March 15. Packed up and took midnight train on 7:50 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 16. Woke up near Cumberland, train late. Snowing fast, about 3 inches on ground. About 4 inches at Dear Park. Only about 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. Ductes 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, phalaros & robins seen. Two bobwhites were very conspicuous standing on snow among weeds under RR 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, swans, hawks, sparrows in weeds not identified. Reached Kansas City at 5:15, left at 6:20 on U.P. for Denver. Snow last.

March 18. Wake up on open plains - nothing but snow in sight on all sides. Apparently 3 to 4 inches deep - cold. Wind blowing, six full of fine snow blown up from sage. Looks like cloud of fog.
Reached Chayenne Wells about 8 A.M. for breakfast. A few rabbit & coyote tracks, lots of hooved lakes, fences full of tumble weeds. Cattle lifted into humped-up bunches along fences toward wind, hair full of snow, tails to wind, heads down & backs up looks boney & sad.

Prairie dog holes full of snow. But the wounds showed plainly. None of the P.D.'s have been cut over. No tracks or signs. Lots of the Ginny's hills & some pretty flat ones apparently made while it was snowing. At Kit Carson saw one Jack Wilt but was not sure whether composite or melanistic. It was light but not white & probably was melanistic. Ran into a weed patch near a ranch & got feet muddy bottoms. Coyotes are reported by the brothers as common along here.

Hops - Ceruleo - Snow getting deeper, 5 & 6 inches on a level.
drifted to top of snow fences in places. Air thick with snow. Can't tell whether it is snowing down or blowing up. Harmed larks are the only live and happy things to be seen - they run over the snow or smuggle 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 flight. In every way they seem happy.

There is said to be a kind 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 winter go out it again in winter - you will see a new world.
Near Denver a fine old golden eagle sat on the snow fence & quietly watched the train go by.

Reached Denver at 1 P.M. surprisingly late, train doesn't leave till 6:10.

Spent several hours trying to find Mr. Woodard, Gary 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.

Bread & plate of evening grosbeak near the capital, saw lots of otteries & English sparrows in town.

Still snowing & blowing when I left Denver at dark.
March 19. Woke up at Havasu, west of Jerome. Clear & cold. Snow much blown, but apparently 6-10 inches deep. Covers the page thickness in places, all blown off from smooth ground, drifted over fines & rocks.

Atmoclines abundant & happy.
Cottontails numerous.

Rawlins - 7:30.
While at breakfast some kind of chick was 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 & fluffy & will feed. One trotted over & began eating a dead sheep.
Cottontails seem happy, sitting on sunny slope in the snow nistling bushes. They are fluffed up in furry balls. Saw one type of camouflage, sitting by a sagubush - looked like a snowball. Saw another running & a good coyote trail.
Prairie dog mounds are all filled with snow.
Custon - some sheep near station.

Winters - About a 100 sheep skins - essential + hides. Unloading local boy for cars.

Sheep warmth out over valley - trans-continental.

In next 10 miles, to Red Desert, a dozen bands of sheep seen, apparently 1000 in each, usually a wagon or herd. No shelter, open valley country, washing in snow.
Rock Springs. Saw the first junipers a few scattered trees along high slope south of R.R. Saw Ephedra along sandy hill. Further along saw several miles of junipers along high cliff on the north nearly to Green River. Entomis winniana, lots of little tracks, evidently of this little chipmunk, along cliffs and ledges between Rock Springs and Green River.

 Reached Green River at 11 o'clock. Work till 3 P.M. Went up to store and talked with freighters and sheep men and got some good notes. The river is frozen over and covered with snow. It was 10 below zero here last night. 17 below zero last night, 20 below yesterday morning and 20 below the day before.

 At seed is very numerous all over town and 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 worse.
Between Green River Granger saw 2 falk
mexicans 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
freezing - 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. tyingi.
Reached Opal at 6 P.M. and got my
baggage from 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
couple days to get through.
Said to have been 18 below zero here
this morning. Clear & beautifully
March 20. Left Opal at 8 AM on the Pié Pinyé stage. Clear and cold, 22 below zero, snow varying from 4 to 12 inches, road severely broken and very poor. Climbed to top of mesa and then struck north over open desert slopes. Reached the Graham Ranch at 1:30 - 17 miles - yet dined, changed trains & went on to Fontenelle for the night, 30 miles north of Opal. Opal is 6,775 ft.; Graham's Ranch is 6,750; Fontenelle to 800. The snow has increased in depth to one and two feet; roads bad. Country barren & shaped to death. Short sagebrush, no grass. No timber in sight except black patches said to be pines on the top of high hills to the east. A few with few bushes along crevasses.
Cynomys ludovicianus. Came out on the snow. Said to have been out all the time for 2 weeks or so from cold day. 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 tamarack cypress or some of the little bushes.

Rezonus. One caught in wood 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.

Lupa bialy. Very abundant, hundreds seen sitting in the snow, often sit within 10 feet as we go by. Seen nibbling bush or weed tips, once killed one very poor but very heavily furred. The fur near toes & Trenches run into holes & holes & under snow in Stachys, Rigmarol, etc.
Lycaos caniculus. Very common. Often seen sitting in the snow close by as we passed. Tracks numerous. Most of those seen are gray. One sheet pure white. Usually sitting in deep depressions on back level with tops of trees. They also have burrows deep into ground with the sagebrush.

Canis griseus. Track of apparently 3 or 4 big wolves seen on the ridge a few miles north of Opal. Not seen. Said to be fairly common.

Canis latrans latrans. 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, one carrying some thing the size of a small rabbit. Its nose twitching, always at a distance, on one side. Lupin taxa. One mound of earth through start before the snow. 25 fresh tracks. Said Skilson found many burrows filled in this burrow + died.
Lutra lutreolus - Tracks of a large mink are fresh in the snow along the creek at Fontenelle. Mink are said to be seen here.

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

Lynx rileyi - 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 Opoet to Fontinella, sitting on rocks, bare peaks, telephone poles on an arrow 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.D. Jack rabbits, cottontails, sage grouse were also numerous but the sage grouse seemed to pay no attention to the eagles, which were stupid and 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.
Archibald & Sveringneas - Rough-legged hawks were about as common as the eagles & were usually seen in the prairie dog towns. Our shot kept at 6 PM, had both stomachs - each stuffed with Eryngus lineatus & Lygos bairdii in about equal quantities. I saw a bunch of sage hens fly up as one of the hawks passed over them, but the hawks paid no attention to them.

Concerning the sheep - Sage grass 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 a bunch. But as the stones
struck close to them they would raise and spread their tails but would not fly. They were often seen picking leaves from the bushes and apparently feed exclusively on leaves of sage brush. The accumulation lying on the snow is apparently all if one mature and swells strongly of sage. The old cocks are in fine plumage.

Anas boscas - Mallards were seen flying out of holes in the snow at Grabaw 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.

A. cana var. A few seen at each.

The two ranches, none between.

Agelaius phoeniceus - Half a dozen rosy branches are singing around the ranch at Fontenelle & roosting in the willows.
Journal

Weather 32 degrees at 7 A.M., minimum thermometer read 18 above.

Remained at the ranch. Made a pair of skis, skinned buck of prairie dog & pronghorn. 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° above zero at 8 A.M. 10 above by minimum. Clear & pleasant. Started about 8 & reached La Barge at 12 & stopped for dinner, photographed the ranch & valley & a wolf scarecrow on the fence. Several scarecrows of old clothes on a cross pole were put on the fences 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 2 o'clock. Snowed for an hour or so, leaving a half inch of fine trailing snow on the crest. Made blankets & wooden glasses to protect my eyes from the glass. Saw no game except some 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 very quick flash 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 afterward 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 more, male - female, sitting on the pole of the shed roof with feathers fluffed up stunning themselves. The boy said there were big flocks of them down at the straw stack in the pastures where the cattle were and that flocks came around the barn for worms. The writing hand is eating well - not always steady.
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 and 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 got out of the path for you to pass.

Mrs. Bird is daughter of the Holdens, whom I stayed yesterday and is typical of the ranch woman, probably 30, naturally strong and fine looking, but tired and worn. Has 5 bouncing children, the oldest a girl of 7 and the youngest about a year. Does all the work and has been washing today. Have 2 or 3 hired
men & pumps stage station, with usually one or two or three or more passengers to meals to stay over night.

The snow has settled so the sagebrush comes up through it in places. Both Astragalus trilobatus and cypres are fully evergreen as also Atriplex confertifolia. The tips of Bigelovia are covered with evergreen back that the rabbits eat extensively.

March 23. A moderately cold morning, probably about zero. Leave on to Big Piney - 18 miles - and located at hotel. Got mail, wrote letters. Warmed up and traveled 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.
Burro hoisting, Otocoris common.
A snow mantling on fence, 2 long-tailed
Golden eagles down in pasture &
dlater 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 an hour.
I saw lots of tracks. Shot 5
Jack rabbits for bait. Saw
one prairie dog. Chilled off
about 10 & warmed up as the
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 stood 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 masks and all are wore gloves burned. The stage drivers' faces are in good shape. Saw 60 cheksi & 3 furcoos, the first for over 100 miles.
March 24. —Cust hard enough to hold me most of the way. Good for skis. Started right after breakfast and 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 loco at his old quarters and followed him around for some time at moderate rifle range. He trotted around, watching me and following me when I got out of sight. I left him on the next ridge, but found his track with that of a wolf going to the butte where he started, which probably means
a pair and a litter of pups.  
Saw one coyote粪便 fresh  
droppings on their trail made  
up of jackrabbit 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 Lupuslaevis  
& lots of campestris. Lots of old  
trees & brush thronough hills on  
the mesa, where the arrow has blown  
off. Saw old but no fresh porcupine  
growings on the Pines heliobis,
which is common along the high cliffs across Green River.

Saw 9 rough-legged hawks, that were feeding on the jacks, and I took shot for coyote bait. Saw 2 golden eagles, heard sparrow hawks in the cottonwoods, lots of wagtails, saw 2 ravens, lots of bluebirds (arctic), 2 redwing blackbirds at ranch, lots of ptarmigan. Found plenty of sage brush tracks of one sagebrush 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 2000. Saw plenty of prairie dogs and heard them bark as usual.
March 27. Went up to Mr. Blades place & got some wolf bait for setting traps, then off to Mr. Evans & got the ,

...of a dead horse & hauled it over east of Piney when the wolves are off 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 carcasses & heard them baying - the first. Saw plenty of roughleg hawks. Did no hunting.
March 25 - Went on a trip to my wolf bait and found where both coyotes and lobos had collision around it at a distance but I course had not touched it. Went quarter of a mile from it and began putting out poisoned baits, along general runways where the coyotes and wolves pass from one ridge to another or along the crest of the highest ridge. Carried stings of the horse's heart & without touching it cut a hole into each piece to put a sure 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. When the 2 lobos 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 wash 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 lobo tracks is much larger than the other. Most of the pairs of coyote tracks are too. I kept well back & did not ease up the lobo, but heard him howl. Saws 2 big coyotes & heard others...
30. Killed only a cottontail, S. Bailey's, which I intended to wake up, but a cat got it in my room, so I skinned it to eat and was going to save the skull, but laid it down while I carried in the meat, and as I turned around a stray gray hawk grabbed the head and 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 shots for the Northwestern Kitt's, but my castor oil from St. Louis has not come. A cold morning, but warm day and thaws fast in P.M.

Snow about a foot deep. Poor patches coming through ridges and hills.
March 24. Found one of my horses gone and coyote tracks around where it had been but no dead coyotes. This was one of McCulloch's sure death capsules in a piece of horse meat. The coyotes dug up and ate the remains of a sage group & cottontail that had been partly eaten before, and came to about 20 feet of my horse meat. Saw 4 sitting on the side hill & got when my friend the lobo tracked into the bunch, they realized it gave him plenty of room but barked & howled at him and in concert with him.

I found an old dead horse that the coyotes & lobos have been feeding on for a long time.
The coyotes had eaten some of my jack rabbits and scattered
the fur around. Shot another jack and left him on the ice.

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

March 30 - Got up early & started
to my tents before daylight while
the dust was hard & the glare on
the snow has seared on the eyes.
Got back at 8 o'clock for breakfast
after an 8 mile run. Found only one
tent gone & it was taken by a bunch of
crows. Plenty of fresh wolf & coyote
tracks. One of my eyes has been
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 Lacey. Found my old lot at his regular stand on the point of mesa above the gulch when the deer is. He leaped away and 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 rattled heron, the first I have seen but one was killed 2 days ago or brought in. Meadowlarks are abundant and singing over the bare patches where the cattle have been fed.
Sage grouse were strutting & coming on the crest soon after sunrises. I could hear only a chuckle, 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 ever strutting. About an hour after sunrises I saw ten on top of a ridge against the sky & thought it was a drove of horses, but the gloss showed sage grouse. These were part cocks & part hens & 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, dragging wings, spread his tail to a wheel, raise
his side crests, puff out his big white muffle, bring his head back till nearly touching his tail, they make a pumping motion with his neck to quiet a chukling sound. His strutting was much like that of a gobbler.

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

I have found where 2 eagles were eaten by coyotes. Both had crops stuffed with leaves of *A. triplata*. 
April 1 - Started before daylight in a snowstorm, but warm no exact fr and snowshoeing. Went to my wolf den for the first time and for the first time saw Mr. Lofo as she sneaked out and glided over the ridges out of sight. Mr. Lofo was as usual on his butte, doing picked duty & he evidently warned her as she was out watching & they sneaked off in the same line, around the edge of the badland slopes, not over the top of the mesa as he usually does. I found the baby wolves in a little cave back 4035 feet under a shelf of sandstone & in easy reach of my arms by poking my hand into the cave. They were
Whispering - crying at being left by their mother, or else at the sound of my footsteps which they insisted for their mother. They were in plain view and there were picked up, about half a bushel of them, of the size of prairie dogs. There were nine - as nearly as I could count, funny little puppies with their eyes just open, almost black in color the both parents are light gray. I left them undisturbed and set traps for the old wolves Photographed the deer + the quail + Turkeys.

Well worn trails follow the ridges out onto the mesa + the place could easily be found even if there was no show.
April 3. Started at daylight taking E. C. Carrington, a foreman, with me. Went to the wolf den that the old wolves had not gone to the den or near the traps. Stationed Carrington on a line of butts with a rifle — tried to drive the wolves to him but they evidently knew he was there and 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 12 miles east of their den. Then gave
Remains of food, mainly jack
rabbits & cottontails are scatting over
the snow banks in front of the den
and half a cottontail was in the
den with the cub. A piece of
cott-
cast
shell of a young animal, freshly
killed was lying just below. It came
to be a young sheep or antelope, &
in this case must have been
brought a few miles. The question
comes up whether the wolf has
been bringing food to his den
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 killed
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 baits used. Will probably catch the females but have little expectation of getting the males.

Mr. Charles Redd telephoned down yesterday that he had caught 10 young wolves and 4 adult. 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 or see if I do not catch one or both.
threw up and followed the tracks of about 20 or 30 antelopes for long distance over the ridges to see if any had been killed by the wolves, found no signs of dead antelopes, but a skull piece of skull picked up at the wolf den looks like that of a very young antelope but proved to be a calf.

The antelopes 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 voting lots of tracks. Saw a raven, an eagle, lots of sage grouse, some jackrabbits and 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 deep + nights + they were very hungry. We fed them milk + they ate ravenously. I went to sleep in this barrel with a gunny sack for a bed.

We were pretty tired after a 20 mile run on skies, 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 skies to make them slip. They ran much easier for it.

Had some good long slides. Saw the first quinces miniums. I have seen it was on the sides near the wolf den.
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 with flour from a bottle and put them back. Put strychnine in 6 pieces of cottontail and placed them around where the wolves came. Photographed tracks of lobo, coyote, jack rabbit and sage grouse. Saw the first tracks of a Citesius (probable elegans) that I have been sure of. Saw a fine marsh hare and a rough leg. Saw a tiny weasel track that must be of a P. vivusus.

Sent expense account and wrote Pinedale and 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 carp. The trout had not been back to their den.

Saw a few Castor Momus out on the snow. Caught one and made cut up. Made up the chilies & killed yesterday & found a blowfly 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 Cola & Pinedale.

A cold morning & hard frost. Frosted rapidly during day.
April 7 - Left Big Piney on the stage about 11 a.m. and reached Carz at dark. Then drove down to Pine Dale and took 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 star-tailed Grizzly along the creek at Burns. Lots of old badger blue bear nests in the cottonwood trees along the rivers where we crossed at Burns.

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

Snow about a foot deep on starting but fell 2 feet deep on our course between Burns and Carz and down the Newford Valley to Pine Dale. This is a broad willow valley with numerous rushes - lots of grass. Burns is a miserable little town.
April 8 - Woke up late Sunday morning, had breakfast at 8, after refusing a cordial invitation to go over to the saloon and take a drink with the proprietor, Mr. Rude, and chief rangers Geo. Folsom. Took a walk the whole length of Main St., instead of taking the town - On one side of the street a log residence, the hotel (post office), the printing office, wood-mine Hall (both log) and school house. On the other side of the street a saloon, residuum - 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 meandering that follows down the creek bottoms from the hills. The creek is a beautiful stream, draining Fremont lake with unlimited supply of water and power. It has apparently more than 100 foot fall in the springs from the lake to town. Large ditches have been taken out and carried over beautiful sage brush mesas of good soil. Good grass.
hardy crops do well but it is close to edge of Canadian zone, as shown by P. monopson and Populus tremuloides along the stream. The baronettes reach only a hundred feet high

Now at Big Piney, working at approximately 7200 feet. The muskox depend mainly on cattle. These have to be fed hay for a larger part of the winter. Still enormous quantities of good wild hay is cut along the valley and cattle look well. Just back of Prineville the foot-hill ridges begin, steep, bold, heaped masses with 2 lines of direction, the lower parallel with the valley, the higher plowed out of the canyons at eight angles to it. Prade of these the Windron with rise steep and grand, 3,200 feet above timberline with a broad black belt of timber along the middle slope. Mount Peak, the highest in the range is a little to the north.

Had a talk with Mr. Brandon, secretary of the wolf bounty association. Go to Glens, chairman. Then went over & talked with E. H. Jones.
April 9 — Had breakfast at 4 and started before daylight with skis and snowshoes, on a hard crust that held us perfectly. Sounded a fresh wolf track about a mile for the ranch, heading for Soda Lake, and 

The wolf was carrying something that dragged on the snow, and making a line. We followed the track past Soda Lake into a rough basin of Glacial dump near the N.E. corner of Fremont Lake, and found the den of 8 pups under a huge boulder just up a steep, warm, southern 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 risen as soon over the ridges & slipping out before we saw them. Their tracks went off side by side over the snow toward the head of Tremont 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 scooping out dirt till I could squeeze in flat ways. The pups were back in the far corner packed in a shallow place & with the candles I could see their eyes shine & hear them growl & whine. By stretching I reached the hind foot of one & pulled him out till I could let go & grab his neck & passed him...
but to Glover who killed him. Thereon was a scraper & 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 to 7 lbs apiece. Were probably 6 months old at least.

We each took 4 on our backs & started for Runnals. Had about 8 miles in finding the den & it was about 11 to Runnals so we started went there with them. Struck to Fernow lake & under a shelve of my skins & trotted down the lake on the ice about 1 mile, then back 3 miles of rough ridges, soft snow & slow hard work to town. Got in at 3 PM, skinned 4 of the wolves & started back to ranch with rest carries clothing, walked about 2 miles.
Fremont Lake is a glacial trough one to 2 miles wide, 1 1/2 miles long, reaching back into the units between great lateral moraines 1,000 feet high in places; partly blocked with rock walls. It offers superb camping grounds toward the upper end.

Elk tracks were fresh all around the rocky shore and glades showed on 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 moraine was abundant and is still very green from this year's growth. A few bones in the wolf den may have been elk, but the track surrounding the den only droppings seemed all to be of horses or cattle. The old wolf caught were a couple of mule deer on her way into the den. She had eaten a good rabbit on the trail at a previous meal. Some old feathers of a blue grouse were found in the den.
As we came near Priscold, very tired from our loads of wolves and down on stone to rest, Gloos remarked that he was sorry I didn't drink, because if I did we'd have a "bilk of a drink, satisfy when we got in." He did bow with the rest of the boys while I was skinning my wolves.

April 10 — Started for Grooms ranch, near Corona, at sunrise, on a hard crust (too hard for good tracking), picked up Mr. Bosum, another range of Benning's ranch, 3 miles above. I went up to the sawmill, 15 miles north of Corona on Willow Creek. Here the range boss has a cabin in the aspens & Muzzy pines, on the side of the mill, with a beautiful body of timber around there. The cabin is just within the lower edge of the timber which extends backbone up the slope in a dense growth of Muzzy pine, scattered F.folios, Pseudotsuga, Picea pungens, Abies concolor, &c.
The snow measured 29 inches in the woods at
the cabin and the crust held all day under the trees.
Found lots of pine squirrels but no chipmunks.
Porcupines had gnawed and seriously injured
or killed thousands of trees of Pinnunyans.
Snowshoe rabbit tracks are common.
Old beaver dams were numerous, we counted
12 dams in succession within 300 yards
down Willow Creek. Flying squirrels are said
to be common. Several Porcupine lances
were caught in the camp bed while they had
cut the blankets into meat tricks cutting a
big hole in the flour sack. A Lynx canadensis
had crossed the meadows just above camp that day;
werco tracks are common & the coyotes were
howling about camp in evening, a fine animal.
Mr. Glover estimates 125 to 150 Martin caught
in the range during the winter. Mr. Bennis
of Caza says he has sold about 2,000 dollars
worth of Martin fur this season, also a
few cross red foxes.

Went to bed under a good J. blankets
after a good camp supper of potatoes, bacon,
bacon biscuits & coffee.
April 11 - Got up before daylight & found about an inch of fresh snow, but much to our disappointment found that it had not frozen & the old snow was 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 lunch & talked wolves & examined 3 beautiful skins the boys had taken during the winter. They had followed three wolves - 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 this 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 & very interesting specimens of Lacoo skins.
Bought 2 wolf + a panther skin of Frank Alexander + started from his place to Coza — 7 miles — on foot with about 40 lbs on my back besides gun + skis. The snow was so soft I could scarcely use the skis + followed an old sligh track on foot west of the way down to Clarks ranch. Then got a boy to take me the remaining 5 miles to Coza — horseback with my packs. Reached Coza at 8 P.M. Tired + chilly + went to bed at the little ranch hotel.

A hard days 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 signs high, a cold wind blew all day. Got chilly, used wagon for last mile. Found lots of trail at Big Piney.
April 12 - Visited my coy 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 Fl owers kill one.

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

Saw 118 antelopes in one bunch and another small herd of 108.

Saw a big lynx bideni and got 3.

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

Grass starting on warm slopes & stock is being turned out.
April 15 - Sunday - Went reports and packed up part of my specimens.

April 16 - Finished packing and my wagon report. Took stage for Opal at 3 P.M. and came as far as Bird's ranch near Midway. 12 miles. Ground drying off rapidly; roads good. Snow on north slopes only. Lots of Citillus elegans out. Shot 3 for the wolf pups, also shot a big white jackrabbit.

April 17 - Reached LaBarge 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 and try to get leather casts from him. Got a basser today.
for Giff'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 crowing on a flat as we came by in the morning, but they had gone.

It was interesting to watch the old mules puff up their big white muffs, spread their tail and drag their wings and then get down on their legs to slide. I could hear no sound at a distance of 40 rods.
Saw lots of sandhill wallbirds & 3 female buffleheads on LaBarge.
Saw two antelope halfway from Midway to LaBerge.
Gibbs says they are more bears on South Pinery than on LaBerge Creek.
He is catching them right along and is going to South Pinery soon to traps for them.

Found a few Betula occidentalis among the willows on LaBarge Cr. Artemisia tridentata - sara, arbustata & pedatifida are common. Tetradymia spinesce, Atriplex confertifolia, mutlatti, and Gnyria grow on south slopes. Eriogonum is the principal alkali valley plant. The meadows are largely salt grass & trule.
April 18 - Stage came along at 9 and put me at Fontanelle at 12. Shot 2 chipmunks & a lepus baileyi & a prairie dog. Left Fontanelle at 1 P.M. and reached Opel at sundown. Roads good but chilly wind blowing. Got 2 prairie dogs & killed others that skied down the burrows.

Country alive with sheep, saw numerous large birds 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 dust storms. Hay or grain was fed when ever it could be procured.
57. Used up the previous 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 coyote tracks.

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

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

One was carrying a muskrat which
it dropped & I secured. It was
4 1/2, must with young of must have
been caught in Hansfork, 2 or 3 miles
distant. Could tell long before I
reached a den by the abundance of
tracks of coyote.
Found fresh tracks of 5-04 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 cobble or sandstone. The mesa is 2000-3000 feet high and extends for many miles. I followed about 5 miles and hope to go farther tomorrow.

Saw one jack rabbit, still mostly white, but turning yellow to watch the road. Saw great numbers of Lepus timidus, both along the cliff and out in the open, where they run to badgerholes. Saw lots of Centurus minuss and a few Citellus elegans, some prairie dogs, lots of gopher holes, plenty of Zonura nests in cliffs. Saw a Sayornis, the first.
April 20. Took a team and drove + went after my Coyotes. Crawled into the first den without digging at all but found only 2 young. They were about 12 ft. in a hole washed out of the side of a bad sand bar, 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.
Found 5 pups back at end of a burrow hole in a sand bed. Opened the hole so I could crawl in my length and reach them. They did not try to bite the probably a month old, with teeth coming through bright eyes. I photographed them in the dark. Made specimens of the two little ones & 2 of the larger little. Kept 3 alive to send to the Gov. Got back at 1 P.M. & then hunted chipmunks - killed a few & also found a colony of Citellus armatus in the meadow. C. elegans is abundant in the uplands, just as I found them at H. Bridge in 1888.
April 21. Shipping young coyotes and made up skins. In P.M. went down by the river & shot a muskrat & caught a Thomamysopus, both good specimens to have.

April 22 - Packed up box of 20 coyote skulls, box of specimens, roll of skins, box of cacti & mailed reports & 2 dog negatives. Packed my baggage & took train at 12:40 for Green River. Got there at 3 & started after typescript. Entomis minimus - Got 5, but found them scarce & wild. Country very barren & eaten up by sheep. Nothing left for chipmunks.
April 23  Woke up in the Ferris Hotel at Rawlins and found myself in very comfortable quarters. Made up my 5 chipmunks, pinned them down in a box and mailed them. Wrote Greenlives Valley kid report, letters and journal notes up to date, got ammunition, negatives, and supplies for the trip, sorted and packed my duffel 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 lakes to Lost Soldier. The stage station at the base of the Lost Soldier hills, 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 wagon with hides of sheep.
At last Saldiers we changed horses and 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 since a few Pinus flexilis, but the fencer of Summit Hills to the east were covered with black, solid forest that ought to be worked. Went through Crow's 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 Myerstown where we changed horses & drivers. The next morning at daylight. A chilly nights ride. Frosty morning.
April 25. Left Myerstown at sunrise on a frosty, 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 Alps and when 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 8:00 AM reached Hailey, on Beaver Creek where we got breakfast at the ranch post office "road house." A good breakfast at a good ranch. Then crossed ridge after ridge, and valley after valley till we reached Hailey at 5 P.M., each valley getting lower and greener as we descend into the Wind River Valley and occupied a good little ranches.
From Hailey to Lavae junipers cover the rocky rims of the valleys, in places mixed with *Pinus flexilis*—north pines. A few cottonwoods and many willows growing along the streams and good crops are raised, including grains, vegetables and some varieties of apples on ranches where trees have been put out. Grass and alfalfa are getting well up so the meadows are green; the wild bush grass is up big enough for a good bite by cows or horses. A few flowers are out, mainly *Phlox subulata* in little white cushions, a little yellow *Cynoglossum* a few *Viola nuttallii*, and that is about all. Sage brush is almost a tree along the crook valleys, often 8 ft high. The soil is good and streams for irrigation numerous, full of snow water.
I should place the valleys around Darwin as transition, with probably a trace of upper Sorentan 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. D.C. Nowlin, state game warden.

April 24 - Snowing fast when 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. Knowlin & arranged for team to start for Celeri in morning.
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 Ft. Washakie till noon.
14 miles. Lunched by the river & went on
with bitter rains, patches of sandy soil,
and the wind blowing up. Passed
several broken, smooth, meadows and
interesting valleys of scattered sage
brush, good soil and abundant grass.
Much country that is ready for
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 Stagnes
Ranch on the river, followed 10 miles
further up the valley to the T.K. Ranch for
night.
48. Found a nice place to stay with the Kicklows. Came 45 miles, over
open country with little of interest to be
seen. Was pleased to find that only
the part of the Elsahone 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
and farming land. Far more than the indians
can use. The broad valley at Washakie
is scattered over with tepees, and some
indian or hayseed ranches occupy the best
part of the Wind River valley. The J-K Ranch
where we stop for the night is leased
from the son of Old Chief Washakie —
as one of the best ranches on the river,
with extensive meadowland, good places
for irrigation, and the best of grazing
"bench-land" on both sides of the river.
Zones - Apparently the whole country traveled from Lander to the J.K. Ranch in transition. Sagebrush Scrub-Tree are the dominant plains plants while along the streams Populus angustifolia, Salix (of many species), Rhus occidentalis, Shepherdia argentea, Ribes d'issigum, Clematis, Rosa, etc. are the common vegetation. There seems to be nothing to suggest Upper Sonoran except junipers along the cliffs and there are mixed with Pinus flexilis and farther up the river toward 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 - Forms a picturesque array in the willows near Lander. Pica hudsonia, common along all the streams. Agelaius phoeniceus, common at Lander-Ft. Washakie. Near the fort a thick brush of Bull berry bushes was alive and squawking with redwings, yellowheads, shrikes, and cowbirds. Sturnella neglecta, meadowlarks are abundant on the bottom lands and often seen a raid out in the sagebrush. Poecetes gayi, for a few grasshoppers seen all along. Junea common in brushy places. Corvus americana, a few crows were seen at Ft. Washakie and others along Wind River. Foles sparrow, common all along. Certhia alagon, seen by the edge of Ft. Washakie. Anthus hudsonicus, two were seen at Ft. Washakie, the first I have seen this year. Colopterus c. callaris; a few seen along Wind River. Melanacris passerina, common along Wind River. Myioborus towmoda, common at Wind River - the first of the season.
Manwals: Encanius minimus one seen at Bull Lake Creek was the pale, yellow-tailed form, quite different from the Green River City specimen. Cidillus t. pallidus, a little striped ground squirrel on the flats near Lander was very pale and small — possibly a parias.

On the way, gopher hills are scattered here and there all along both on the mesa or on the creek bottoms.

Lupus baileyi: A few long-tailed cottontails were seen. Cyprinoma lineata, a few prairie dogs were seen but they are rather scarce. Cidillus elegans, a few seen near Lander & Washakie.

Fibertipithines: a woodrat house stands in a pond near the Indian Agency.
April 28 - Left the J.R. 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 junction of mountains and foothills and also the badlands across the Wind River—his house, yellow and stuccoed walls, curiously carved by the water. Mr. Carson says he has found from 5 to 7 wolf pups in a den, usually in natural cavities under ledges or big boulders, but some in burrows he thinks the wolves build themselves. Some of the dens were up at the edge of the timber on the mountains slopes.
On the Circle ranch, Mr. Landis says considerably stock is lost by wolves. A few wolves are killed each year. Mr. Dick, his foreman, knows that have been caught on the ranch the past year, mainly in traps. On the J.K. ranch, Mr. 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 come to the ranches pound. 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 others...
Saw a few wolf tracks - mixed coyote tracks on the flat at fork of rivers below Circle. Entering mining town near the T & K Ranch and one above Circle.

Cyananea beans, a few seen up to fork of Wind River. Some bodies above Circle.

Thorogood hills seen all along, both on mesa and plate. Euphuisas.

A few seen all along to Circle.

Woodchate vents were seen in the rocks where ever we were near enough to see them.

The Wind river valley runs very a we go up to a new canyon below the forks, then widens out again into good flats for farms. The Circle ranch is the best of all, with a fine bottomland pasture for range grass and excellent range on the benches both sides of the river.
After leaving the Indian reservation we found the range overstocked with grass being eaten off, especially on steep slopes. The tops of mesas have better grass. At Circle M. Farrel says he raises good potatoes and most hearty vegetables with no trouble for frost.

Home. As far up the valley as we went, firs below Dubois, transition zone predominated, with Populus angustifolia along the river, Junipers and Pines plentiful on the ridges. Near Lava Lake where a N.E. slope reaches to the river bottom, Canadian zone comes down, with aspens at first, then pines, to but the junipers reach to and mingle with the aspens. Saw a fish hawk catch a fish trout and later saw one at a huge nest in a cliff.
April 29. Left the Circle Ranch at 1:45 and reached the J-K at noon, returning over the same road we went up. Just below the pole of Wind Rivers is a flat where Larkspur is unusually abundant and where cattle are often poisoned by it. Four dead cacti, one cow almost dead and another evidently sick were lying on this flat. Many cattle are lost each spring by the larkspur and were said to die each summer in the hills from larkspur poison, but I suspect really from Aconitum.

Windy, cloudy, and began to rain just as we reached the ranch at noon. Gave up the way home to stand indoors writing up notes. Sat a few hours, Rained by spells all P.M.

Crowheart Butte is just across the river, east of J-K Ranch. Chief Washakie is said to have killed a Crow Indian, they ate his heart.
April 30 - Warm, damp night, but no trickling 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. Saw a saw with squalls of rain & snow all day. In our faces. Took a few photographs but in poor light. Couldn't get a clear view of Crow Heart Butte, so did not visit. Took the Wind River & Washakie valleys.

Saw a swainson hawks that had eaten a prairie dog, saw 2 more, saw several kingfishers & plenty of Otoeiris & a Wjiachistes & 4 Zenaidura.

Caught - Hymnus, tailpokes & 6 Peromyscus netracenis at the J.K. Ranch. Peromyscus sprung all my Motona traps. Saw a few wolf tracks.
5th. May 1. Worked all of forenoon making out my April expense account—$102.
In afternoon got a saddle horse & rode 12 or 15 miles east to row of rocky hills & followed crests of ledges for wolf tracks. Found vwise wooly 
(ignus) wolf, but drove an old coyote from her den & could 
have found it if I had taken time to hunt for it. It was

Country all shapped over, on a 
section leased from Indian Reserve.
Grass good. Sagebrush plains & ridges
Found a Golden eagle, dead,
shot or poisoned. Saw lots of
Saltmarsh—-the first for this spring.
A few Stilbæ æsthetics, house crows
and raven.
79. May 2. Got a saddle horse & went with Mr. Nowlin for an all day wolf hunt toward head of North Fork and on Stock Creek, in the foothills 15 miles N.W. of Lander. Found lots of crow up along edge of trees 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 by knew & then we found the forest ranger Arthur Roberts who has taken many wolf pups & who told us what 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.
May 3. With reports till midnight last night and again from 5:30 to 9 this morning a
wild bird and wormed up, packed up
and took stage for Rawlins at 10. Roads
bad and we lost time all day, reaching
Havel for supper. Then over Beaver
hill with a 4 horse team and down to
Myersville at midnight. Had Bob
Hayes for drives from Havel to Myersville.

"Deaf Bob" one of the best drives on the
line. Cleared mild with a good man.

May 4. Left Myersville soon after midnight
with a horse stage and young lester for a
driver. Made good time and reached
Brent Ranch at sunrise. Found only 2 poor horses & lost
time, reaching last Soldier at 9:30
for breakfast. Then got a better team
and a good driver - Teddy Jones, &
made good time into Rawlins
at 5:15. Little game en route.
May 5th—Left Rawlins at 8:30, and got to
Fremont for dinner at 12. The Cottonwood
valleys of the North Platte and Laramie
Rivers ought to be worked for upper
Sonoran species. Fremont plains
are probably transition, the trees in
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 Fremont
Rocks, but increased to a good tracking
snow. Just at the lower edge of
the snow the prairie-rounds were very
numerous—some seasons while the
snow had melted off the warm sides.
They are the typical prairie-rounds,
and to two feet high, 20 to 30 feet
wide, covered numerous about 15 miles
before we reached Cheyenne, but after
were scattered all along.
At Chugwater went to the Buntland Hotel then to the Capital. Called first on Gov. Buntland talked over the new problems - found him well informed on the subject - greatly interested. He has cattle and sheep ranch near Casper & says he has paid trappers $6.50 apiece for catching 20 wolves on his ranch. The trapper used scent, raccoon fish oil & probably other things. Had a team rope - it would hunt for a bit of this scent & chew the paw & roll on it. The man bad done a great deal to clean out wolves from Montana range & had a wide reputation, but was a very low-down, disreputable character - a noxious pest, & all that was disgusting. The governor was doing what to get hold of a newspaper man as he thought? The people ought to know what we are doing. Said it would do much to remove prejudice against forestry & game protection. Personally the Gov. is quiet & entertaining.
I now have mapped 19 wolf dens and their distribution around the borders of the mountain ranges is very instructive.

My visit with Mr. Naylor, state game warden, was very pleasant and we had time to talk over many matters of mutual interest regarding game and animals in general. He is a native of Texas, and familiar with much of west Texas and New Mexico. Was once a Texas Ranger, a sheriff in N. M., has been in the Wyo. state legislature and is a surveyor and engineer by profession, a ranchman by choice and very earnestly interested in preservation of Wyoming game.
Called on State auditor, Grant met & got records of donations paid by the state back to 1892. While waiting for them Prof. Winslows came in and greeted me like a long lost brother & we talked & 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 Madera is on the Police list at Boulder.

Then I went to the famous old saddle maker—McNee—tought a pair of spurs & priced saddles at 25 to 50 dollars. He outfitted the Hayden party in 1872 & is said to sell 4000 worth of saddles a year now. They are famous from Montana to Texas & one fine saddle

Went back to hotel & enjoyed a good meal with plenty of time to eat it.
May 9 - Left Cheyenne 8:30 A.M. for Denver.

A clear morning with post on the sidewalk and mountains hidden in clouds.
Smooth plains with short grass and only prairie dogs to be seen until we reach 
Denver. There farms all along with 
green fields of wheat and grain. And 
many freshly plowed fields. At 
Gulch Farm trees in blossom, willows 
and cottonwoods in blossom showing a touch of green. Thorough hills 
averent at all along. Yucca curve, 
Tumble weeds abundant.

Reached Denver at 11:30 after I had closed 
conductor got my mail. Rode out to City Park 
and back and waited till 8 P.M. for train 
to Silver City, N.M.

Lots of Carpodacus pectoralis singing in park 
and among trees in town - a few English 
Passerines, Turdus merulae, Robin 
and blackbirds. Saw the first barn swallow 
Grackle.

Left Denver at 8 P.M.
May 7, 1904.

Wake up an hour before reaching Trinidad.

Santa Fe Grass plains scattered over with Opuntias abounds just leaving out.

Near Trinidad the valley is green with fields of alfalfa, grass, grain, apples, pears, and peaches in blossom. Havens well set on Populus plants, also advanced a large field of Junipers and bushes cover the hills around Trinidad. Got a good homely breakfast at the Gardiners. Up canyon to edge of Transition zone about Morkley where Pines predominate. Pseudotsuga, Querus gambeli begin with Populus angustifolia following the streams. Transition continues over the pass and down half way to Paton.

Then, nut pines and junipers begin on the valley below Paton is open and grassy.

On the west face of Zinaja Hills east of Dorcey.

Yellow pines appear again on the Gonzales Mtn. and the Canadian Hills, Buckeye Mtn. and along both sides of the canyon at Watters.
Along the canyons - edge of mesa the pinion follows outcrop of rock, you come on the limestone then in the lava.

Wagon wound in a series of lava buttes and ridges. The valleys are covered with short grass and a few queen palms. Therefore very few flowers and vegetation looks dry except in irrigated fields near 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 dry farming.

At Rika the peaks of the Pecos Fire Mts. begin to show, Santa Fe Baldy and behind it Crest Baldy - well capped with snow which extends south over Lake Peak and a little beyond but does not cross to Glorieta Peak. The cottonwoods at Glorieta were only beginning & bare out + rest as beautiful as usual.

The Pecos people in the canyon near Canyoneita were much further advanced and along the Rio Grande Valley in full bloom. Ponderosa was in blossom at Canyoneita and in fruit nearly full list of fancy.
When we reached the Rio Grande river vegetation was well advanced. The Indians were planting & tending in their fields. Most of the trees were in full leaf, the grass on the bottom lands was in full growth & above the river in places Plattego polypnemia made groves in fuzzy white carpets over the dry slopes. Reached Albuquerque just at dusk & had to wait till 12 to board for train south.
May 8 - Wake up at sunrise at Cutler, on the midst of El Torreada Del Muerto with cactus, bushes, mesquites, and yuccas all around. The cressote full of flowers on the mesquite in full bloom and with fruit ripened. Cactuses, orange yellow flowers everywhere.

Reached Rincon for breakfast at 6:45 and found vegetation still further colored. The cactuswords are in full leaf and many of the trees loaded with Pricklycholla florescence (Cistus) cressote in full flower. Protococa judiflora almost in flower. P. chrysocoma leaves out. In the yard a few trees of hedge newbery are loaded with fruit, much of which is now ripe.
87. Rino, N. M. May 8, 1906.

Populus fremontii, Phoradendron caespitosum
Salix nigra, along river ditches
Prosopis juliflora, in loose, nearly in place

Corintha tridentata, in flowers
Alisplex congestus, in flower or bud
Rhamnus microphylla
Baccharis salicifolia, abn. on plots
Ephedra viridis, con. on dry ground.

Quercus rubra, with flower stalks but
Quercus rubra, with ripen fruit at station.

Peach trees, 3 in full leaf & post flowering
Apple trees, 3

Chiropsis integra, con. in woods
Fallopia purpurea, in flower

River relay, 1 con.
Curvedita neriops

Kocheria speciosa, con.

Baccharis glutinosa, abn. on high plots
Near Pincus saw a white night heron near the river. It sat on the stem of a queen railing. Down an \textit{ever}-green. At Rivers a Sayorin sang a war-calling. Ewua qualt, a California to 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. \textit{Oto-earis} at Deming's north. Two turkeys by gun, saw near Spalding.
Dipodamp spratulifre vends are seen on the mesa west of Rincon.

- Woodchucks

at numerous in quagmire butches up slope west of Rincon. In places half or more of the surrounding bushes have been stripped of bark & killed. Mosquito, Crocoite, Reus muiguilla, many other bushes on peak.

- Pediastrepes are abundant over the graney plains an hour west of Rincon.

- Lupus arizonica - Several seen up the slope west of Rincon.

- Lupus tetramere - One seen near Green.
At which most of the shrubby vegetation has disappeared & the covering is mainly grass & in places a rich of golden composites, a species - known wrongly called "Ageratum
indoricum"? & a small fleshy plant. But across the wide valley to the north & on one side of us some bushes - apparently mosquitos or Cirsotis which in slope dips to the south. We seem to be on the edge ofypress & lower pears grown where a tilt to the north becomes a rise - ypper to the south in lean. West of ylott we cross a wide plain and as we again strike a slope tilted slightly to the south mosquitos, also Quebec radiata euphies
At Denning the whole set of lower Sonoran plants, abundant & on to Faywood.
91.

scars and mainly disappear then, we reach Whittier, and are replaced by Opuntia arborescens, grass, and small plants. A few quencher radish still scatter along, 4 cling to south slopes up nearly to Silver City.

Valina and juniperus pseudoplana and oaks appear on the north slopes of the ridges.

The break from Lowers to Upper Sonorana comes between Haywood and Whittier Water in the open valley, though the steep south slopes above carry trees of Lower Sonorana higher up.
Reached Silver City of noon + went to the Broadway Hotel.

The town is in a bared gulch between barren hills, but with a south slope.

Populus fremonti is full of ripe & bursting fruit, Juglans cinerea are in blossom. China berries in log-

Populus in nearly ripe fruit, Silica in fruit, apples, tree past flowering,

yellow + red roses + iris in full flower.

From the hill back I turn the
Glack Timber of the Forest Reserve

shower not far to the north.

Doves are singing in the trees + house finches are numerous eating seeds

of Cottonwood. Sayornis saya + Spizella

+ Selatines are common on the hill.

Also Spizella atrigularis + singing a pleasing little song

3 parts reeding in a real spizella trill.
May 11 - Left Silver City for the 905 Ranch at 7:30, Raining squally. Came through Central, which is about 7 ft. Baied, then through Santa Rita, then over the ridge and down onto the Minnes on the old town of Minnes, then about 11 miles up the river and over onto the head of Safflo creek and down at a few miles to the 905 Ranch, a beautiful place in wild, park like valley, The Safflo is a branch of the Gila. Came 40 miles from Silver City, but in a round about way. The country is rough and rocky on season, 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 Minnes 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
(Queen Raini?c; Dasylirion - 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) up above down as low as
Silver on steep north slopes
from near Santa Rita, up over the
ridge and half way down the slope
toward Minnies Transition zone
with yellow pine and Agave in
abundance prevails. Then the
Minnies valley is Upper Sonoran
as far as we followed it and
further on south slopes. Over
the ridge to Sappho Creek or
the C&S Ranch is mainly yellow
pine 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 uppersorram with junipers & nut pines & Cuscuta.
Water begins to run into 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 a 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 & are fed on "feed range" in Colo. or Kansas, within easy reach of waataet. The distance & country between here & shipping points makes shipment of big cattle unprofitable.

Found the GOS a typical, well to do ranch. Was taken in charge by Mr. Leavensworth, and made its further...
May 12

With Mr. Leavensworth, I rode down the canyon 4 1/2 miles to look for wolf tracks, but found only old tracks. Then returned, packing my outfit on mules and with a nice little saddle horse, we started for a camp on the Minibues, at Lat. 33, Lon. 105, some 10 miles from the actual source of the river, 7 miles from the 405 home ranch. Followed up a dry canyon, then a long ridge, into the mesa separating the waters of the Gila and Minibues, a little way up the mesa then down into the Minibues canyon where we found an unoccupied adobe house, used as a round-up camp. Here I unloaded bed, grub, traps & outfit. Mr. Leavensworth returned, leaving me and my saddle horse in camp.
The canyon is very narrow, with steep slopes probably too high 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 take up the rocks and logs against trees. The flats are narrow strips on one side or the other, covered with beautiful Populus angustifolia, fine old yellow pines.

The whole bottom of the canyon is pure transition zone as the frosty nights and cold canyon air would suggest. The side slopes are mainly transition except where they face the south and are then upper Sonora.
The clean open forests of yellow pines, the overbreadth growth of junipers, nut pines and oaks — the graceful cottonwoods along the river made us delight in a combination as we could wish. The little rocks of the creek, the numerous bird songs and abundance of animal life makes the spot a veritable campers paradise. Still few campers ever come this way — owing evidently to lack of trout in the streams. Here is abundance of other game — deer tracks all around, turkeys common, some bear and wolves, and abundance of abbot squirrels.

Spent the rest of the day fishing my gun, which some — had snapped up — driven the plunger in, cleaning up the eater, getting my outfit in shape for work and setting a few small traps around camp.
May 13 - Sunday morning - alone in camp except for my horse, a harem of 5 adult squirrels in my dooryard, a black phoebe's nest under my roof, lots of chipmunks & mice & birds all around.

Made up my own scent, took a bag of traps, some old fox bones and climbed the hill to top of mesa. Found a big, fresh wolf track along the road we walked since we came down. Made a drag of my old bones & set traps along the drag and both the road, using several kinds of scent, castoreum with tanned hide, castoreum with a salted & tanned hide, castoreum with a salted hide in alcohol, castoreum straight and some of Galloway's wolf bait. Set five wolf traps and in the evening set 2 fox traps near the cabin.
May 14 - Found a Urcoyon in each of my fox traps which were baited with fresh rabbit & scented with castor oil & cassaportia.
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 when a wolf had followed the road to clear out of my traps & then turned & followed the scent back and forth along my drag wash & trapped all around the traps which the cattle had previously stepped in & sprang.
The cattle insist on pawing up my traps tho I run them off the ridge every day.

My Make, Hotchkiss, came this evening so I will now have all my time for work. Have written & cooked for 3 days - long enough.
the cabin.
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 9 A.M. Didn't 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 night before last! Found a Compass - saved skull. Inclines insects trees come up to a mile below the cabin. Yellow pines go down below where we were.

The canyon walls are bare down as far as we went, but sandstone and conglomerates come in below the hard sheets.

Canyon bottom mainly transition, south slopes upper sierane.
109- May 17 - Sent Hotchkiss down the canyon to the way traps while I went to those on west & then on down Jerry Canyon to the Y.O.S. Ranch. Got my mail & another saddle & 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 creek in blossom on canyon walls & humming birds around it. Saw Amphiphilus in the canyon on pair. A lot of good yellow pine timber has been cut & stored in Jerry 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 Y.O.S. Ranch.
May 18. Two wolves, one very large, some smaller, followed the road just past one of my traps that was baited only with dry cascara. The wolves followed out along the drag and stepped on both paws of trap but missed the pan. Did not stay to tamp around enough. Then struck into the river valley and 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. Rest some at the traps and brought down as close to road as the wolves stuck to roads & trails almost entirely.
May 19 - Nothing had been along the trap lines or the traps were not disturbed.

May 20 - No wolf tracks, but Huchkiss found a fresh panther track in canyon 3 miles below ranch. He saw 3 mule deer + I saw a little whitetail - O. couesi - 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 bred horses early + I started up the hill on foot just after. Followed the ridge east of river until up where the aspen begins + then went down into the canyon.
112 on both sides. Found abig bear track in one to east, among the aspens, Abies, Pseudotsuga, and Pinus physlida. Beautiful canyon bottoms with cold streams. Mountain plants of Canadianzone strip. Rocky slopes on both sides. Canadian timber on cold. Upper Sonoran in hot slopes opposite. Mtn. tops very stony and not much grass. Good short grass except when cattle can get along open slope readily. Some of their grazed bare. Had no Parsons but went up probably 2000 ft above camp. Got back before dark very tired. Came down side canyon for light.
Cytophyae were on the high mesa. They had scratched up a lot of ground, and I found Cyperus in the corners of the mesa. There were bulrushes but I could not find the grass they belonged to. At one point, it was good, crisp, and tasty and pleasant. I heard thrushes sing in the canyon. I saw a few juncos and coopers tarantulas catching the moths in the cottonwoods.

I found nowadays hills as high as I went. Also Ericameria, Micrurus, and Misiones runners. I saw numerous pinwheels on tops of mesa but failed to get it. I saw lots of tracks of deer, little white-tails of prairie. I found a fine stand with brush near a salt lick.
May 23 - The same old pair of wolves, one very large and one small, followed the road & trails past my whole line of traps. At the first trap, scented with Followays, no bait, the smaller wolf stopped, followed the drag mark across the road a foot to the side, and stopped all over my traps except on the rear. The big one walked right on looking neither to right or left. At the next trap the both walked straight across the scented drag without stopping - this was also scented with Followays. The next trap had a gray fox in it & the wolves stopped and tramped all around it, bit off a tuft bunch of hair from the fox & then went on. The next scent line they missed by about 10 feet, after turning until the road to an old boom I had near
for a drag. This was Hatchkiss’s sent, 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 or then just missed the scent line of the kind given me by Mr. Culverman, 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 much 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 castoroea, the other with castoroea, cassapitida, & oil of rhodium.

On the line down the river, Hatchkiss says they came in below the first traps, passed close to a baited with Galloways without stopping, & then past one baited with the scent given by Mr. Culberson without a pause. These three were set close to the trail & all in good condition, freshly rested yesterday & a fair test.

Hatchkiss found a calf they had killed a hare out of, but had not killed it. It would undoubtedly die. He also found an old cow rattling & 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 on foot & brought in the bassees on my return. Packets of beds & 2 days grub on old Sundown and Hatchies on John & Jim. Shorty went down the Minibes about 3 miles to the mouth of Powderburn Canyon past all but one of the lower line of wolf traps, then up Powderburn to near the head and not far from the wain ridge of the Minibes Mts. I 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. and very likely had been eaten. I set a No. 3 trap with stone drag by it in hopes the cat would return.

Travelled fast and reached camp place at 2 P.M. Had lunch and set out my traps and 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. As there were higher peaks to the south and north of me, the Wimber's circles around to the north and actually heads south of the head of the Borrowen.
So far the east I looked down into the head basins of the Whirlies on the east & the head of Powderhorn on the west, two heavily timbered canyons, that of the Whirlies as rough & stubb & jagged as the Seven Devils range, with a mixture of bare rocky & densely wooded slopes.

I had no named but should guess our camp to be 6000, lower end of Powderhorn 5700, Camp above at 8200, highest point reached 9500, highest in sight 10,000.

A fine little stream runs west of the way down Powderhorn, sinking in its rocky bed & reappearing at intervals. The bottom is generally narrow, sometimes only a gulch, again a timbered valley.
with steep timbered, grassy or barren slopes 500 to 1000 feet high along each side.

From our upper camp to the summits all the steep slopes are covered with Canadian juniper timber. These are densely wooded with spruce + fir + aspens, + in many places how deep, mellow, rich, soil just over the crest aspens grow in clear forests of trees one, two or three feet in diameter, 70 to 80 feet high. Douglas fir tree is often 5 feet in diameter, 100 feet high. *Pines flexile,* is abundant & often of good trunks 2 or 3 feet thick & 80 or 90 feet high. Good healthy bushes + grass cover + willow flow along the streams + coves.
Transition zone runs upon south slopes to within a few hundred feet of where I went, with yellow firs and box elder (Q. gambelii?) on the slopes and Populus angustifolia nearly up to our camp in the canyon bottoms. It also runs down on cold slopes and in the canyon bottoms to below the mouth of Poudrehorn, with much fine yellow pine timber in the wider parts of the canyons. Both old, big trees ready for harvest, young timbers and seedlings. It is generally open, clean forest, too closely grazed beneath with many of the young trees bitten off by cattle.
Upper Sorran gone runs up on steep, hot slopes as high as our camp with sunscreen peach-leaves Fossombrone, Pinus edulis, Quercus grisea & Cercocarpus parviflora.

Actually capper past transition to a level with lower edge of Canadian on the cold slopes. Much of the mesa tops is Sorran with scattling timber & shortgrass. Saw bear track & sign, lots of deer tracks & 2 old does of the blacktail, but more of the tracks was of the little cervid.. Saw plenty of Eriums offset & Cytinus grammatus on the way up.

Saw 5 turkeys & heard them gobbling in evening, lots of tracks.
124, May 25

Caught Victoria mexicana, Micsatus wortioides, Promius safius.
Shot Semius vogelorum & got one Entanas cinereocollis.

Got a little red and waspless that I do not know even the genus of. Heard lots now. Thrushes were singing, nesting, finches also, Zótilchka, humming birds, (plagaeirus) were numerous on the gooseberry bushes. A spotted owl took most of the night. An old gobbler woke us up before daylight & gobbled frequently from the spire sloped opposite our camp for half an hour. Blue jays were common. Drydato had
I took a tramp up gulch above camp about 2 miles, nearly to crest of ridge + found water all the way in places + good camps spots.
Packed up + started at 9 A.M. for camp on the Windbus 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 away before. So probably a last year hole without a mate as he is not wary + takes any kind of scent readily. He came up the road from the south past my
lin of traps & scents as follows:

1. Muskrat scent (spoiled by alcohol) not noticed.
2. Assafoetida - not noticed.
3. Oil of Rhodun - "
4. " Anise - "
5. Trap scented with castoreum, assafoetida, + oil of Rhodun - Tramped up and down trail + all around trap, dug up paper + tar it to its + left trap pan bare untouched.
6. Musk - commercial - Followed up the trail + tramped around scented place.
7. Siberian bait from The G0S Ranch - followed up the trail to baited end.
8. Trap, baited with wolf's gall and
   N. Wn. kick Fen 6. Wolf bait, but a
calf had got into trap + gone with it. The wolfie tramped all
   over place where it had been.
   Wish he had killed the calf.
9. Hotchkiss's bait - the wolf turned out of road & went straight to counted end of trail & walked across it.

10. Trap baited with Galloway sent, had caught a bear on the day before & been reset. The wolf went around it.

11. Trap baited with Galloway & staked down. No. 3 with flat, capped steel chain. The wolf went past, then returned & got in the trap, bit the chain into about 6 inches from stake & went away with trap. The 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.
The last trap of the line was not visited except by the cattle, who barked to find it out.

The big, branded calf in a 4½ trap with stone drag had gone some 20 rods + 1 pound him in a gulch. Was following the drag marks & expecting every minute a way to bounch up but the calf was a more difficult + less satisfactory subject to handle. I caught him by the chain of the traps + there 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 of my life.
I depended on keeping that calf still till I could get the trap off. I grasped his nose with both hands and threw my whole weight against him, got him down, one knee on his neck, one hand held of his nose and choked him till he gasped for just enough breath to keep alive without babbling. Then I worked at the trap with the other hand, but found one of the springs jammed down over the cross bar. I couldn't budge it so got a stone and hammered till it came loose. Then found I couldn't open the trap with the calf down and his leg held, so the side, and I had to get both feet on the two springs to open it.
Had to get the calf up, still holding his nose to 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, wore scratched & kicked & rattled & seared them thirsty.

I felt in sympathy with my cook of trappers, Hotchkiss, who comes back from line of trapper after the cattle have tramped out the trips just before the wolves came along, cussing & growling & says he wishes the wolves would eat up all the cattle in the country.
May 26 - No wolves along the line + nothing doing.

May 27 - Sunday morning, accordin to Mr. Leavenworth who came over from the G 05 Ranch to see how we were getting along. The first white man besides ourselves were seen prawn.

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

1. The G 05 scented trail was followed by the smaller track, but the big fellow went straight past it.

2. The next traps 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 traps that had a gray fox in when three 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, so past in writing.
May 28 - Nothing doing along the trap line. No wolf tracks or even a coot in sight.

May 29 - Packed up my stuff while Hatchkiss went down to the lower traps. He got a moose in 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 smell of the

The track of the big one measures, front foot 4 1/4 by 3 1/2.

ate an early lunch, broke camp, packed up and went over to the G. O. S. Ranch. Found the same way had 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 90S
to Santa Rita—25 miles.

Found a fresh wolf track in road
when we struck the Winburns just
below Circle Ranch.

Found cherries nearly ripe
at Winburns and an excellent
apple of last year's crop.

The valley is good for fruit—
apples, peaches, pears, apricots,
plums, cherries, etc., grapes.

The floods last year carried
away some of the best
orchards of many good fields
having boulder strewn washes
in this place.
135  May 31 - Got baggage for Silver City at 8, passed through Central in full view of old Ft. Baird, then 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 and wrote reports till train time - left for Denver at 6:45 P.M. Arrived at Denver about 9 P.M. & got a lovely chain room at The Wilden.

June 2 - Took a tramp around Denver & got notes on plants, birds etc. - took a few photographs. The town has grown - sidewalks are a lot of county - is a part of windmills which yield good pure water. Yards full of trees & buttercups, Mergans abundant & good signed. Also Yucca rodiana - lots of lizards & small mammals - even in town. Patches thus trees along streets.
Left Denver at 11:30 on Rock Island over S. P. track. The vegetation around Denver is strongly Sonoran but after crossing the sandy bed of the Rio Grande we cross open plains with mainly grass. Antagonistic to weeds that would indicate higher Sonoran if any thing wanted we begin to go down near the Rio Grande Valley, where for the first time we strike Cereusite & abundance of mesquite & other plants again. Lower Sonoran is much too evident along the Santa Fe trak along the S. P. from the Rio Grande to Denver. It must come all the way up. The Big Minesirs home for Eda Hughes etc. Grass is good & new fields & ranches being opened near Denver. Reached El Paso at 1 P.M.

Rio Grande high – New Mexican etc. Yuccas & cactus in flower –
Up through the Tulareova Valley the
weeds, grasses, Acropus, Atriplex succinum,
and green radiation are dominant plants
as far as Oscura on north slopes
a little beyond, there it is open
grassy plains with nothing taller
than grasses, past Carazago
and the Capitan hills. Eden county
with junipers and matching coniferous
trees to nearly the river when I
went to find a cabin.

June 5 - Woke up at Delano, Tex.
A rain has frequented the air recently.
The plains are green and grassy and
constantly growing more green and
grassy ever so best.