chipmunks - killed a few + also found  
a colony of Citellus umnotus on the  
meadow. C. digans is abundant on  
the uplands, just as I found them  
at H. Bridge in 1888.

61.

April 21. Shipped my young coyotes and made up skins. In P.M. went down by the river & shot a muskrat & caught a Thomomys oceana, both good specimens to have.

April 22 - Packed up box of 20 Coyote skulls, box of specimens, roll of skins, box of cactus & mailed reports & 2 doz negatives. Packed my baggage & took train at 12:40 for Green River. Got there at 3 & started after topotypes of Eutamias minimus - Got 5, but found them scarce & wild. Country very barren & eaten up by sheep. Nothing left for chipmunks.



62. Journal

April 23 Woke up in the Ferris Hotel at Rawlins & found myself in very comfortable quarters. Made up my 5 chipmunks, pinned them down in a box and mailed them. Wrote Greenhorns valley kid report, letters and journal notes up to date, got ammunition, negatives, and supplies for the trip, sorted <sup>baggage</sup> and packed my duffle bag ready to take the stage for Lander in the morning.

April 24 Left Rawlins at 7:30 A.M. in a cold, wet, windy morning and drove 45 miles over sage plains long ridges and alkaline lake basins to Lost Soldier, the stage station at the base of the Lost Soldier Mts., or Green Mts., at 5 o'clock. Changed horses twice and got dinner at a stage station. Passed only one poor ranch, but many sheep ranges with bands of sheep.

At Fast Eddies we changed horses & started without waiting for supper, climbed up a long slope & in about 9 miles crossed the summit of the ~~divide~~ range in a low pass not 1000 feet above the plain. No timber except a few scrubby junipers and on rock rims a few Pinus flexilis, but the Ferris & Smihals Mts., to the east are covered with black, solid forest that ought to be worked. Went through Crooks Pass. Changed horses and got a cold supper at Burnt Ranch (Rongis) at 10 P.M. Continued down grade till we struck the Sweetwater River and followed up it to Myersville where we changed horses & drivers. the next morning at daylight. A chilly nights ride. Frosty morning.

64. April 25. Left Myersville at sunrise on a party, cold, raw, windy morning and after crossing the river climbed steadily up grade till we reached the top of Beaver Hill, where a fierce wind swept ~~up~~ from the snow covered Wind River Mts. and where patches of old snow were still lying on cold or drifted slopes. Then down a steep slope of 300 or 400 feet to warmer valleys below and at 8 A.M. reached Haily, on Beaver creek where we got breakfast at the ranch post office & "road house" a good breakfast & a good ranch. Thence crossed ridge after ridge & valley after valley till we reached Lander at 5 P.M., each valley getting lower and greener as we descend into the Wind River Valley, and occupied 4 good little ranches.



65.

From Hailey to Fawkes junipers cover the rocky rims of the valleys in places mixed with Pinus flexilis - north rim. A few cottonwoods & many willows grow along the streams. & good crops are raised including grains, vegetables and some varieties of apples on ranches where trees have been put out. Grass & alfalfa are getting well up so the meadows are green & the wild buck grass is up big enough for a good bite by cows or horses. A few flowers are out, mainly Phlox anglica in little white cushions, a little yellow Cornflowers a few Viola nuttallii, and that is about all. Sage brush is almost a tree along the creek valleys, often 8 feet high. The soil is good and streams for irrigation numerous & full of snow water.

lets.

I should place the valleys around Lakes  
as Transition with probably a trace of  
Upper Sonoran on warm slopes, but  
our notes for 1894 will give a better index  
to zones & plants than I can get now.

Went to Fremont Hotel and  
spent the evening discussing wolf  
and game problems with Mr. S.C.  
Nowlin, state game warden.

April 24 - Snowing fast when I woke  
up at 7, & snowed most of forenoon  
till 2 inches lay on the ground. Then  
got warmer & all melted, leaving  
mud & slush. Was hoping for a  
tracking snow but did not get it.  
Wrote notes & letters & talked wolves  
& game protection with Mr. Nowlin &  
arranged for team to start for Circle in morning.

67. Journal -

April 27, Got a team & van and left  
Lander at 7 A.M. for Circle - 75 miles up  
the Wind River. Found the roads so muddy  
and sticky that we could only walk the team  
and did not reach H. Washakie till noon -  
14 miles. Lunched by the river & went on  
with better roads, patches of sandy  
soil, and the mud drying up. Crossed  
several broad, smooth meadows and  
intervening valleys of scattered sage  
brush, good soil and abundant grass.  
Much country that is really put  
under irrigation, while the water  
supply is going to waste.

Finally pitched down a long hill into  
Wind River Valley just below Bull Lake,  
and instead of stopping at the Stagner  
Ranch on the river followed 10 miles  
farther up the valley to the T. N. Ranch for night.



68. Found a nice place to stay with  
the Kiskadees - Came 45 miles, over  
open country with little of interest to be  
seen. Was pleased to find that only  
the part of the Eboahoe Ind. Res. north  
of Wind River is to be opened for settlement  
This is the poorest part, including the  
Owl Mts. and rough country generally  
while that remaining is beautiful grazing  
& farming land - Far more than the Indians  
can use. The broad valley at Washakie  
is scattered over with tepees, and some  
Indian or halfbreed ranches occupy the best  
parts of the Wind River valley. The J K Ranch  
where we stop for the night is leased  
from the son of old Chief Washakie -  
is one of the best ranches on the river,  
with extensive meadowland, good flats  
for irrigation, and the best of grazing  
"benchland" on both sides of the river.

69.

Zones - Apparently the whole country travelled from Lander to the J. K. Ranch is Transition zone. Sagebrush & sycobates are the dominant plains plants while along the streams *Populus angustifolia*, *Salix* (of many species), *Betula occidentalis*, *Shepherdia argentea*, *Ribes divaricatum?*, *Clematis*, *Rosa*, etc. are the ~~common~~ vegetation. ~~That Lander~~ There seems to be nothing to suggest Upper Sonoran except junipers along the cliffs and these are mixed with *Pinus flexilis* and farther up the river extend to and among the aspens, indicating a Transition zone species. Nor do any Canadian zone species come down into this part of the valley, even on north slopes. At Lander most of the ordinary garden vegetables are raised and there is at least one good bearing apple orchard.

Birds - Parus a. septentrionalis, saw two in  
 the willows near Lander, Pica p. hudsonica, common  
 along all the streams. Agelaius phoeniceus,  
~~common~~ at Lander & Ft. Washakie. Near  
 the fort a thick bunch of Bull berry bushes  
 was alive and squawking with redwings,  
yellowheads, brewers, and cowbirds.  
Sturnella m. neglecta, meadowlarks are abundant  
 on the bottom lands and often seen & heard  
 out in the sagebrush. Proccets q. confinis,  
 a few grasspeckers seen all along. Junco  
~~common~~ in brushy places. Corvus  
americanus, a few crows were seen at Ft.  
 Washakie and others along Wind River.  
Falco sparverius, common all along.  
Ceryle alcyon, ~~one~~ seen by the creek at  
 Ft. Washakie, <sup>the first seen.</sup> Anthus ludoviciana, two  
 were seen at Ft. Washakie, the first I have seen  
 this year. Colaptes c. collaris, a few seen along  
 Wind River. Merula m. propinqua, common  
 along Wind River. Myadestes townsendi, one seen  
 at Wind River - the first of the season.



Mammals: - Eutamias minimus - One seen at  
 Bull Lake Creek was the pale, yellowtailed  
 form, quite different from the Green River City  
 specimens. Citellus t. pallidus, a little striped  
 ground squirrel on the flat near Lander was  
 very pale and small. - possibly a parvus.  
~~Thomomys~~ \_\_\_\_\_, gopher hills are  
 scattered here & there all along, both on  
 the mesa & on the creek bottoms.  
Lepus bailyi - a few long eared cottontails  
 were seen. Cynomys leucurus, a few  
 prairie dogs were seen but they are  
 rather scarce. Citellus elegans, a few  
 seen near Lander & Washakie.  
Fiber zibethicus - a muskrat house stands in  
 a pond near the Indian Agency.

72. April 28 - Left the J K Ranch at 6:30  
and reached the Circle Ranch, 30 miles  
above, at noon. In afternoon went  
6 miles farther up to Mr. Carson's ranch  
and talked wolves with the nephew of  
Kit Carson, who has had considerable  
experience in finding wolf dens. He showed  
me a strip of rocky foothills back of his  
ranch where he had found 11 wolf dens.  
I photographed the sections of mountains &  
foothills and also the badlands across  
the Wind River - his house, yellow &  
fractured walls, curiously carved by  
the water. Mr. Carson says he has  
found from 5 to 9 wolf pups in a den,  
usually in natural cavities under  
ledges or big boulders, but some in  
burrows he thinks the wolves have dug.  
Some of the dens were up at the edge of  
the timber on the mountain slopes.

73.

On the Circle ranch Mr. Landis says considerable stock is lost by wolves & a few wolves are killed each year. Mr. Beck, his foreman, knows of 8 that have been caught on the ranch the past year, mainly in traps. On the

J.K. ranch Mr. <sup>A.P.</sup> Kirkland says 5 wolves have been killed during the past year, all but one poisoned & this one killed by an Indian & he does not know how it was secured. The number of cattle killed in a year is not easily estimated as the calves are picked up on the range and rarely seen the remains found. Mr. Carson thinks the wolves kill a great many deer & elk & mountain sheep but he seems to have no data to back his assumption.

He also says the bear kill many cattle for him. He says the mountain sheep are now on the ridges down close to his ranch & showed me a point where one was shot. Some old horns seen



Saw a few wolf tracks - several coyote tracks on the flat at fork of river below Circle. Eutamias minimus, saw one near the JK ranch and one above Circle.

Cynomys leucurus, a few seen up to forks of Wind River & some holes above Circle.

Thomomys \_\_\_\_\_ hills seen all along, both on mesa & on flats. Lepus bairdii a few seen all along to Circle.

Neotoma \_\_\_\_\_ Woodrats nests were seen in the rocks wherever we were near enough to see them -

The Wind river valley narrows as we go up to a narrow canyon below the forks, then widens out again into good flats for farms. The Circle ranch is the best of all, with a fine bottom land expanse for large grain - and excellent ranges on the benches both sides of the river.

After leaving the Indian reservation  
 they we found the range overstocked & the  
 grass badly eaten off, especially from  
 steep slopes. The tops of mesas have  
 better grass. At Circle Mr. Favelle  
 says he raises good potatoes and  
 most hardy vegetables with no trouble  
 for frost.

Zone - As far up the valley as  
 we went, 60 miles below Dubois, Transition  
 zone predominated, with *Populus angustifolia*  
 along the rivers, *Juniperus* & *Pinus*  
*flexilis* on the ridges. Near Torrey  
 Lake where a N.E. slope reaches to  
 the river bottom, Canadian zone  
 comes down with aspens & a few  
*Picea* purages, but the *Juniperus* reaches  
 to and mingles with the aspens.

Saw a fish hawk catch - first trout and  
 later saw one at a huge nest on a cliff.

76. April 29. Left the Circle ranch at 6:45  
& reached the J.K. at noon, returning  
over the same road we went up.  
Just below the fork of Wind River is a  
flat where Larkspur is unusually  
abundant & where cattle are often  
poisoned by it. Three old carcasses,  
one cow almost dead and another  
evidently sick were lying on this  
flat. Many cattle are lost each  
spring by the larkspur and were  
once said to die each summer in the  
hills from larkspur poison, but I  
suspect really from Acornitum.

Windy & cloudy & began to rain  
just as we reached the ranch at noon.  
Gave up the way home & staid indoors  
writing up notes. Set a few traps,  
Rained by spells all of P.M.

Crowheart Butte is just across the river,  
east of J.K. Ranch. Chief Washahie is said to have  
killed a Crow Indian. They & eat his heart.



77. April 30 - a warm, damp night  
but no tracking snow in morning, so we  
gave up the wolf hunt & came back to Lander.  
Roads fairly good and we reached Lander  
at 5 P.M. - 45 miles. Damp & raw  
with squalls of rain & snow all day.  
in our faces. Took a few photographs  
but in poor light. Could not get a clear  
view of Crowheart Butte, so did not take it.  
Took the Wind River & Washoe valleys.

Shot a swainson's hawk that had  
eaten a prairie dog, saw 2 more,  
Saw several kingfishers & plenty of  
Otocoris & a Myiadestes & 4 Zenaidura, <sup>the best</sup>

Caught one Thomomys talpoides & 6  
Peromyscus nebrascensis at the J.K.  
Ranch. Peromyscus sprung out of my  
Molona traps. Saw a few wolf tracks.

78. May 1. Worked all of forenoon making out my April expense account - \$102.

In afternoon got a saddle horse & rode a 8 miles east to row of rocky hills and followed crests of ridges for wolf tracks. Found none nor any signs of wolves, but drove an old coyote from his den & could have found it if I had taken time to hunt for it. ~~It was~~

Country all sheeped over, on a section leased for Indian Reserve. Grass good. Sagebrush plains & ridges.

Found a Golden eagle, dead, shot or poisoned. Saw lots of ~~salpinctes~~ - the first for this spring. A few *Zenia arctica*, mourning doves and *Sayornis*.

79. May 2. Got a saddle horse & went with Mr. Nowlin for an all days wolf hunt toward head of North Fork, & on Soul Creek, in the foothills 15 miles N.W. of Larches. Found lots of snow up along edge of timber where many old wolf dens were located, but found no wolf tracks. A 17 year old son of Mr. Meredith went with us & showed us all the old dens he knew & then we found the forest ranger Arthur Roberts, who has taken many wolf pups & who told us where the dens were & all about each. He is a keen, reliable observer & has lived among the wolves for all or most of his life. I got much valuable information from him & see how he can be used to advantage by the Forest Service in destroying wolves.



79. Journal

May 3. Work reports till midnight last night and again from 5:30 to 9 this morning & mailed bird & mammal reports, packed up & took stage for Rawlins at 10. Roads bad and we lost time all day, reaching Hairy for supper. Then over Beaver Hill with a 4 horse team and down to Myersville at midnight. Had Bob Hayes for driver from Hairy to Myersville. "Deaf Bob" - one of the best drivers on the line. Clear & mild with a good moon.

May 4 Left Myersville soon after midnight with 4 horse stage & young Lester for a driver. Made good time & reached Burnt Ranch at sunrise. Fur-bers on load only 2 poor horses & lost time, reaching Last Soldier at 9:30 for breakfast. There got a better team & a good driver - Fiddy Jones, & made good time into Rawlins at 5:15. Little game or animal life seen.

T. 9. Journal

May 5 - Left Rawlins at 8:30, & got to Laramie for dinner at 12. The cottonwood valleys of the North Platte & Laramie Rivers ought to be noted for upper Sonoran species. Laramie plains are probably transition, tho there is little but grass to go by.

At Sherman we found a little snow on the ground from the storm in the night and on the east slope of the Laramie Mts. it increased to a good tracking snow. Just at the lower edge of the snow the prairie mounds were very numerous & conspicuous where the snow had melted off the warm sides. They are the typical prairie mounds, one to two feet high & 20 to 30 feet wide, were most numerous about 15 miles before we reached Cheyenne, but a few are scattered all along.

At Cheyenne went to the Inter Ocean  
 Hotel & then to the Capital. Called first  
 on Gov. Brooks & talked over the wolf  
 problems - Found him well informed on  
 the subject & greatly interested. He has a  
 cattle and sheep ranch near Casper &  
 says he has paid one trapper \$50.00 apiece  
 for catching 50 wolves on his ranch -  
 the trapper used scent, rancid fish oil  
 & probably other things. Had a Tam's wolf  
 & it would hunt for a bit of this scent &  
 chew & paw & roll on it. The man had  
 won a great deal to clean out wolves  
 from Montana ranches & had a wide  
 reputation, but was a very low down,  
 disreputable character - a noxious fiend,  
 & all that was disgusting.  
 The governor was very not to get hold  
 of a newspaper man as he thought  
 the people ought to know what we were  
 doing. Said it would do much to  
 remove prejudice against forest rangers  
 & game protection. Personally the  
 Gov. is genial and entertaining.



I now have mapped 19 wolf dens and this distribution around the borders of the mountain ranges is very instructive.

My visit with Mr. Nowlin, state game warden, was very pleasant and we had time to talk over many matters of mutual interest regarding game & animals in general. He is a native of Texas, and familiar with much of west Texas & of New Mexico. Was once a Texas Ranger, a sheriff in N. M., has been in the Wyo. state legislature and is a surveyor & engineer by profession, a ranchman by choice and very earnestly interested in preservation of Wyoming game.

Called on State auditor Grant next  
 + got records of warrants paid by the state  
 back to 1892. While waiting for these  
 Prof. Niswinder came in and greeted  
 us like a long lost brother + we staid  
 and talked till 5 o'clock, an hour after  
 closing time for the office.

On the way down town we met Tom  
 Cooper, one of Hayden's guides on the  
 early surveys. He knows a lot of the survey  
 men + says ship Wadsworth is on the  
 pier here at Boulder.

Then I went to the famous old saddle  
 maker - Menen - + bought a pair of spurs  
 + pined saddles at 25 to 30 dollars.  
 He outfitted the Hayden party in 1872  
 + is said to sell 40,000 worth of saddles  
 a year now. They are famous from  
 Montana to Texas + are fine saddles.

Went back to hotel + enjoyed a  
 good meal with plenty of time to  
 eat it.

82. May 9 -

Left Denver at 8 AM. for Denver.  
A clear morning with frost on the sidewalk  
& mountains hidden in clouds.  
Smooth plains with short grass & only  
prairie logs to be seen until we reach  
Laramie. Then farms all along with  
green fields of alfalfa & grain &  
many freshly plowed fields. At Greeley  
Plum trees in blossom, willows green  
& cottonwoods in blossom & showing  
a trace of green. Thompson hills  
abundant all along. Yucca common,  
tumble weeds abundant.

Reached Denver at 11:50 after 10 bad clouds  
could not get my mail. Rode out to City Park  
& back & waited till 8 P.M. for train  
to Silver City, N.M.

Lots of Carpodacus frontalis singing in park  
& among houses in town - a few English  
sparrows, Melospiza & Chondestes -  
in park. Saw the first barn swallows near  
Greeley.

Left Denver at 8 P.M.



83, Journal

May 7, 1906.

Woke up an hour before reaching Trinidad  
- the Santa Fe on grass plains scattered over  
with *Opuntia ulmifera* just leaving out.  
Near Trinidad the valley is green with fields  
of alfalfa & grass & grain - Apples, plums &  
peach trees in blossom - trees well out  
- *Populus pauciflora*, *Populus angustifolia*  
*Juniperus* & nut pines cover the hills round  
Trinidad. Got a good honey breakfast at  
the Gardiner's. Up canyon to edge  
of transition zone about Morley - where  
*Pinus ponderosa*, *Pseudotsuga*, *Quercus*  
*gambelii* begin with *Populus angustifolia*  
following the streams. Transition continues  
over the pass & down half way to Paton.  
Then, nut pines & *Juniperus* begin & the valley  
below Paton is open & grassy.  
On the narrow crest of Paton yellow pines  
are close enough to be recognized as also  
on the Tinaja Hills east of Corsey.  
Yellow pines appear again on the Gonzales Mesa  
on the Canadian Hills, Turkey Mts, and along  
both sides of the canyon at Watsons.

along the canyons + edges near the pine follows outcrops of rock, + you lower on the limestone than on the lava.

Wagon road is a series of broad buttes + ridges. The valleys are covered with short grass + a few yucca glauca.

There are very few flowers + vegetation looks dry except in irrigated fields on bottom. Got dinner at Las Vegas at 1:30.

Was sorry to see new farms opening up in the beautiful juniper orchards near Bernal Hill - for any farming.

At Ribera the peaks of the Peasaplan Mts. began to show, <sup>including</sup> Bully + behind it Green Baldy - well capped with snow which extends south over Lake Peak and a little beyond but does not reach to Glorieta Peak. The cottonwoods <sup>(P. angustifolia)</sup> at Glorieta were only beginning to blow out + not as beautiful as usual -

The Populus fremontii in the canyon near Campanita were much farther advanced and along the Rio Grande Valley in full leaf. Poplars were in blossom at Campanita and in fruit - nearly full leaf at Lamy.

When we reached the Rio Grande river vegetation was well advanced. The Indians were planting & hoeing in their fields. Most of the trees are in full leaf, the grass on the bottom lands was a foot high & also the ayulpa. In places Plantago patagonica makes grass in fuzzy white carpets over the dry slopes. Reached Albuquerque just at dark & had to wait till 12 o'clock for train south -



84. Journal

May 2 - Wake up at sunrise at  
Cattles, on the midst of the Torvalda  
Del Muerta with creosote bushes,  
mesquites, + yuccas all around.

the creosote full of flowers & the mesquite  
in full leaf & with ~~buds~~ unopened  
catkins. Several yellow flowers are common.

Reached Rincon for breakfast  
at 6:45 + found vegetation still  
farther advanced. The cottonwoods  
are in full leaf + many of the trees  
loaded with *Platanus* flowers  
(with the) creosote in full flower.

*Prosopis juliflora* almost in flower,  
*P. pubescens* leaved out. In the hotel  
yard a few trees of *Rodriguezia*  
are loaded with fruit, much of which  
is now ripe -

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

87. River, N.M. May 8, 1906.

*Populus fremontii* & *Platanus* abn.  
*Salix nigra* along river & lakes  
*Prosopis juliflora* in bud & nearly in flower  
 " *pubescens* in leaf  
*Coultas tridentata* in flower  
*Atriplex canescens* in flower or bud -  
*Rhus microphylla*  
*Baccharis salicifolia?* abn. on flats  
*Ephedra viridis?* com on dry ground.  
*Yucca rostrata* - with flower stalks & bud  
*Morus rubra* - with ripe fruit at station.

Peach trees } - in full leaf & post flowering  
 Apple trees }  
 + all prunus }

rip mesa West of Rio Grande

*Chilopsis elegans* com. in wash.  
*Zizania paradoxa* - in flower -  
*Rumex obtusifolius?* abn.  
*Cercobites neqariza*  
*Koeleria spinescens* - com.  
*Bradyris glutinosa?* - abn. on high flats -

Nutt

UNITED STATES DEPARTMENT OF AGRICULTURE  
 FOREST SERVICE



88.

Near Grange I saw a white necked  
raven near the train. It lit on the stem  
of a yellow Radix. Doves are  
common. At Riverton a Sayornis saya  
was calling. Saw a quail, a California  
or Arizona - on the Rio Grande flats  
and a cottontop on mesa west of  
valley. Saw two more cottontops  
near the Rio Mimbres north of Deming.  
Barn swallows have nests all  
along the edge of depot porch at  
Deming. Otocoris ~~com~~ at  
Deming & north. Two turkey buzzards  
seen near Spalding.

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Dipodomys spectabilis vouches are common on the mesa west of Rincon.

Neotoma - Woodrat houses

are numerous in mesquite bushes up slope west of Rincon. In places half or more of the surrounding bushes have been stripped of bark & killed. Mesquite, creosote, *Rhus microphylla*, & many other bushes are pulled.

Cynomys - Prairie dogs are abundant over the grassy plains an hour west of Rincon.

Lepus arizonae - Several seen up the slope west of Rincon.

Lepus texianus - One seen near Granada.



UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

20.

At Nutt most of the shrubby  
vegetation has disappeared & the  
covering is mainly grass & in places  
a robe of golden composites, of mainly  
2 species - the one wrongly called "Bigelowia  
indoviciensis"? & a smaller Helianthus  
like plant. But across the wide  
valley to the north I can see stretches  
of bushes - apparently mesquite &  
creosote where the slope dips to the  
south. We seem to be on the edge  
of Upper & Lower Sonoran zones  
where a tilt to the north thins  
it - Upper - to the south in Lower.  
West of Nutt we cross a wide plain  
and as we again strike a slope  
tilted slightly to the south mesquite,  
creosote, & ~~Barbary~~ beavers abundant  
also yucca, red rose Ephedra

At Denning the whole set of  
Lower Sonoran plants, abundant,  
and on to Faywood, then they grow

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

*[Faint handwritten text, possibly a signature or date]*



91.

scarcely and mainly disappears before we reach Whitewater and are replaced by *Opuntia arborescens*, grass + various small plants. A few *Yucca radiosa* still scatter along, + cling to south slopes up nearly to Silver City.

*Holcus* and *Juniperus pechyloea* and also appear on the north slopes of the ridges.

The break for Lower to Upper Sonoran comes between Jaywood + White Water in the open valley, though the steep south slopes above carry traces of lower Sonoran higher up.

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Reached Silver City at noon  
 + went to the Broadway Hotel.  
 The town is in a barren gulch between  
 barren hills, but with a south slope.

Populus fremontii is full of ripe &  
 bursting fruit, ~~yellow~~ Juglans cupressata  
 are in blossom. China berries in leaf.  
 Populus in nearly ripe fruit, Lilacs in  
 fruit, <sup>+ peach</sup> Apple trees <sup>+ with fruit string as warbles</sup> past flowering,  
 yellow + red roses + Iris in full  
 flower.

From the hill back of town the  
 black timber of the Forest Reserve  
 shows not far to the north.

Tireas are singing in the trees  
 + house finches are numerous + eating seed  
 of cottonwood. Saporus sayi + Tyrannus  
 vociferans <sup>+ salpinctes</sup> are common on the hill.  
 Also Spizella atrigularis + singing  
 a pleasing little song <sup>o o o</sup> <sup>o o o o o o</sup> of  
 three parts ending in a real spizella trill.



UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

100 Journal

a gap in pages - forgot the last - one

May 11 - Left Silver City for the G.O.S. Ranch at 7:30, Raining & squally. Came through Central, which is about to Ft. Baird, then through Santa Rita, then over the ridge and down onto the Miembres at the old town of Miembres, then about 11 miles up the river and over onto the head of Sappelo creek and down at a few miles to the G.O.S. Ranch, a beautiful place in wide, park like valley. The Sappelo is a branch of the Gila. Came 40 miles from Silver City, but in a round about way. The country is rough and rocks are scarce, steep and stony in places. Most of the country is dry but there is a little water in the creeks of Silver, Central and Santa Rita and the Miembres is a pretty little river too wide to jump across.

Most of the country is Upper Sonoran hills + ridges with a trace of Lower Sonoran (Yucca radiosa: Dasyglossis - one little bunch of dwarf mesquite) up as far as Silver on steep but slopes. Also a trace of Transition zone (in yellow pine and Agave aplonata) down <sup>nearly</sup> as low as Silver on steep north slopes. From near Santa Rita, up over the ridge and half way down the slope toward Mimbres Transition zone with yellow pine and Agave in abundance prevails. Then the Mimbres valley is Upper Sonoran as far as we followed it and farther on south slopes. Over the ridge to Sappeto Creek to the Y O S Ranch is mainly yellow pine ~~and~~ Transition. While the ranch valley is open, grassy park & beautiful yellow pine groves. On the north side of the valley the steep



South slope is mainly Upper Sonoran with juniper & Nut pine & Cercocarpus parvifolius. Water begins to run in the creek about 3 miles below the GOS ranch, but at the ranch a big, shallow well furnishes an abundance of good water.

No attempt to raise crops or even garden is made but the cattle range is ideal, with abundance of grass for both winter & summer and rarely any snow. Most of the cattle are shipped when 2 & 3 years old to be fed on "beef range" in Colo. or Kansas, within easy reach of market. The distance & country between here & shipping points render shipment of beef cattle unprofitable.

Found the GOS a typical, well-to-do ranch. Was taken in charge by the bookkeeper, Mr. Leavenworth, and made to feel at home.

103 May 12.

With Mr. Leavenworth, I rode  
down the canyon 4 or 5 miles to  
look for wolf tracks, but found only  
old tracks. Then returned  
& packed my outfit on a buckhorse  
& with a nice little saddle horse  
we started for a camp on the  
Minbras, at Lat 33, Lon. 108,  
some 10 miles from the actual  
source of the river & 7 miles from  
the LOS home ranch. Followed  
up a dry canyon, then a long  
ridge onto the mesa separating  
the waters of the Gila & Minbras,  
a little way up the mesa & then down  
into the Minbras canyon where  
we found an unoccupied adobe  
house, used as a round up camp  
& here I unloaded bed, grub,  
traps & outfit. Mr. Leavenworth  
returned, leaving me and  
my saddle horse in camp.

104. The canyon is here narrow,  
with steep slopes probably 700  
feet up on each side. The river  
is a beautiful stream of pure  
sparkling water rushing over  
a stony bed, now small enough  
to cross on a pole or jump  
from one stone to another in  
the rapids, but showing evidence  
of fierce torrents at times that  
tear up the banks & pile cords  
of wood and logs against trees.  
The flats are narrow strips on  
one side & then the other,  
covered with beautiful *Populus*  
and *quercus* fine old yellow pines.  
The whole bottom of the canyon  
is pure Transition zone as  
the frosty nights & cold canyon  
air would suggest. The side slopes  
are mainly transition except where  
they face the south & are then Upper Sonoran.



105. The clear open forests of yellow pines,  
the orchard like growths of junipers, nut-  
pines and oaks - the graceful cottonwoods  
along the river make as delightful  
a combination as one could wish.  
The little roar of the creek, the  
numerous bird songs and abundance  
of animal life makes the spot  
a veritable campus paradise.  
Still few campers ever come this  
way - owing evidently to lack of  
trout in the streams. There is  
abundance of other game,  
deer tracks all around, turkeys  
common, some bears & wolves,  
and abundance of about squirrels.  
Spent the rest of the day fixing  
my gun, which some - had snapped  
- driven the plunger in, cleaning  
up the cabin, getting my outfit in  
shape for work and setting a few  
small traps around camp.

104 - May 13 - Sunday morning - alone  
in camp except for my horse, a drove  
of 5 abert squirrels in my dooryard,  
a black phoebe's nest under my roof,  
lots of chipmunks & mice & birds  
all around.

Made up my wolf scents, took  
a bag of traps, some old beef  
bones and climbed the hill to  
top of mesa. Found a big,  
fresh wolf track along the road  
made since we came down.  
Made a drag of my old bones  
& set traps along the drag  
and beside the road, using  
several kinds of scent, castoreum  
with assapitida & salmon oil,  
castoreum with assapitide ~~out~~  
in alcohol, castoreum straight  
and some of Galloway's wolf bait.  
Set five wolf traps and in  
afternoon set 2 fox traps near  
the cabins.

107. May 14 - Found a Urocyon in each of my fox traps, which were baited with jack rabbit & scented with castoreum & assafetida.

No wolves had been along the road or near my traps.

Made up a few mammal skins

May 15 - Caught a skunk in one of my fox traps. Found where a wolf had followed the road to near one of my traps & then turned & followed the scent back and forth along my drag marks & trapped all around the traps which the cattle had previously stepped in & sprung. The cattle insist on pawing up my traps tho I run them off the ridge every day.

My man, Hotchkiss, came this evening so I will now have all my time for work. Have lived alone & cooked for 3 days - long enough.



107. the cabin.

108 May 14 - No wolf tracks on  
the mesa this morning.  
Started for my traps just as  
the sun touched the hill tops &  
got back at 4 A.M. Did not  
have to get breakfast.

Afternoon went down the river about  
3 miles and set 3 wolf traps,  
two in the main canyon and one  
up in Powderhorn Canyon. A wolf  
had followed the trail right before  
last! Found a *Comepatus* -  
saved skull. Juglans nigra's  
trees come up to a mile below the  
cabin - Yellow pines go down  
below where we were.

The canyon walls are lava  
down as far as we went, but  
sandstone & conglomerate come  
in below the lava sheets.

Canyon bottom mainly transition,  
south slopes upper coveran.

109 - May 17 - Sent Hatchkiss down  
the canyon to the way traps while  
I went to those on mesa & then  
on down Terra Canyon to  
the G.O.S. Ranch. Got my wife  
& another saddle and got back  
to camp at 5 P.M. Caught  
only a gray fox. No wolves  
had been along either line of  
traps -

Found a beautiful Cercis  
in blossom on canyon walls &  
humming birds around it. Saw  
Aimophila in the canyon -  
one pair - A lot of good yellow  
pine timber has been cut and  
sawed in Terra canyon, long ago.  
but much young pine is coming  
up in its place. There is a  
little running water high up in the  
canyon & a windmill near its mouth,  
just below the G.O.S. Ranch.



110; Journal.

May 18. Two wolves, one very large  
+ one smaller followed the road  
past one of my traps that was  
baited only with dry castoreum.  
The wolves followed out along the  
crag and stepped on both jaws  
of trap but missed the pan.  
Did not stay + tramp around  
enough. Then struck into  
the river valley + went along  
the trail past 2 other traps,  
both of which had been tramped  
out by the cattle and one spring.  
Walked by without stopping +  
went on down the canyon.  
Reset some of the traps +  
brought some in closer to road  
+ trails, as the wolves stick to  
roads + trails almost entirely.

111 - May 19

Nothing had been along the trap lines & the traps were not disturbed.

May 20 - No wolf tracks, but Hetchkiss found a fresh panther track in canyon 3 miles below ranch.

He saw 3 mule deer & I saw a little whitetail - O. covari - up in the canyon above camp - Rained a little in the night & a shower about noon.

May 21 - Nothing doing along the trap lines, so we had dinner early & I started up the mt. on foot just after - Followed the ridge east of river, went up where the aspens begin & then went down into the canyon

112 on both sides - Found a big  
bear track in one to east,  
among the aspens, Abies, Pseudotsuga,  
& Pinus flexilis. Beautiful canyon  
bottoms with cold streams &  
mountain plants of Canadian zone  
steep, rocky slopes on both  
sides, Canadian timber on  
cold & upper Sonoran on hot  
slopes opposite. Mesa tops  
very stony & not much grazed.  
Good short grass except  
where cattle can get along  
open slopes readily. Some  
of these grazed bare.  
Had no barometer, but went up  
probably 2000 feet above camp.  
Got back before dark very tired.  
Came down side canyon - paddled



113 Found a pair of Cyrtomys musci on  
the high mesa - They had scratched  
up a lot of ground + I found Cyperus  
bulbs + the roots of more they had  
eaten. saved bulbs but could not  
find the grass they belonged to -  
Ate one + found it good, crisp  
+ starchy + pleasant.

Heard thrushes sing in canyon.

Saw a few juncos.

Saw Cooper's tanager catching  
the nuthatches in the cottonwoods.

Found Thomomys hills as high  
up as I went. Also Sigmodon  
+ Microtus runways. saw one  
Lepus punctatus? on top of mesa but  
failed to get it. saw lots of  
tracks of deer, little white tails  
apparently + found a fine skull  
with horns near a salt lick.

114 May 22. No wolf tracks &  
traps undisturbed, so I went over  
into Rocky Canyon - a beautiful  
Canyon full of fine timber, Pinus  
ponderosa & flexilis, Abies,  
Pseudotsuga - Populus angustifolia  
& truncoides, Quercus gambelii?  
& on hot slopes all the upper mountain  
trees. Fine water in pools &  
running part way. Beautiful  
camp spots & rough country to  
explore above & below. Thrushes  
& juncos & pigmy nuthatches,  
blue jays, warblers & tanagers  
in canyon - <sup>white-bellied swallows</sup> Martens, vesting in  
old pines - Aberts oquist &  
grammurus, & Colloper philus,  
Zenaidura macroura & cineocephalus  
abundant - saw one little white tailed  
& picked up a skull.

115. May 23 - The same old pair of  
wolves, one very large & one small  
followed the road & trails past my  
whole line of traps. At the first  
trap, scented with Galloways wolf bait,  
the smaller wolf stopped, followed the  
drag mark across the road & a feet to the  
side and stepped all over my traps  
except on the pan. The big one walked  
right on looking neither to right nor  
left. At the next trap the both  
walked straight across the scented  
drag without stopping - this was  
also scented with Galloways.

The next trap had a gray fox in it  
& the wolves stopped and tramped all  
around it, bit out a tuft bunch of  
hair from the fox & then went on.

The next scent line they missed  
by about 10 feet, after turning out of  
the road to an old house I had used



for a drag - This was Hatchkins' scent, but they were close enough to have found it if they had cared to. They missed the next trap by 20 feet, turning out on a trail & then just missed the scent line of the kind given me by Mr. Culberson, but close enough to either to have found them if they cared for the scent. The trap was scented with Galloways. The next line was straight muddy, commercial - they crossed it without stopping. They missed the next two traps by turning out of the road for a dead cow on one side and a piece of old meat I had used for a drag on the other. Still they were not very far from either trap,

one of which was baited with dry castoreum, the other with, castoreum, assafoetida + oil of rosin.

On the line down the river Hatchler says they came in below the first trap, passed close to 2 baits with galloways without stopping + then past one baited with the scent given me by Mr. Culberson without a pause. These three were set close to the trail + all in good condition, freshly scented yesterday + a pair test.

Hatchler's found a calf they had bitten a ham out of but had not killed. It would undoubtedly die. He also found an old cow bawling + refusing to be comforted because her calf was missing. She was also bawling in the same place the next day.

118, May 24 - Went to my upper  
line of traps early ~~over~~ foot & brought  
in the horses on my return.

Packed our beds & 2 days grub on  
old Sundown and Hitchhiss on  
John & I on Shorty went down  
the Minbras about 3 miles to the  
Mouth of Powderhorn Canyon,  
past all but one of the lower lines  
of wolf traps, then up Powderhorn  
to near the head and not far from  
the main ridge of the Minbras Mts.  
& camped.

None of the wolf traps had been  
touched but a half grown  
mountain lion had dragged a  
calf that had been killed apparently  
a week ago across the river valley



and well up into a rocky canyon and left it. The calf must have weighed 100 lbs. & very little had been eaten. I set a No 3 trap with stone drag by it in hopes the cat would return.

Traveled fast & reached our camp place at 2 P.M. Had lunch & set out my traps & then started up the ridge for the summit of the range. With an easy climb of about 3 miles I was on the main summit, tho there were higher peaks to the south & north of me. The Minbras circles around to the north & actually heads south of the head of the Powderhorn

120. So far - the crest I looked down into the head basin of the Minibus on the east & the head of Powderhorn on the west, two heavily timbered canyons, that of the Minibus as rough & steep & jagged as the Seven Devils range, with a mixture of bare rocky & densely wooded slopes. I had no aneroid but should guess our camp to be 6000, lower end of Powderhorn 5700, Camp above at 8200, highest point reached 9500, highest in sight 10000.

A fine little stream runs west of the way down Powderhorn, sinking in its stony bed & reappearing at intervals. The bottom is generally narrow, sometimes only a gulch, again a timbered valley.

with steep timbered, grassy or barren slopes 300 to 1000 feet high along each side.

From our upper camp to the summits all the cold slopes are covered with Canadian zone timber. These are densely wooded with spruce & fir & aspens, & in many places have deep, mellow, rich soil.

Just over the crest aspens grow in clear forest of trees one, two & three feet in diameter & 70 to 80 feet high. Soughs spruce is often 5 feet in diameter & 100 feet high. *Pinus flexilis?* is abundant & often of good timber 2 or 3 feet through & 80 feet high. Gooseberry bushes, *Ulex glabrum* & willow grow along the streams & canyons.



Transition zone runs up on south slopes to within a few hundred feet of where I went, with yellow pine + bur oak (Q. gambelii?) on the slopes and Populus angustifolia nearly up to our camp in the canyon bottoms. It also runs down on cold slopes & in the canyon bottom to below the mouth of Powderhorn, with much fine yellow pine timber in the wider parts of the canyons, both old, big trees ready for harvest, young timber & seedlings. It is generally open, clear forest, too closely grazed beneath & with many of the young trees bitten off by cattle.

123

Upper Soveran zone runs up  
on steep, hot slopes as high  
as our camp, with Juniperus  
pauciflora & monosperma, Pinus edulis,  
Quercus grisea & Cercocarpus parvifolius.  
Actually lapping past transition  
to a level with lower edge of  
Canadian on the cold slopes.

Much of the upper tops is Soveran  
with scattered timber & snotgrass.

Saw bear track & sign,  
lots of Deer tracks & 2 old does  
of the blacktail, but none of the tracks  
were of the little cooperi. Saw  
plenty of Sciurus aberti & Citellus  
gramurus on the way up.

Saw 5 turkeys & heard them  
gobbling in evening, lots of tracks.

124, May 25

Caught *Neotoma mexicana*, *Microtus*  
*m. vorticosa*, *Peromyscus rufinus*,  
Shot *Sciurus mogadonensis* + got  
one *Eutamias circumcollis*.

Got 2 little red faced warblers  
that I do not know even the genus  
of. heard lots more. Thrushes  
were singing + nesting, juncos  
also, + *Zonotrichia*, Humming birds,  
(*palpeirans*) were numerous on the  
gooseberry bushes. A spotted  
owl hooted most of the night.  
An old gobbler woke us up before  
daylight + gobbled frequently  
from the spruce slope opposite our  
camp for half an hour. Blue  
jays were common. *Dryobates* heard



I took a tramp up gulch above camp about 2 miles, nearly to crest of ridge + found water all the way in places + good camp spots.

Packed up + started at 9 A.M. for camp on the Minibus, again, arriving at 2 P.M. Got lunch + went to my wolf traps on mesa + found that another wolf had been along. He is in size between the big one + small one of the pair that went along before. Is probably a last years male without a mate as he is not wary + takes any kind of scent readily. He came up the road from the south past my

line of traps & scents as follows:

1. Muskrat scent (spoiled by alcohol) not noticed.
2. Assafoetida - not noticed.
3. Oil of Rhodium - " "
4. " Anise - " "
5. Trap scented with castoreum, assafoetida, & oil of Rhodium - Tramped up and down trail & all around trap, dug up paper & tore it to bits & left trap pan bare & untouched.
6. Musk - commercial - Followed up the trail & tramped around scented place.
7. O'Brien's bait from the GOS Ranch - followed up the trail to baited end.
8. Trap, baited with both Yalloways & N. Wn. Hides & Fur Co. Wolf bait, but a calf had got into trap & gone with it. The wolf tramped all over place where it had been. Wish he had killed the calf.

9. Hotchkiss bait - the wolf turned out of road & went straight to scented end of trail & walked across it.
10. Trap baited with Galloway's scent, had caught a Weasyl the day <sup>before</sup> & been reset. The wolf went around it.
11. Trap baited with Galloway & staked down. No. 3 with flat, lapped, steel chain. The wolf went past, then returned & got in the trap, bit the chain into about 5 inches from stake & went away with trap. The ~~stake~~ end of chain had been wet in his mouth & was stuck over with sand, was dented & bent from his teeth & had evidently been chewed till a link broke. Couldn't follow him far.



128 - The last trap of the line was not visited except by the cattle, who had pawed it out.

The big, branded calf in a  $4\frac{1}{2}$  trap with stone drag had gone some 20 rods & I found him in a gulch. Was following the drag mark & expecting every minute a wolf to bounce up but the calf was a more difficult & less satisfactory subject to handle. I caught him by the chain of the trap & then by the ear when he began to bawl in terror. His terror was no greater than mine for there were some 20 cows & 2 old bulls just out on the mesa & my life

129 depended on keeping that  
calf still till I could get the  
trap off. I grabbed his nose  
with both hands + threw my  
whole weight against him + got  
him down, one knee on his neck,  
one hand held of his nose +  
choked him till he gasped for  
just enough breath to keep alive  
without <sup>wasting any</sup> bawling, then I worked at  
the trap with the other hand, but  
found one of the springs jammed  
down <sup>+ fast</sup> over the cross bar. I  
couldn't budge it, so got a stone  
+ hammered till it came loose.  
Then found I couldn't open the trap  
with the calf down as his legs  
held it on the sides + I had to  
get both feet on the two springs to open it.

Had to get the calf up, still holding his nose & mouth shut, & finally got the springs down & pulled out his foot. He was not much hurt & ran off to hunt his mother while I hustled for the nearest timber, more scratched & kicked & battered & scared than the calf.

I felt in sympathy with my cook & trapper, <sup>Hank</sup> Hatchkies, who comes back from his line of traps after the cattle have tramped out the traps just before the wolves came along, cursing & growling & says he wishes the wolves would eat up all the d— cattle in the country.



131 May 26 - No wolves along the  
line & nothing doing.

May 27 - Sunday morning, according  
to Mr. Leavenworth who came over from  
the G O S Ranch to see how we were  
getting along. The first white man  
besides ourselves were seen for weeks.

The old pair of big wolf &  
& smaller bitch came up the road  
from the south, but not along the  
river valley. They went past  
two traps and two scout lines  
without much interest in any.

1. The G O S scouted trail was followed  
by the smaller tracks but the big  
fellow went straight past it.
2. The next <sup>north</sup> trap that caught the calf  
& was too freshly set for them to  
go near.

3. They both turned out & went around Hatchkiss' scented line,
4. The trap that had a gray fox in when these wolves came along last stopped them & they tramped all around but not on the pan. The tracks seemed to be mainly of the smaller wolf. I could not be sure that the big one had even turned out of the road.
5. At the place where the wolf took the trap they turned out of the road & did not go to the scent nor come back to the road again.

Hatchkiss caught a gray fox near camp. I took some photographs & a bath. Much warmer today, no frost in morning.

133 May 28 - Nothing doing along the trap line. No wolf tracks & not even a calf in sight.

May 29 - Packed up my stuff while Hatchkiss went down to the lower traps. He got a Norway in the trap baited with his scent. A wolf had gone past 3 of the traps without stopping at any of them. He thinks it is a new wolf, not quite so big as the one with the small bitch.

The track of the big one measures, front foot,  $4\frac{1}{4}$  by  $3\frac{1}{2}$ .

Ate in early lunch, broke camp, packed up & went over to the G. O. S. Ranch. Found the same way but followed road on west part two of the traps without



134 stopping to investigate them.  
It is large & probably the big one  
of the pair that go by regularly.

May 30 - Packed over for 905  
to Santa Rita - 25 miles.

Found a fresh wolf track in road  
where we struck the Mimbrus just  
below Circle Ranch.

Found cherries nearly ripe  
at Mimbrus and also excellent  
apples of last years crop.

The valley is good for fruit -  
apples, peaches, pears, apricots,  
plums, cherries & grapes.

The floods last year & year before  
carried away some of the best  
orchards & many good fields  
having boulder strewn washes  
in this place.

135 May 31 - Got the stage for Silver City at 8, passed through Central in full view of old Ft. Baird, then on open ridges to Silver City, at noon - 25 miles - Got mail, sent packages, Wrote on reports till 11 P.M.

June 1 - Packed up baggage & wrote reports till train time & left for Deming at 6:45 P.M. Arrived at Deming about 9 P.M. & got a lovely chair room at The Wilder.

June 2 - Took a tramp around Deming & got notes on plants, birds etc - & took a few photographs. The town has grown & spreads over a lot of country, is a forest of windmills which yield good pure water. Yards full of trees & bushes. Magnets abundant & good sized, also *Yucca radiosa*. Lots of lizards & small mammals - even in town. *Prosopis* trees along streets,

136. Left Deming at 11:30 on Rock Island  
over S. P. track. The vegetation around  
Deming is strongly lower Sonoran  
but after crossing the sandy bed of  
the Rio Grande we cross open plains  
with mainly grass, *Gutierrezia* & weeds  
that would indicate upper Sonoran if  
any thing until we begin to go down  
near the Rio Grande valley, where for  
the first time we strike creosote &  
abundance of mesquite & other plants  
again. Lower Sonoran is much more  
evident along the Santa Fe track along  
the S. P. from the Rio Grande to Deming.  
It must come all the way up the Rio  
Grande however for Lake Guzman.  
Grass is good & new fields & ranches  
being opened near Deming.  
Reached El Paso at 1 P.M.  
Rio Grande high - New Mexico Dept.  
*Yucca rostrata* in flower -



137 Up through the Tularosa Valley the  
mesquite, creosote, *Atriplex canescens*,  
& *Yucca radiosa* are dominant plants  
as far as Oscura or on south slopes  
a little beyond, then it is open  
grassy plains with nothing taller  
than *Gutierrezia*, post *Caragana*  
& the *Capitan* bits. Broken country  
with junipers & rattles continued  
to nearly Larrevere where I  
went to bed & asleep.

June 3 - Woke up at Dalhart, Tex.,  
a rain has freshened the air & earth  
the plains are green & grassy &  
constantly growing more green &  
grassy as we go west.