May 4, 1894

Left Washington at 3:45 P.M. by Penn. Line by way of Baltimore, Harrisburg, Pittsburgh, Columbus, & Chicago for O'Neill, Nebr.

May 5. Arrived at O'Neill at 5:20 P.M. Tramped over prairie till dark, but found vs. gothbs. hills. Saw some from the train between O'Neill & Ewing. The soil of O'Neill is mainly a coarse black sand, which takes hard in place but is mostly yellow. The absence of gothbs is hardly accounted.

May 7. Took the 9:30 A.M. train for Ewing. 25 miles, 3 of O'Neill & arrived at 10:30. Found that my mistake. I had taken the wrong package of traps & had but 2 No. 0 with me. But all of my traps, caught 2 gremls intercessors & another carried one of my traps down into hole. Aug. 27 fat along the river but it branched & I did not get the trip. Sandhills are all along here. It's really a black sand & good soil. Yucca planca is common on the hills. Had a big puff-ball cooked some & it was good.

May 8. Caught a Sitump, a R. Huclusbump, & a Peronophyes flumetosa, but no wasp gathered.
Nebraska

Left Ewing at 10:30 & arrived at Norfolk at Noon. Bought 2 eggs No 106 & pet 3 for George. Caught on breeding. Found hills along draw bottoms but none on clay hills, back of valley. Set traps for miles on hills, 12 miles about Norfolk is rich & is mostly improved.

Hotel Oxnard is a pleasant hotel. Shot a Lefus yesterday but did not connect it was bad.

May 9. Caught 2000 George breeding, 5 Arriveda question 3 or Rhizoctonias. Found lots of grubs of both the latter.

Worked upper Oakdale & set traps for George or Perodicus. Reared most of 19M.

The land hills & yuccas begin of Oakdale & extend westward.

May 10. Caught only 2 George but they seem to be very lathrinus.

Caught 1 Perodicus started westward at 2:15 & reached Valentine at 9:15.

Met J.M. Bates on the train.

Went to Ray's House. Worked till 5:30 & then got up at 7 took stage to Rosetell Agency & arrived there at 3 P.M. About 30 miles.

Jan 2. Passed gray, skins; set 20 traps, wrote on broken & hills.

Found Perodicus holes. Very windy & sandy & disagreeable day. Cold morning, hot day, pleasant evening.
Rosebud Agency + Pine Ridge

May 12  Caught 4 Pigeons & a Pecoswus & a Pecosaurus. All taken for the first time in Dakota. Started a Coyote out of brush patch & missed him as he went over hill.

May 13  Sunday  Found a Pecothesus fascinated in our trap & a P. flavus in another. Left out the trap where the fascinated was caught. Brought in the others. Home to be ready for stage at 8 in the morning.


At Valentine called on Mr. Bates & got some plants identified. Left Valentine at 11:15 & reached Bunkwell at 1:15. Sent reports & letters.

May 16
Caught 2 Geese, 3 Pigeons, 12 Quail, 10 Pheasants, 1 Turkey. Skinned these & took stage at 1:20 for Rushville. Arrived at 6 P.M. A gale of wind blew all day & after 5 P.M. it rained. Was cold. Saw nothing along road. Today I have to wait at Rushville for west train.

May 17
Stopped at Choceca & got 3 hours sleep. Took train to Crawford at 7 A.M. & had to wait 2 hours for train to Newcastle. Cold, windy & rained most all day. Did not go hunting. Finished reports & did a little work indoors.

May 18
Started for Newcastle at 6 A.M. About 5 miles north of Crawford we struck clay soil & saw some Groups hills, a little farther along a strip of badlands began to with thin Sage brush, Atriplex & Sarcobatus. Plenty of gummoo all the rest of way except along Cheyenne River, where is a broad sandy flat scattered over with small cottonwoods that are in rows & look like an orchard. They seem to grow in rows along old water lines. Horizon hills was easily recognize when first seen just north of Aridwore. But on the sandy flat of the Cheyenne they are not so easily distinguished in any possible 2 Groups hills.
Newcastle

The R.R. follows around the edge of the Black Hills, just cutting through a few points of pines. A few detached series of high, yellow-covered buttes are seen to the west. The road runs through grassy valleys most of the way. Cacti & sagebrush are conspicuous features north of Red Horse. Edgemont would be a good place to stop & see if pronghorn inhabit the sandy bottoms of the Cheyenne R.

May 19

Got my mail. Saw Elam Blain, who kept my horses & made arrangements to have the wagon brought in in morning for some repairs. Hunted & set traps up the Creek Canyon and over the mountain side. Killed nothing. Cold & raw. Saw but few birds.

Caught a Chinook & a sit娘家, an Aleviglae Austins & 12 A. riparius.

Made up the skins. Got my wagon wheels fixed loaded up with part of my outfit & went with Elam Blain to his ranch 5 miles S.W. of town. Set out some traps for Putzein minks & small things. Blain described Putzeins as says he saw one last winter & saw that they lived in a cave & didn’t do much. Found my horses in pretty good shape. Saw one Lyca lynx canadensis.

A cool day & windy.
Newcastle

May 20. Found a few things in my traps but no prairie dogs. Blaine found a coyote dead and dug out 3 young ones and kept them alive. Blaine killed a Lopes campstake.


Very windy.

May 22. Caught a few things and made up skins. Went up the creek to where some gray wolves had been seen lately but found none. Saw 4 antelopes but could not get near enough to shot. Went over towards Big Beaver Creek. Found a Sage Grouse nest with 6 eggs. While chasing the antelope I of the edge got swashed. Saw two Lopes Campstake, lots of antelope tracks & one wolf track. Found a nest of Swainson Hawk but no eggs.


Looked at Cyprons out of my Territ traps.

May 24. Killed and made up 2 of our young coyotes, finished up the other thing.

Packed a box of skins.

May 25. Took up my traps & came to town to meet Loring but he was not to expect him till tomorrow. Got my camp outfit together & went up from town & camped.

Wrote on my report all the time I could get. A warm day. John Wiss began work at noon.
May 26. Loving came at 9 A.M. and we left Newcastle about 9:30 A.M. on the regular road for Casper. Crossed South Creek and struck Beaver Creek at the L.A.K. Ranch. Then turned into the hills and followed up canyons and through parks and forest woods with a gradual rise until reaching an altitude of 5200 ft. Then descended a long gulch and camped at a ranch at 4800 ft. After leaving this L.A.K. ranch we found water only in one pool till we struck the ranch where we camped. Here is only a spring, but plenty of splendid water. Came about 24 miles. After entering the hills the country lays in smooth ridges - long slopes with rock cliffs along the washes or canyons. Beautiful grassy parks occupy the more level spaces and a scattering dot of pines. Salix scouleriana covers the ridges and slopes of the canyons. There is almost no underbrush or shrubs. The principal vegetation is grass and pines. Ponderosa, Juniperus virginiana, Pinus ponderosa, Crassulaceae grow along some of the canyons. Very few flowers were seen. A little Rhododendron is common, and above 5000 ft a Labrador flower. For a long distance this is splendid grass but no water or stream. Deer tracks are common along the road. Saw Vamia in flower and shot one Red Quail. A hot day.
May 27

Sunday. Broke camp at 10 I went through Custer and camped at its Wilcox ranch where I stayed in 1888. Came 18 miles. Came over on ridge at 5,400 ft. Custer is by the averted 5,250. Passed 2 or 3 good ranches. Saw no steaming of water till near Custer. Struck the granite formation about 5 miles before reaching Custer. Saw one Astor's disaster just after coming into the granite belt. Failed to kill 1. Splendid grass, nice country but little heads. One fox track. Windy day.

May 28

Started at 7. Passed over the highest point in our route, about 4 miles north of Custer at 5,900 ft. Then struck the head of Springs creek & followed down to Hill City. Then down to Sheridan 1001 to another creek & down it 3 miles & camped where the road turns off from creek. Came 23 miles & camped at 4,720 ft. Came down grade most of the way. Struck several flocks of birds in the creek running on north slopes. Springs creek is a good sized creek. Clear & cold & good. Saw quakes & bullheads in it. Saw no Astor's, killed Sevius, James, & Spamp as & a bat. Camped at 5 & washed up skins & pressed some plants.
May 29. Left camp at 7 A.M. Crossed a high ridge & then over ridges & through follows with a gradual descent to Rapid City. At camp the thermometer read 40°50 & at 9:40 the first 2 birds ceased expect on ridges and rocks. Some few grew ovet rocky ridges down to Rapid City of 3000 ft. - Avoided.

Oaks are common & form some groves, some trees bearing on a two feet in diameter & 40 feet high, but they cease with the pines and none were seen below 3000 ft. One Coon Track was seen in wood at 4000 ft

Passed quite a lot of ravines. The country is half timbered & half rocks, good grass & not much water after leaving Spring Creek till we strike Rapid Creek. Crossed the banks felt to then down a long slope into valley where at 3:25 on 4th Populus monophylla, Fraxinus americana, Alnus americana, Thuja occidentalis, Shepherdia argentea, Quercus gradea, grass we receive herbaceous & anticipate further advances there up in the hills. Mahonia aquifolium is in full flower in the valley but has flowers seen only at all through the hills. Barilla grandis & broom trees with us all through the hills & are still characteristic plants.

Lunched at Rapid. Sent telegram, got one enfeebled. Crossed over onto Poplar Creek & followed down it to about 19 miles from Rapid City & camped with splendid grass, water from a small well & crowd kindly up along road. No flies in sight save a few strays along bank
Rapid City to Cheyenne R.

and the black banks of pines covering the Black Hills in the distance. After passing out of the gap at Rapid City the country is grassy prairie with long slopes and high ridges along the valley. The soil is hard and dry and in places is mainly granite. Tried to get timber at camp but could find no signs of anything but grasswags or 5. Estimato. Saw a few Gysmups along road but no other mammals. A random way he saw a few antelopes near here not long ago.

Saw a flicker in crossing but did not get it. Have seen a few every day but could not get near any of them.

We each killed a bird from breastbone with bows walking and bird flying.

Average lat camp at 6 P.M. 27.25.

May 30. Caught nothing. Started at 7:30 and struck across rolling prairie to Elk Creek. Crossed Elk Creek among numerous ravines and then over the prairie to the Cheyenne R. which bore.

Swimmed and camped by river, at crossing of Rapid + Cheyenne stage road.

Ran about 37 miles. Travels all the way, often no trees in sight. Water holes all along but mostly very alkaline water. Small trees along Elk Creek. Cottonwood, locust, ash, willow. Splendid grass all the way. Edge of prairie discolored almost in to wind.

Valley full of willows, Llaves and thun. Lot of gambol in the well all along. Top of prairie 3200 feet, bottom of river valley 1800 feet. The broken uneven bank of valley is full of willows and reeves which are filled of thrush birds.
Cheyenne R.

The river and bank there plant their own shrubs, such as thistles, Populus, common cottonwoods, Elumen
americanum, Fraxinus americana. Skyelena arguta, Rhynтонны, Actinidia cana, Fruttu plums.

Cottonwoods grow along Cheyenne R. There is no sandy flat on this side near hills.

Lost lot a lemon campfire which contained 4 large embers. Still went her old winter hair which was worn off start — exactly.

Fished a Sitka's out of an old well by the road.

1. Shot a S. Felicitina which contained 9 embers.

Shot 2 week of 2 species together.

May 31. Lost 4 caught 5 Sitkans. I caught nothing. Crossed the river and followed down about 2 miles on S. side, finding a wide sandy flat camped on all right.

Most up hills, hunted cleaned gun / in evening shot lots. We both got 5 Yankings.

Cought a Porcupus — sat together. Porcupus tracks. High gumbo hills of blackend appearance, full of gyp druż and 6 feet crows.

River valley which in places is over two miles wide with sandy or gumbo flats & again is narrow. Populus monophylla & Skyelena arguta grow in rows along the flats. Thickets of rosebushes are put of Juncus
Symphoricarpos & Rhus cotinus are common on the flats, also Potentilla & Lathyrus

Sweetly grass, lots of stock.

Mr. Smith who has lived here 15 years says Soreyfises are rather common.

To Bull Pendel R.

June 1. Caught a Porcupus, a Porcupus porcupus.

A P. fess, one Crayfish or 4 Sitkans.

Lost & 7 morning shot a Colotile.

Followed down the river about 5 miles to Smithville 115, 10 miles north of Bull Creek. Here we
climbed up onto the Prairie. At river averaged read 1750, on top of prairie 2100 ft. at edge.

Cossed rolling prairie about 10 miles & then descended into the Bull Pendel Valley, followed up
the river 1 0 5 miles & camped at a ravine which is said to 15 miles from mouth of Bull Pendel,
18 miles from Smithville, 50 miles from Rapid City.

Top of prairie at edge of valley read 2300 + Bull Pendel R. 4900 ft. It is a valley on to 2 0 15 miles wide, with badland sides + gulls from, good, grass & along the river grows of Cottonwood.

Junipers & prunes grow over the valley sides as they do along the Cheyenne.

The Bull Pendel flows through a small valley than the Cheyenne but carries more than twice as much water. The water is muddy but fairly good to drink. Not half as alkaline as the Cheyenne. There are no sandy flats.

Crossed the Bull Pendel on horseback & it came well up on Junipers sides. Set traps, did not finish making of greenery.

Came 2 1 miles today.

Grates are fluest, it in spring some mosquitoes, both. Can just see Black hills & Bear Butte.
June 2

We each killed 4 liakes & caught a Rithiodontus. Kissing got 2 liakes. Made up 9 mandrels, started at 8 A.M. Followed river half a mile, then turned up a gully and climbed to top of prairie. Abnered and at 7:30 A.M. on edge of prairie 2,300. Passed one ranch with good spring 10 miles from starting place & no more ranches & only stagnant water all day. Camped at sundown on prairie with good grass, but only stagnant water from a cattle water & cow chinks for wood. Baccaloni 2,500 at camp. Probably came 25 miles or more. Good wood on prairie. Headed straight for Bear Butte where surface would allow. Have been in vicinity of the Black Hills all day. T of night they appear only 15 miles to the first pines. Followed edge of Belle Fourche Valley & could look down to river most of the time. The valley spreads out & becomes wider & shallower as we go up it. Can see a few cottonwoods along the bottom. Junipers & brush grow along the peaks towards down but vanish as the valley widens. The prairie is smooth & grassy. Little grazing but too dry for crops. Could see ranches in valleys on either sides of us. Prairie birds are abundant but little signs of mammals seen. A few Gyrans & bobo & Vermypso & prairie & Badgers.

Set out a lot of traps at camp & it was too dark to do more than put three in pails. Shot Plover & Curly for food. Found vert. of Schidmuyer, Calumet & O'Gara.
June 3 Sunday. Got only one sitings in the tanks. Lazed up an Alkali creck rest. Broke camp and travelled about 11 miles & camped on Alkali Creek 13 miles east of Sturgis. Camped in the shade of a little elm tree & took a rest, the first rest time leaving Newcastle. Came over the same kind of prairie as yesterday till we struck down into the creek valley. The Bull Pond is off 15 miles to the N.E. The valley that we followed in sight of yesterday afternoon was the Alkali, a branch of the Bull. Barometric at morning camp read read 2,500, at Alkali 2,400 at 1 P.M.

June 4. Got up at 4:30 and started at 7. Lazing caught a lonesome, shot a Lonesome lonesome. We got up colic cases of various kinds of infirmity. Shot a pair at rest, but the young had no patience and were not fit to eat. Shot a Zanies at H. Meal. Took full note on plants along route.

7. Made in a pretty valley at foot of hills, is a large pond. Bear Butte rises a few miles to the east & looks like a volcanic cone but probably is not. Should think it was 1,000 ft high from base. Bear Butte Creek is a fine stream flowing through the foot - through Sturgis, is deep & pure. Pines begin on the hills at foot. Oaks are common & Pulsus angustifolia begins & extends up to Deadwood. After passing through Sturgis we turned right and of caison, passed through toll gate & followed up the canion of Bear Butte Creek.
Deadwood & Spearfish

for several miles. Stopped for lunch near about 5 miles from Deadwood. Many eagles and other birds of prey were flying about high in the air. Very difficult place to get up but not impossible. Saw others flying about cliff at Deadwood.

Reached Deadwood at 4 P.M. Got some supplies and traveled about 5 miles on the Spearfish road. Camped on little stream at edge of open valley country at a level considerably below Deadwood. Made up a good fire. Set up table. Had a good road and no bad hills to Deadwood but on leaving there had a steady climb of 450 feet to crest of divide. Then down grade. Passed through 3 toll gates. A very hot day.

June 5

Starting at 8 A.M., traveled most of the day through grassy valley withacious all along. Our camp was at the northern foot of the hills and the road follows around the base. Before reaching Spearfish we could look far out to the N. and S. forked low country at Spearfish on the north end of the Bear Lodge. This begins + to the west of the way. They shut off the view to westward, winding in a valley between them + the Black hills. We crossed past all day with splendid grass, lots of dust + much grass and warmth. Came about 50 miles + camped on a little creek between the Bear lodge Mt. + Black hills, about 15 miles N.E. of Sundance.
Sundance

Oakes pine so this tree came down to Spanish which is the prettiest located town in the Hills. It is at the mouth of a fine caucodon at edge of timber. There is a fine stream of water as clear as crystal. The town itself is rather sickly there are some good cottages with trees and shrubbery. The valley below town is full of good irrigated farms. The view from all sides is pleasing.

Butch is only a little drift out town but is on a splendid stream and in a good farming valley. Caught a horn toad but it escaped. Killed Oakes pine, saw several mon flickers.

June 4, Caught an Agueola muscens & Situnyas & loving caught 8 Situnyas. Is sailed at 8 & reached Sundance at 11. Got mail & found Butch & camped a mile west of town. Made up a few specimens & wrote on reports. Sundance is in corner between Bear, Lodge, & Sundance Hill. Travelled over red soilled valley with gyscum & woods & splendid grass.
June 7, Visit reports all day. Shot a
Timian of the Black Hills parks, and a Colorado.
Losing contact on his report, but has not finished it yet. Outflats put out a line of traps.
The first little snow since weblasted.

June 8. Outflats & I went up to top of Warren Peak which is the highest peak in the Black Hills. Mt.
Followed a wood road nearly to top. We found a
peek, people have been tracking deer tracks
from near the summit. We added to the
peaks. There is a good timberline on the Mt.
Piney woods & Icicles in the tree trunks do not reach to the peek. For several miles along the crest
of the range and about the upper 500 feet is bare.

On N. edge of peak, the pine & poplars come up
the highest of any place. A taught of small trees
reach to within 100 feet of the peek.
Large rock out of snow lay in gullies away below the summits. Little streams also in the
gullies on all sides of the peaks & running through beautiful fields and meadows. The whole
view from the peak is beautiful. The Black Hills on
one side, the Deadel river about 15 miles away on
the other & beyond is badlands. Apparently no
one lives in the mountains. Saw no signs of
big game save deer tracks.
Shot a young Lappier hound & a ruffed grouse
soon. Saw minks & got a success medal & found sign
of Amicalo about 100 feet. A dew on grass shrubbery.
Note: June 11, we went up in the Bear Lodge Mts.
from west side and found the cove cove ranging
from base to near summit continuously and
they gradually diverge towards the summit.

Sundown

I saw not specimen but could get no acres.

The fire had killed it all about 2 years ago but grew up
all the acres. The young acorns are not yet old
enough to live. I cut grove in great thickets and
only above the pines; ranges from 275 feet high.
Cove of base of Mt. are common but do
not reach far up into the pines. The winds
separate the two coves for about 1000 feet.

At Sundown the cove died 4500 at
7 AM. On top Warren Peak 6400 feet to camp
at sundown at 5 PM. 4675. Collected several species
of local plants in cove.

June 9. Rained hard all night, the creek
washed away gumbo like ground, hills all knocked
out genet out & a nasty morning ensued.

Could not move camp an account of gumbo
and made up skins & set more tents in cove.

Began packing up to leave us on the morning stage.

Cleaned up in P.M.

June 10. Sunday. Leaving left on the stage
at 5 AM. Reached 7 packed up and came
around to south side of the Bear Lodge Mt.
and camped at the base, and did nothing the rest
of day.

June 11. Found we could get up Warren Peak by
following an old road around further to west side of
Mt. Rose. Came about 5 miles and camped at west
base of the peak, took tents & went up 4, 10 above,
about 3 miles and found only posterior signs of Arikaree.
They have covered the higher part of Mt. under the snow
but now have gone back along streams.
To Devil's Tower

The high up holes are all abandoned.
Caught on big Assinibois Dakota. Came back and
attended story creek at camp. Saw a few
Burtrishes. Two coke go clear up on this
side of mountain & became worked about its pines.

I went up mountain to take before
breakfast. I caught a Zapus & Burtrishes high up
on Mountain & 2 Zapus near camp. Better
caught an Assinibois high up and 3 Burtrishes
and at camp be caught 3 Burtrishes. The Burtrishes
packed up & started at 8 A.M. Assinibois
at camp near 500, climbed up to 5700 and then
began to descend through peaks and groves of
pines & oaks & poplads. Some beautiful shadow & pines
very little water seen, two small streams crossed
at base of hills. Came down several very long
step hills, road not much used, no grasses
on or through the Bells furnace. Pines and oaks in
stretches and patches clear of river. Deep canons
run down from base of hills, with flat topped
ridges between. Bells of hills at 4000 feet + from
that a slight descent to edge of river, then down
which we descended 100 or 200 feet to river.

Reached the Belle Furnace at 1 P.M. and followed up
the river about a mile and camped on west side.
The river flows directly north, is some with a
bello deep to the horse. The water is like dirty
milk and higher than usual going this season.
Much of the bottom of valley is sandy.
Cliffs of yellow sandstone & red shale
baffle the valley. The river bed is hard &
covered with stones. Stony flats are common.
June 12, came through a patch of pines about a mile where fire had killed them all several years ago & they had been rotten & lost all boughs off from 10 to 50 feet from ground having a 1/4 thick forest of dead pine stumps. All were rotten. There was no regularity of direction in which top lay.

Deilk's tears

and numerous pieces of coral, stalactite & fossils & lava pebbles are mixed with the stones. The river flat is a mile wide. There are some ranches with small fields & large pastures.

June 13, Rained hard all night, caught nothing. Dropped to 40 feet & a Cottontail. Started at 9:30 am followed the river about 6 miles to the Devil's Tower. The road is partly slippery but not very bad. is mostly sandy instead of gravel. Followed a perennial rock of a quicksilver bed across back of tower & camped about 9:30 on west side of the pinnacle ground. It is a lovely place in pine wood with greenery and peaks, clean & cold. A pool of rainwater near bottom is a quicksilver but it is 40 rods down a steep hill to the little chuck. Gear is splendid. Strawberries are ripe.

The tower stands on a bluff close to the west bank of Belle Fourche R. Its top is 575 feet above of foot of bluff. Its circular base is 352.5 feet at camp & 393.5 feet.
Devils Tower

It took several trips to reach the top of the tower of columns, which I read 4250 ft. The tallest column is at an angular point 30° for a 200 ft. at base. All are in immense blocks, some of them 8 or 10 ft. in diameter and 20 or 30 ft. long. They are straight and flat, and straight as the steeple. Some are 4 and 5 feet high. It was said to be now 3 feet high. The rock looks like granite, but is not. It has a gray body, blue and white, character, much like that at the foot of Stanley Falls, Idaho. It is hard to reach. From the west face of the tower, is symmetrical with the wide, rock facing. It is composed of square columns. At the base of the column, broad around and out so as to form an enlarged pedestal, but when they rise upright, they become symmetrical to appear to have a sharp, thin edge. There are about 50 columns on west side, and 16 at the end.

A spruce tree grows at upper edge of columns and on sides of columns up to the top. I climbed a shelf of stone on top of tower at west side and placed the base of my pack on top of shelf. I used my pack as a ladder. The top of tower is slightly rounded and on the edge grows some green plant. The top probably contains 4 or more.

The columns look small but are 8 or 10 ft. in diameter and when close by are so immense that you can hardly imagine them of crystalline formation. Found little speck among broken talus.

27 May
Devils Tower to Little Mo.

The surrounding rock formation at base of tower is yellow sandstone below this red rockstone. On the west a big ridge connects the towers with the base of the Missouri Buttes which appears to be 10-12 miles distant. They are about as high as the towers and apparently of the same sort of rock but not in basaltic columns. They rise like pointed cones.

June 14. Caught e. Mt. Blair. Shot a
   Made up stakes. Moved camp down 10 miles to river.
   Set flaps. Wrote Bar Lodge, Mt. Blair.
   Sawn one butt but did not get it.
   Got out 60 flaps.

June 15. A splendid week for riches but did not
   catch anything in trails except a bow wow. Went
down the Big Horns about 5 miles to Bear Gullch r.
   thence up that and over the divide and down to Little Missouri and camped.
   Came about 20 miles beyond the mouth of a sand.
   Camped in sight of and about 10 miles from the
   Missouri Buttes which we passed on the way.
   Rim rock timber follows the gullches r. across
   ridges across the divide r. down nearly to the
   Little Mo. Furthermore a big timbered ridge seems to decline.
   Then its timber in sight in the distance on high ridges to the N.W. 75. W. 1/2.
   Apparently a big ridge runs west from the Buttes
   and probably crosses with it. Further west
   the top of the divide ceased to great peaks.
Little Missouri to Little Powder River

With pine timber in stripes, a beautiful place with splashed grass. Not much stock only our horses. Rode along. The divide registered 4,000 feet. The Black Fork is River 9300, and the Little Missouri River 3400. On the divide one met for the first time since leaving Preble, Nebraska. Bivouacked when within 50 feet of the bottom of the Little Missouri River. Struck Sarcotus for the first time.

At the river I found some Runyan cattens which is the first seen以来 leaving the bottom of Claypan Valley at Smithville. I had considered it good pasture and still think it is.

The Little Missouri is a small creek almost dry in places, but with lots of dead pools that had been flooded by braves. Tons have been cut for along the creek by braves but were freshers than nearly a year ago. Began to rain soon after reaching it all is green.

We loaded 86 traps.

January 28. Did not rain much at camp but raised had southwet 9 pes. At daylight the river had risen about 3 feet before we left camp it had risen 2 1/2 feet more. Was a rushing torrent of striking mud and filth. The horses were on the other side. Noboby had a line of traps also on the east side. He had strung out a tiny stream to set them but had to swim across to get his traps. The horses & the horses had to swim back. The last 5 traps set along the bank of the stream I last 2. We caught only 1 thonga & a lot of Situungu. Broke camp about 8 & struck west over the ridges on an old dim road.
Little Powder River

Struck another creek, mostly dry, a branch of the Little Wet. Saw a fresh wolf tracks in road and soon after saw 5 antelopes & 2 cows. In all 14. We got one shot but wound a musk if it did not get away. Passed the D Ranch at 11:30, 4 miles from Little Wet. They say 4 from their hq with good followed up a creek to divide divider other creeks & ridges till after 6 & camped by a pool of rainwater in a wash not far from a wide valley which we suppose to be the Little Powder R. Valley.

Before crossing the divide we had gently slopes a weakly smooth ground with not many hard-kulls but on this slope it has been broken & washed with deep washes & bottomlds. For awhile we were out of sight of pines but soon saw them again on the divide and then stretching along the broken ridges to the North and South of us. A few Cottonwoods grew along the wash but we have apparently left them at Little Wet.

Passed a couple of small plains dog teams at the D Ranch. A Blacktail deer came down to drink near camp as it grew dark but we failed to get any sermon.

Came about 20 miles I guess. The soil is sandy in places and thin quartz. Coal shows in narrow strata along the glaciers near camp. Splendid grass all the way and not much stock. A good many dead cattle seen.

Came about 15 miles I guess. This must only grow seen except the one between Spearfish & Sundance.
June 17

Got up of daylight & hunted for my deer but couldn't find it.

Made up a few skewers & started at 9 o'clock.

Crossed Duck Creek, which is the exact line we followed down the Canadian, and climbed a long slope to the west & followed the ridges for about 8 miles before coming to the Little Powder River. Were fortunate in finding a fairly smooth route, while on both sides were rough woodlands. Followed Little Powder R. just below mouth of Elk Creek and camped by river on East side. Found a diemond on other side of river & a couple of round-up men came along & told us where to go.

Saw a big P. D. town on top of ridge not on the holes all of the dirt thrown about & troubles — was cold. Other rounds showed black. Saw an antelope but it was wild.

Shot a elk & canvased for supper.

Camped with cottonwoods at river & cut traps.

Found plenty of old ponderosa holes but no fresh ones.

Found the Arrow plants in abundance —

Pachera triflora & Lopinus fusipes

The caynville is safely about half a mile wide & half covered with ponderosa woodlands.

The river is 2 feet deep & fordable, a torrent of yellow, stinking mud with dead cattle all along its shores. The cowboys said it was yesterday, it was almost dry.

Thunder storms all around in PM as every day for weeks past.
June 18
Cresed to west side of river and followed up it about 6 miles to mouth Whitetail Creek & then followed up that part the W M Ranch and over the divide and down Bitter Creek to the first water hole on it & camped. Came about 16 miles. Found headjipers abundant along Little Powder Valley and about 2 miles up Whitetail Creek & then saw no more signs of them or of Sovereign species. The country is all a burned out coal field & the scenery looks like Lava. Rough hills & steep sides are covered with scrubby pines all across the divide.
Caught Perolypus, Angelpumps & Situmpys at Little Powders. Eat out traps for Pingejips in prairie dog town tonight.
The water at Bitter Creek is the worst we have found. I small spring comes out of bank & is strongly charged with gummin & tastes of the coal which leaves out the numerous seams.
South Bighorns plainly from the divide, probably 75 or 80 miles straight.
June 19
Cought nothing.
Follwed down Bitter Creek to mouth of Powder R.
At S A Ranch which they say is in Montana. Proceeded up the river on east side about 2 miles & camped near river. The country is the same burned out & worn down prairie field, very rough & steep & seeped. Steep cliffs of red & yellow sandstone bounds the valley. The country is mainly cordlands covered with attaintd Pines porentes.
The avaid read at Little Powder Rives 3350, on divide 4050, and at Powder River 3340. Intermediate readings are given in notes book.
Powder River

Camped at river at 5 P.M. & wrote an report & made up a few specimens. Got on trains on the way.

It looked as much like raining we did not set any traps. Began to rain hard & with rain on tent & settled down for rainy night.

June 22nd Rained hard all night, we were on low ground & very flooded. Built a dam around inside of tent & bored it out with wash dish. Paul & Watson went out in their slippers & shook clothes till we could get dry ground to dry. Got up late & after breakfast did some walking till noon while we waited for the water to run off.

Broke camp at noon & followed up river about 10 miles & camped about 5 miles north of mouth of Chad Creek. The roads are very bad & the river is so high we can't cross for probably 2 days at least.

Set traps, but found little signs of mammals.

The valley bottom is a mile or two wide, high terraced bluffs covered with scrub pines & junipers border the valley. Sage brush of the standard species - tridentata & Cam, are the predominant shrubs. Sarcostatis is common.

Atriplex confertifolia was seen on grade at top. Some Atriplex nummularia was seen. Prosolia tenuiflora & Lupins penutus are common & also a pretty white flowered Alomia.

Coal is abundant & also seared when coal fields have burned.
June 21. Caught nothing. Butcher caught 1
beaver, Shot 2 tamaus & some hide.
Hunted part of forenoon. In PM went up the
river about 5 miles to mouth of Clear Creek &
camped. The river has gone down over two feet
today & is falling rapidly. Can cross in the
morning without trouble.
Set each of us a line of traps through P.D. town
for butterflies which baffle with no prospect of
success. A hot day. The road is mostly
dry.

June 27. Caught nothing in our traps.
Crossed Powder River & followed up Clear Creek
crossing it 11 times. Water came over the bottom
of buckboard in every crossing & we got some
things in the load, but the specimens in our shot
Reed's Clearmont at 6 & camped near town. Came
25 miles. Just got up this tent in time
for a hail & rain storm. Could not get traps
out a few for Thompson. A hot day.
The Big Horns are in full view nearly all
the way & now looming up grandly with
snow all above treeline.

June 28. The horses got behind a hill & we
did not get them till noon, but it did not
matter much as it rained nearly all night.
The road was bad. Caught only a thing
Started at 12 & followed the railroad till
11:30 & camped near Arro. Guess we
came about 15 miles.
To Sheridan

Followed up an easy grade and over a divide and down another creek among big, grassy hills with cedar rock caps. The country is very rough with high, stiff hills, but covered with soil & vegetation.

Grass is big & thick. Actually grass is the commonest shrub. Willows & other grass hold on the creeks. A few pines grow on the highest hills. Springs are numerous where divided in gulches. Part of the soil is scree & past gullies. Few bare Country baboons

June 27, Sunday morning & slid 2 miles from Sheridan & not hungry & got started at 9 AM. Followed down the creek and over a ridge to another stream which I suppose to be Powder River & thence to Sheridan. Arrived at camp at 4:30 of Sheridan at 5 PM, 35 miles. Soon left the big hills & the creek valley broadened. Ranches are scattered along. Good farms & fields of irrigated crops along Powder River Creek & Good Creek & beautiful, rolling, grassy upland.

Sheridan is about the 7th, Lander is in a pretty country, is close to the base of the Bighorns.
June 25. Staid in camp all day writing reports and packing specimens.

June 26. Maid 6 packages to put one by express. Sent reports, letters, telegram.

Follow up Big Horse Creek to the canyon where it comes out of the hills. Could get up as far as I wanted if I could, through the grass is mostly eaten off by cattle. Came about 18 miles. Arrived back at Sheridan 3500 ft. of Camp 4500 ft. Correcting from base our actual altitude is 4760 ft.

Pine ponderosa = Ponderosa dogladii & Aze = Betul a are common at our camp & scatter down 300 ft. lower.

Populus angustifolia now completely supplanted westerners - all along Big Horse Creek forms a forest strip of unusually large trees it washes up our camps.

Big Horse Creek is too large & deep = wild to fish. is a splendid stream, clear water & irrigates a great area. Good farms at scattered all along it. A good deal alfalfa is raised & does well.

Large ditches coming off onto mea & small ones are taken out of the river at frequent intervals. Beaches the creek valley the country is grazzy mesas with some sagebrush. A Tridentate begins again for the first time since in left Portland R. Rained last night & again in P.M.
June 21, Caught only Sitkans.

Went up the mountain for all day trying.

Camp is 4700 feet. Went up the MT of 7400 feet.

Killed Turkeys, Seinns &a Grizzly, Butchered 5 Grizzly &a Deer.

Saw deer, elk & deer tracks.

Found Piros ponderosa & Floria & Musgrass &

Pseudotana douglasii & Pivo crabmam.

Had a stiff and difficult climb & did not get near any of the second peaks. On top of the table land, or forest plateau at about 7000 to 8000 feet a heavy forest stretches away to the peaks, thick as in some places at the south end of the range. Rained all day. got back to camp at 7:30 hungry & tired.

June 25. Making plans - did not start till 11.

Followed down Big Goose Creek 5 miles & then struck north over mountain bridges to Dayton on Tongue River - about a mile beyond & camped.

At 1:30 - Followed parallel & lot has been the base of Big Horn MT! Masses, rolling country, &

Valleys. Good grass & in vally farms with

fields of grain & alfalfa. Alfalfa is in full

bloom & is being cut for hay.

Tongue River is a rapid stream, too big to ford.

Multiple clear water. Is full of fish for BK.

Trees & brush grow along the river & vally

is bordered by it & the farms look good.

Set traps for Deer &a Black bear. But no traps - &

all of which seemed to be common. Heard 3 chickis &

See young Cygnus & killed a turkey.
June 29  Caught only a Thaworny & Arcticola
amusing. Was disappointed at not getting any
Reithrodonotus. Moved camp about 6 miles
to where the road strikes the K.R. & spent
the rest of the day writing & setting traps.
The country is all fenced & is either in pastures
or fields. Camped in a swamp place but the
pitchfork for Reithrodonotus is good.

June 30  Caught only on Thaworny & Bristles caught
2 Thaworny & 2 Arcticola amusing. I still
believe that Reithrodonotus made the runaways that
I found but it seems impossible to catch one.
Took to hunt because a fight isn't get started till 10
Climbed a low ridge & struck the head of the
Little Bighorn R. near the Montana Line &
passed through the Little camp town of Pass close
to the Montana Line & camped 2 miles beyond on
the Crow Reservation in Montana. Set out a lot of
Found an Indian baby buried in a tree in a goose
A grassy valley (smoothly rounded hills & ridges
covered with splendid grass. Only little
woods with a few resturing boxels along the

July 1  Caught 2 Arcticola & a Zapus & Bristles
Caught 5 Arcticola. Left at our traps &
shot near all day - Sun. Day
Found some very good fossil wood on top of
a hill close to camp.
Little Bighorn Valley

July 2 Took up traps but got nothing of any account and a couple of immature Cottontails. Mammals seem wonderfully scarce. From about 80 traps we got only 5 mammals. Buzzards seem to be the only species of all common. Even prairie dogs are scarce though old abandoned hole are common.

Started at 7 T traveled at a good rate till 5 down the river valley & camped on grassy flat close to river. Set out 93 traps (both 1st) mostly in brushy & weedy places for Rutherford & in old field for Rozet.

We are now opposite the north end of the Bighorn Mts. On the left is the range of high hills with west rough tops covered in spots by pines called on the map Rosebud Mts. They are back 50 miles from the river & between is a ridgy area of good grass land while on the west side of valley rolling grassy meadows extend to the Bighorns cut through at intervals by creek valleys. The river flat is from one to 2 or 3 miles wide. about half of it is splendid grass land & the other half covered with groves of Cottonwood, Ash, Boxelds, & Willow. In thickets of wildrose, chokeberry, plum, rose, cowberry & tall weeds. Big ditches have been taken out at several places & the whole valley might easily be irrigated, but only a few little patches are watered. Indian cabins are scattered all along through the brush but not on seemed to be occupied & we did not see a sentinel all day.
Crows Reservation

The slopes near two wire fences are full down to the gradeless basins are pasturing in the Indian meadows. All most of the sections a small patch of ground has been planted at some time but is now grown up to weat, clover, wild buckwheat, wild sunflowers & some other esoteric weeds. Evidently these patches have been planted to provide for the hordes but have not been cultivated often & its pour seed continues in the soil.

The valley is full of mosquitos which give us no peace neither late in the evening when it gets too cold for them. Probably the mosquitos have driven the Indians out of the valley for the summer, else they have fled upon the R.R. or else have gone to the big fight south of the agency.

R.R. grading camps were passed of in about 1 5/4 miles all day. The end of the laid track was passed in the morning a mile from an camps. The valley offers an easy & good route for a R.R. if a good road is being built. The soil of the valley is a mixture of gravel & sand & seems very productive. Every bit of the valley could

Travelled about 25 miles.

July 3: Out of 93 heads we got only 2 sickens & 2 Ayricon. Followed down valley which does not change much in character to the agency. Camped about a mile from agency.
Crow Agency

July 4th. Caught nothing in my traps, Oct 1st got only 2 Sittangs.

Called on the Indian agent - Mr. Watson.

Went up to the Cemetery and watched the Indian dance - a sham battle. There were said to be about 3000 Crow so present & 900 Sittangs, a lot of Sittangs, in all over 4000 Indians.

Returned to camp in time to set more traps, but it soon began to rain hard, but they seem in prospect of catching anything here.

July 5th.

Caught only a Sittang & an Acrisium. Raised hand all day trapping. Went down to Agency this morning. A lot of railroad trains were crossing & we could not get over tonight so camped on point between the Little & Big Horn Rivers & set traps on east side of both. Bigan Clinton again about sundown.
Between the Aganoor Fort the road runs across a Beautiful sand mesa which forms a triangle between the rivers. It lies admirably for irrigation & is splendid soil. The whole valley of the Little Rupan is well adapted to farming by reclamation & if not in a reservation would be quickly settled.

Rocks muddy & bad. No signs of animals except Turoncys till the banks were crossed & then all plenty of Peccaries & Kanguates.

Began crossing at Sunoloma.

Sorebatus is common at fork of rivers.

July 6. Custer caught a Peccary & Sitarus & I got some Sitars. The rain spoiled all chance of success. Made up some stores & went to the fort for blankets & got none. Had to wait till nearly noon & go across the river & then ford nearly half the river. Followed about 6 miles up river on west side & camped at edge of bottom land. Salt tracks in brush but tree is little sign to indicate animals other than Awtelas & Sitars.

The Big Horn river is high & muddy & treant full of drift. Islands & bottomland are covered with Waterworts, willows, bullrush, tusiers, grass & Amaranthes. A wide wide, flat valley with gumbo trail extends back on west side 2 miles & is covered with sage & Helianthus annuus & Sorebatus & grass. Food is good. Mosquitoes bad.
July 7. Caught only sitatungs.
Moved camp up river about 8 miles and
camped again on bank of river. Set traps
in brush and on flats. Passed through a
large Cyrampuckhabering Farm and saw lots
of recrkick holes. Mosquitoes are fearful.
A hot day. A good many cactus and oman
plants.

July 8. Sunday. We got 2 species of sitatungs,
from Lysius salviaticus & Lysius of traps
to escape the mosquitoes we pulled up & came back
down the river to the buildings and camped at
water holes, about 10 miles west of Custer.
A hot day. Came about 12 miles.

July 9. Started at 8 and crossed over a low
divide and down a small dry creek to Sheep Creek
up it to head and then over a higher, flat
tongue divide that resembling the kind Eastside.
Then down long Draw Creek to Pryor Creek
Followed up Pryor about a mile, crossed to west
side & camped a mile farther up.
Along upper part of Sheep Creek the valley is good
with splendid grass, a nice stream, pebbles & trees.
Pryor Valley is narrow + the bottom mostly brushy + trees + Potanic woodlots, rapidly willows,
bullbrush + brush. Abundant hills with flat, grassy
tops beside the valley + mixed back as prairie.

Pryor prairie has a few junipers growing along the
edges of valley floor down on Pryor Creek + on
buttes off toward the Yellowstone.
Pryor Creek is a small stream, crooked, in steepbanks
muddy + snitty.
July 10  mosquitoes were plentiful. Could hardly sleep.
followed up Prayer Creek valley all day + camped
about 3 miles above [south of] the Mission + Sub-
agency. Still about 4 miles to Pray Gap.
The valley opens out as we come up it. The hills
along the sides become bare + carry no pines + no
brush except in gulches. A few Pusillus angustifolius
were seen 8 miles below the Agency + Ponderosa pines
a few miles north of the Agency, only box elders +
willows going up the stream past it.
The Mission + sub-agency are in Hamilton Zone
in a grassy valley, well watered + pleasantly
located. Indian tipi's are all around them, but we
saw very few inhabited. Indian houses would stand clus-
to the Agency, below the houses are all closed +
the Indians away, probably to escape the mosquitoes.
Caught only a glimpse in morning + did not
reach camp in time to set tipi's before dark.
A hot day but a shower in evening cooled it.

July 11  Continued up through Prayer Gap to the summit
and turned up first little creek coming from the east.
We supposed it for Sage Creek, followed up it about
a mile as far as we could with wagon + camped.
At edge of thick patches of sage thinnings a wide
canyon. Set tipi's along stream + in pines.
According to U.S. Dept. Map the Mission is about 3600 ft.
and by the aneroid our camp is 4600. + the divide
in Prayer Gap is 4900
July 12. Caught only an Arinola longicuda. Went up canyon 1/2 mile, but got no response to calls. Hunted all afternoon. Killed 1 Squirrel on the way back. Weeds, sagebrush, pines, and hillsides. To hunt, both sides are good, but mostly pines and sage. The sun had set by the time we returned to camp. We made a camp at the mouth of a canyon.

July 12. Caught nothing. Broke camp and followed the creek down to the summit of Sage Creek about 2 miles. Turned up Sage Creek and followed it from 11 A.M. to 6 P.M. for beyond any road. Camped at mouth of the creek which has a good timberline and lots of grass. The creek is still clear, and we made a good camp. We climbed the slopes above the creek, which is filled with pines. We came to a good campsite about 2 miles up Sage Creek, which is not far from the road.

July 13. Had not only a few troops but got a horse and an Arinola 1/2 horse. Started up the Mt. at 9 A.M. took 1 hour and 15 minutes to the summit of the first peak. We were on the summit of the highest peak of the Payson Range. We were at camp near 10 a.m. and reached the top of the highest peak at 11 a.m. The trail is very steep, and the climb is very difficult. We made a camp near 12:30 p.m. and left early the next morning. We made a good campsite near a creek.

July 14. Had not only a few troops but got a horse and an Arinola 1/2 horse. Started up the Mt. at 9 A.M. took 1 hour and 15 minutes to the summit of the first peak. We were on the summit of the highest peak of the Payson Range. We were at camp near 10 a.m. and reached the top of the highest peak at 11 a.m. The trail is very steep, and the climb is very difficult. We made a camp near 12:30 p.m. and left early the next morning. We made a good campsite near a creek.
Picea engelmanni or Pines flexilis form timberslin.

P. engelmanni stops here. Pseudotsuga davidiana
aches the edge of timberslin as a dwarfed shrub.
I never saw a timberline before. Through the
altitude is not too great for it. In other timberslin
trees are as dwarfed and depressed as usual.
but if the altitude registered by the axis is correct
the timberslin at every line are abnormally
The north face of the mountains is open and they
slope off gradually to the south in great grassy
areas. A few small groups of stumps stand on top.

From the summit we could look all over the Bigton
Basin and see the Caum of the Bigton. Could see the
Bigton Mt. and Owl Creek as a continuous ridge
joining the High Mt. to the west of the Basin.

A bright spot of low country lies
between the Pinnac. Mt. and Beartooth and connects
the Basin with the Clarkefork Valley. Much of the
basin in sight is level, but steep slopes
show where the stream valleys are fertile.

A giant mass of mountains rises west of the
Bigton Basin. Thousands of foot of snow
accumulates above timberline in dense masses.

The high mountains of the Park are in plain
view to the south and into the Wind Rivers
and mountains reach far to the north.

I never saw a granely mass of mountains.

Saw 4 antelopes on top of the mountain.
but no signs of elk, sheep or deer. Horses and
cattle range over the top. Saw 2 Arctotys but
failed to get one. Cows are common on the plateau
over the summit.
On my way down killed a big black tailed buck or another.

Came to camp & got feedbacks & went after the deer. Got him on the saddle & the horse rolled down a steep slope & over and tick stuck a tree & nearly smashed himself.

Did not get back in time to cut hide.

A beautiful day.


Finished the deer skin. Made up small skins & set a good live of traps.

Rained in evening.


Made up a lot of skins.

July 16.  Caught 2 were Seineus & other things.

Cooking & starting down the Creek. Put half the load on the saddle horses, both team horses are lame, one from rolling down hill with deer on his back, the other burned his foot with an oak. It is not difficult to get down the creek with a light load.

Shot a big Curtuampson the way down & saw where an elk bed followed the road 2 miles since morning.

Camped at the first ranch on Sage Creek at edge of Indian reservation & about 3 miles from southwest of Prosser Gap.

Assumed camp. Avocetos Anastasia is the common name. Shot 3 young Sage grouse from a large flock consisting of 2 sized young.
July 18. Left Oatley + rode to camp while I took the saddle horses + packbrad + blankets, to + went + started down Sage Creek into the Big Basin. Followed down the creek 20 miles to a mouth where I arrived, at 3 P.M. + on learning that it was still 14 miles to the Stinking Water, decided not to try to make it, but turned back about 8 miles to a good place to set traps + camped. Camped at 5 P.M. + set out to keep plaster. Sotseus. Shot 5 Tawasee minims + a Cus擺moss. Stroik luceans first about 8 miles from our base camp at edge of reservation. Saw a small colony of Cus摆moss about 2 miles before striking the first C. luceans. After striking a level at about 4000 feet the character of vegetation changes entirely to desert Sonoran. Grass is scarce, Cactus + Scappotuce + Dickson nuttallii + Contostelia, Artemisia spinifera + eufyrtica are characteristic, though A. Physutata + cava are also abundant. Much how, dry soil scattered vegetation + brushlands give a desert aspect. The country strongly resembles that of Owl Creek + Rocky Creek. Sage Creek is a stream that I can jump across + carries no timber but a brush of Willows + Bull-bran brush. You can 3 branches up near the reservation line + no water till the one I struck + turned back ot + I think no water below till it reaches the Stinking Water, any way not for 9 miles below. The Cypress + Milpa up from the Basin ends in a dense forest. Part of this Base is rocky + covered with a thick fit of junipers or Cieasquepus bushes.

July 19. Caught only one Prosopitisc, shot a few more rabbits. Got up early + took up traps + started back. Reached camp at 11 + worked up down the rest of day.

July 20. Broke camp at 9 and struck across for Red Lodge by Clarks Fork. Camped at camp read 4:25, about 200 feet below top of Panora Gap. On rim of Basin 4500, At Clarks Fork 3375. At camp 2000. Crossed smooth mesa + up a gradual slope to rim of Basin. Then down a steep gulch through brook hills + rocklands about 8 miles to the river. Clarks Fork has a good songstruck valley irrigated for about 2 miles with Big ditches. Near the mouth taken out a sandstone starting up. A few Trees + some brush run along the north bank way. Reached the river at 1 P.M. + found it too high to ford. The water went over the horses backs. Took horse across in skiff. Road horses across + floated wagon with long ropes. Wagon rolled over river + at least the thing at 1 seat box. Got over about 4. Followed up river about 8 miles + camped. At that for Ruthertown. Mesquites very good. Came about 15 miles.
Clarence Fork & Red Lodge


July 22. Caught only Perogyatus & Perogyatus Sunday.

July 23. Caught a Perogyatus, 2 sitings sarvisicus & 2 michiganensis, or some other small form.

Started at 7 & reached Red Lodge at 2 P.M. About 15 miles all up grade. One hill took us up 1000 feet. Average of camp by Clarence Fork was 3425; at Red Lodge 5275.

Camped a mile short of town by Rocky Fork at 5275. Left the distinctly Solomon Valley at 5800 feet. All snow at edge of Boreal Zone. Rocky Creek is the softest stream without rocks I ever saw. Water is bright green, clear as crystal. Good frame below town. Red Lodge is a coal mining town of 100 people or more.

July 24. Spent the day in packing & stacking supplies & getting supplies on outfit & finding out about its country & country. All ready to pack up the caion in tommorow.
Reaathoh Mts.

July 25. Proved up the c arson to the last ranch about 5 miles above town and left our w ogan perpendicular. Put the relit on and two hand horses pulled up the trail. Left Rocky C aed at 6:30 and climbed up a rather steep grade to 9000 and then over great smooth slopes on a plateau slightly. Tilty slopes at the edges and leaves the last hard open for 0 days apparently about timeliers but not in elevation. Imposes they are spots of true timeliers along north slopes and big bales of arrow bay in the Sueses on sheltered slopes. It is jine traveling along the top of the cool.

Fresh air comes over the snow fields while it looks hot and may down in the valley. After 3004 miles along the top we camped at 9000 on a belt snow bales in a little point of a price. 

Picea engelmanni r.  r. - P- m. altitidus are the highest trees near our camp. 
Picea engelmanni r.  r. and P. - m. engelmannii come up the slope from 6200 to 9000 then Picea engelmanni + Abies took this place.

Dandelions slowly stopped lower down. The Alexandreum Microphyllum is abundant on the slope of full of red ross which are good. On the summit of which is bountiful and alpine plants abundant.

Camped at 8 P.M. at table for discussions + Shrews.
Beatooth Lake.

Sot an old & gang woodchucks & a
Semus & saw company.

The mosquitoes was very thick & warm.
Ice grew dense & cold. It is almost cold
enough to freeze within 6 feet. This
is a back of corn 30 rods long by 4
wide, and very flat and deep.

We soon reached the fifth west & great
forks rise high above timberline with
rims that are various fields.

July 26. Caught 2 ducks & a muskrat & an Elopom
& Situm.

Packed up & continued to follow the divide
between Travers & Rocky Ford & Clear Ford.

Travel slowly from 9 till 5 and camped
at what we suppose to be Beatooth Lake.

Wees about timberline all the way till we reached
the lakes, and part of the time out of sight of
timber. The snow banks were too soft to walk
so we had to pick our way around them &
often found its ground mush below them.

The breeze remained close to 9000 all
day though we caught more than we was hot
up & down. Probably our last night camp
at timberline was 10000 & we have been
more than 1000 just higher.

Found good tuck & went on the way
but not good. Passed dozens of little
lakes, one was partly covered with ice &
small snow glaciers were breaking of in
others. Most of them were deep & very
clear - some were green.
Breathoath With.

There are no trout in the lake - streams up here, the descent is too steep.

Saw lots of Arctopus, as 5, Lakitoks + auric "Tamar" + lots of signs of Logahere + Arctopus.

Saw at least 100 Arctopus, the same kind bird high up. Grass + alpine plants are abundant except where snow has just gone off of the ground here. The plants are almost all the same as those of the Wind River.

A very pretty yellow Caltha is new to me. Ledum glandulosum is in full flower which surprised us. Green + Bryophites are in full bloom.

In the evening the plants were all white with frost + the air had frozen + our little coal had gone dry. Snowed about half the day. Too warm we walked along with all the clothes on, we could get bloody. The wind drove the snow into our faces + we could hardly keep the boxes going against it. Probably came about 15 miles but made some long crooks that were unnecessary.

Breathoath Lake is about 500 feet below timberline.

July 27, Left part of our ammunition + some other things down at the ranch, so I started down for them. Went back over the same trail on which we came up. Started from camp at 8:20 + reached Red Lodge at 7 P.M. Killed a tamar + a Devil's gator.

Cold + a little snow fell in evening.
Beartooth Valley

July 27 Started up with Dr. Foster and reached camp at 6 P.M. A warm day & the horseflies & mosquitoes are very bad, especially the mosquitoes at camp at the latter. Shot 2 lambs & a young mule. Rose across the big meadows & did as good considerable distance.

July 27 Caught a lot of mammals & worked them up & set long traps. Took a trip down the creek to the fork & up the east branch & around over the ridge between. Killed only a duck. Raised by spears.

July 28 Caught 2 wapent & a lot of other things, set a line of traps about timberline & worked on skins. Dr. Foster killed a skothe blacktail fawn. Raised several showers. Mosquitos are very troublesome.

July 31 Took up my traps about timberline & worked all day on skins.

Aug 1 Worked till 5 P.M. on skins. Took up all but my Wapent traps. No frost in morning & no rain all day, the only day of no frost & no rain since we came into the WY.
Aug. 2. Broke camp and started for Cooke City at 7 A.M. Struck west over ridges to valley to edge of plateau & then down into Clarks Fork Valley at the junction of Crandell Creek, then up the Clarks Fork road about 14 miles & camped 12 miles from Cooke. Arrived at camp 8:30, at mouth of Crandell 6:00, at camp 6:00. On top of the Mts. we passed lots of little lakes & crossed numerous marshes & shimmering places & snow banks. At 8:00 we studied Populus tremuloides & Salix amurensis & other plants & also Thermophila elegans. Saw Tanacetum chilense 3 or 4 on the slope, but did not kill them. Killed 4 Gentianopsis & 3 Ronserias. Saw two Luzula candidi & passed through miles of thick woods where they are numerous. Struck Koscielez Run & Linnanes Ravine, the latter for the first time in my life. A few mosquitoes & flies bother us in the valley but not as many as on the flats.

Came about 25 miles. Clarks Fork Valley is a great glacial trough with rounded & rounded points & sides and deep in middle & half a dozen or more granite knobs rising 100 to 200 ft. High. Some of the glaciers with worn, round & smooth rock as hemispheres & almost bare rock.
Aug. 9. Followed up Clark's Fork over a divide - down to Cook City a mile beyond. Then down Soda Butte Creek to Soda Butte Station near its East fork. Yellowtail & camped.

Quelled and at warming camp 6:50. Ponded 7:00, at Cook City 7:00, at camp 6:50.

Came 8 3/4 miles.

Clark's Fork Valley continues to the divide as a glaciated valley full of forest & pines & streams. The forest is largely Pines everywhere with Pines and Juniper & Lilies & some Pines疏林. Popple is common.

Cook City is an old, dead mining camp in a cairn 6 miles from the rock face. At the hotel were a black & brown bear & a Lynx carnivorous cat.

Down Soda Butte is beautiful. Forest & pines & streams through a splendid cairn. With high, red rock walls, it is a well-bottomed, facing cairn, well clothed with evergreen vegetation & timber. The timber has a fresh, untouched look that is delightful, but we saw no sign of game or animals, save Red squirrels & denotibles & a few Blue grouse.

Soda Butte is a most likely mining zone.
Aug. 4. Came down Soda Butte Creek to the East Fork of Yellowstone & down it to the main river. Crossed on a bridge & followed a trail up the west side to Tower Falls & camped a half mile beyond on a little creek. Set traps for small things. Tower Falls are close to the river on a side creek, a very pretty fall about 75 feet high. The river flows through a box canyon & is narrow & rapid. Basaltic cliffs tower in places. Some high ridges are rocky or some kind of old lava rock. Only low mountains are in sight.

Ate at noon. camp at Soda Butte camp 6,600. At bridge of Yellowstone 6,200, top of Upper Falls 6,260. Camp 6,450. The lower valleys are strongly transition but no signs of Sirocco's presence.

Saw a Caribou doe. I will guess. Sheepbushes abundant. Reaches down to the river. A thence that climbs trees in Judith canyon. We saw a lot of fresh beaver cuttings along Soda Butte Creek. Some elk marks & deer tracks seen.

Pseudotsuga douglasii & pinus murrayana & P. flexible are the common trees. Some Picea angustifolia also common. Populus tremuloides is abundant in thickets & Populus balsamifera.

Passed some sulphur springs near the river above the bridge & some more at the lower falls. Came about 22 miles.
Aug. 5. Followed an old trail up the river and struck the lower end of the canyon. Followed an old trail along the edge through fallen trees on then up along side of a mountain a little way up the river. Passed a hot spring boiling very hot. Passed a hot spring and then again struck the canyon and followed the edge up to the hotel near the falls. Camped at 8 PM. Took boat to see the falls.

The views of the canyon are grand and wonderful. The sides are vertical or perpendicular & in the darkest places the light is often not over half as well. The sides are so vertical and many bright colored yellow, red, or green tints show. Little pinnacled shoot up all along the sides. The sides are an emerald green ribbon at the bottom, rapid & foaming. On the east side runs 3 miles below the hotel is a little stream falling over the edge of the canyon down in several white springs to near the bottom. After passing the spring, on the right we come onto the great plateau which is almost solidly covered with forest. For miles the timber is solid & looks like black velvet. Some large peaks show farther up. We came through numerous little meadows & passes.

Ammeter read 8000 at highest edge of canyon & 7700 at camp near hotel.
Caught an Averilo longicauda & A. pathola
Saw an Antelope, lots of deer tracks & some elk
tracks & 2 bear tracks. Lots of Scirpus &
some Tamarix that climb trees. Heard Antelopes
& few Spermaceti elegans, & an Osprey hooted.

Pendant sedge & Pirus muricarpus were most
abundant thus. At 8:00 we found
Alcove and Pinnace angustifoli is the commonest
spike on the plateau. Some P. flexilis is setting
and along. Posenia tenella is sparse from
thickets, & along the stream are Alnus & Salix
profusae & Linum perenne & Phlox drummaea
and sedges are in bloom. Balsamorhiza
angustiss. is common below but does not
reach up onto plateau. The top of the plateau
appears to be purely Boreal.

Went down to the falls of the Yellowstone
then across to Norris Basin & thence to
the Middle Basin & camped.

The timber is almost continuous &
almost pure Pirus muricarpus. The fallen
trees of old burning cover most of
the ground through the forest. The growing
trees are mostly small & stand thickly.

Saw Spermaceti latialis in several
places & lots of Tamarix & Scirpus & hills
of Thorneys.
Aug. 7. Octopus, D. Eddy & I took our saddle horses & leaving the rest at camp made a trip to Upper Geyser Basin. Saw the Castle, Blue Horn & Old Faithful sprout & had a look at most of the other geysers. Saw a little lidded geyser just off Old Exceed, a little scalpions with 2 lateral stripes.

Aug. 8. Packed up & returned to Norris Basin & on north to 8 miles of Mammoth Hot Springs camped by Obsidian Creek. Passed the Beaver Lakes & Obsidian Cliff. There is a big travertine in one of the lakes & an old abandoned one in the other lake. The best one is apparently occupied is built of sticks & rubbish in the lake, is about 10 feet wide x 40 feet high.
The Obsidian Cliff is a section of a lava stream and in one place an almost pure obsidian of a mixed quality. It is in basaltic columns 60 to 100 feet high & from a foot to 4 or 5 feet through. Great chunks broken out, are pure black glass, but not transparent. To the north of us is a good sharp Active & a slow flat one.
Killed a Taima's buttevecrach with a stone & saw a tried to kill a lot of S. Lateralis. Saw musket boreas.
Camped & cut timber by the edge of Willow Park.
A good heat in morning, warm day. Midgets bad, a few horse flies, at in evening a few mosquitoes.
Aug. 9. Went down through the Golden Gate to Mammoth Hot Springs. Crossed Gardiner River up one fork over a divide & down to the Yellowstone at Horse Hotel & on 2 miles farther to the bridge & camped. Came 30 miles. Came out of the thick timber into a park region & at Willow Creek & Indian Creek stuck Sparrowhawk eagles at about 7400 ft. Top of canyon leading down through Golden Gate is marked 7300 ft. Down the canyon we drop rapidly to the Hot Springs. drop 200 or 300 feet & across the river.

In the deep river valley there is little timber & it is mainly Benchmark Zone. Douglas spruce & junipers are the principal trees. It is a hot canyon & on the hottest slopes are several species of evergreen plants. Grassy ridges & potholes characterize the country between the Gardiner & Yellowstone Rivers. A good antelope country. We saw two prong - 11.15.

At the Yellowstone River we strike another Transition Valley with a possible element of Serrano on hot bare slopes but so thin Serrano Zone. The riddle is tundra type & forest & physiology. Saw a Badger, Posing and Zebra & Yellowstones eagles. Caught a spruce in evening.

Aug. 10. Started at 8 & Reached Cooke at 7. Came across to East fork & up Soda Butte Creek on the route by which we went down. Rained about half the PM. Camped in old cabin at Cooke.
Aug. 11. Got a late start. 2 horses had to be shot. Crossed the divide & down Clarks Fork to crossing above mouth of Crandall Creek & camped on east side of river. Killed a lot of Zeenis & Eupnothilus.

Aug. 12. Started at 8 & reached our old camp at Beartooth Lake at 2 P.M. Found the trail very good as we knew the way & could cut off home distance & found little grading. Eas' came pretty 15 miles & from 6,000 feet to about timberline.

On leaving our camp at the lake 10 days ago, Dutch's left out 12 Matin Tribes thought he went to them & found a Matin, a Lyres & a Node. Mosquitoes & flies still bad.

Aug. 13. Left camp at about 8 & camped 14 miles above Reid Lodge at 7 P.M. Got the mail.

Aug. 14. Worked all day on specimens & got mine all in good shape. Dutch has still some mines to stuff.

Aug. 15. Worked on supper & packing specimens. Set a few jokes in motion. Saw some but but did not get on.
Aug. 16
Left Red Lodge and crossed over to Red Lodge Creek and down it to about 15 miles from town. Camped at Lee's ranch. Wrote till late.
Since we went up the Loie, the grass in the valley has become brown and dry.

Aug. 17 Cropped over to the Rosebud Co. and down past the old Crow Agency to Stillwater River and down it to the Yellowstone. Crossed it to Stillwater.
Good Sorawen Lake runs up the valley of Stillwater River about 13 miles from the mouth. Pined Bumps over the rocky valley sides. Thick timber and brush along the river and its black green foliage makes a strong contrast to the yellow, grassy, valley terraces.
Set traps for Rattlesnakes along river. Camped at edge of town.
Paid 1 dollar toll on the bridge.

Aug. 18 Followed up the river to Maellt.
I turned up Beaver Creek and crossed to White Bear. Up it to war source, over a divide, then down into Lake Basin and camped at first water. Up White Bear Creek up an in a great grassy, sloping prairie with pine covered hills on both sides, lots of currents & chokecherry along creek.
Lake Basin  

Aug. 19

Camped @ Alvordt & Butey caught 2 Perognothus. Went down across Lake Basin in a N.E. direction & across a low ridge & through Hailstorm Basin & across the rim & over to Painted Rock Creek & camped.

Came about 30 miles. The bottom of Lake & Hailstorm Basins is mainly Sourdine. There are some large pools of alkaline water & one small stagnant stream in the basins. There are some good patches of grass & good feed over most of the basin.

On south rim of Lake Basin the overpriced cool 4400, in bottom of basin 3700, 5 in north rim 4000. It seems to be a true basin with no outlet. The rim is a perpendicular escarpment of eroded sandstone. The bottom of the valley is ridged and uneven. This is an old lake basin mounds. One pool that we passed is covered by a white crust of alkali. The soil is partly gunba, but mostly sandy. Sourdine plants fill the basin to bottom of rim. But are mixed with transition species. Various cresses etc. Desertis & Eufodia & various other annuus & Origenes are all abundant. Gentiana & Mertensia is one of the most characteristic. Another is Artemisia frigida.

Lot of Perognothus were seen. brushing hill

Morn. Saw about 60 antelopes @ killed one. Saw lot of Coyote & Wolf tracks & some badges. Killed 5 Thunder minimum along Painted Rock. Pines & Pecosabum grows on its hills.
Aug. 20. Came 10 miles -crossed the Russellville Fork - noticed country beyond about 19 miles - cant find any alkali pools. The country is barren & much of it ground one by step. Travelled all day in Sororan Zone. Ragweed & Parthenium form a good 50% of plant along river. The rivers is sluggish & not very big. The valley is alkaline and booked & barren. Cacti is abundant. Sarcobatus & Antitypex common + 9. Confertifolius, f an annual Antitypex. Oxyptis & Helianthus annuus + other Sororan plants are common. 

Saw lots of Peckytothepole & some good Sarcobatus holes. Lots of Coyote & wolf tracks along road. Dr. Foster killed a big black antelope from a bunch of a dozen or so.

Most of the soil is gravel and some quite typical ridges of badlands occur. Approached camp tonight are some excellent specimens of badland butte with bare sides, colored strata & sandstone caps. Lots of fossil wood is peeling away the base & some fossil bones. At night day & the glance from dark, black soil of ashy color & radiated heat are very unpleasant & very hard on our eyes. Had no distance of over 9 miles without water but mostly in alkaline pools & not fit to use. Passed two skunks, but even in their tracks is very alkaline & has a smooth, feel & a sweetish taste.
Aug. 21. Caught stock at Stony. Counted about 600 sheep as yesterday dry & baked. Neat elk & hole. There is plenty of grass but it is becoming very dry except in the gulches. Coal crops out in numerous places, but only poor quality of lignite.

Surprised nothing or in long slopes. A few trees along scale of the streams. No finer hills till we reach the foot of the Mt. Passed a ranch on Swimmers Flat Creek & another at a halfway point & another on Carlinas Creek. Followed up the west side of Carlinas creek across long, smooth mead about 3 miles & across head of Swimmers Creek & up a long, narrow valley in a season of late
of Mt. Found 2 springs in timber Creek, but found a couple of strings of at base of Mt. & found in thick, stony timber at head of wagon navigation. Meet f the timber is destroyed to, a little Picea + letter does it in mostly Pinus p. auct. + Populus tremuloides. + P. angustifolia.

Camped late & only at the bottom. Found both I deer & bear tracks.

A hot day & it seems good to get into timber again.

Aug. 22. Set out a line of tracks at camp in P.M. took our tracks & cash a blanket & lunch & started up the mountains to camp & set tracks on top. The Mt. was too steep to get a horse up. It was a step, hard climb of 2,500 feet from camp to first peak & took us 24 hours. Then crossing a saddle we reached a big snowfield where we got our first drink of water. Then went to
Big Snowy Mts.

The top of the main ridge, 100 ft. higher than the first peak. Crossed over the main ridge to a small snowbank on north side where we got water in beds of edge of snow & by eating snow & camped & set up camp about 100 yd. below the summit, slept in a clump of dwarf pines.

The top of the range is mostly barren & dry, great fields of broken rock with hardly any signs of vegetation. Timber comes to top of the range along very west half. There is good grass for feet along the edge of the north slope.

The whole range seems to be a bad vegetation with occasionally pockets of old forests of ft. The striae are nearly parallel at the top with only a slight dip to the north.

Numerous funnel or well shaped sink holes occur on the summit, some are deep and contain snow down 20 ft. or so. The broken rock is in small cobbles, which on level places are usually arranged on edge. There seem to be no openings in the ledge rock so the shingles is in to small pieces that no cut can ever cut in offered for loggins.

Pyrus oregona is the commonest plant on the top, dead ones. It grows in rocks & beds. It is in broken pan north slope. The first deer saw to know. Sharp & has tracked and crossed the range.

We saw mountain sheep, moose & elk.

When the marshes are abundant.

Buck grass & Droppers at fowls, sour more.

So another we could not see to bottom of ridge.
Aug. 23. Slight cold, got up early. Caught 2 shotes & 2 bearbats. Slept down the mountain & reached camp about 10 A.M. Killed a Yarnia in caion. Saw lots of deer & bear trails. Re cloth camp, tired out & worked the rest of day skinning 19 warrinals. Found a Yarnia & a lot of Eocitiges in lower tides & 1 bobcat. Moved camp half a mile down into lower pass where Dr. Frosty found a good skreen. Not & very shoty.

Aug. 24. Caught a lot of small warrinals, worked all day making skreen & selling more tides. Dr. Frosty left us for Great Falls to Clorado. Another hot day but not so shoty.

Aug. 25. Caught 2 hime bladder & a lot of small stuff.


Aug. 27. Took up tides & started for Great Falls. Went down the bitter about 3 miles & crossed the wreek and over into the valley rest where we found a skreen & a lot of Eocitiges instead, the first of the season. Continued across creeks & rivers along foot of Big Sierra MT. To west end of caion & alond the Gog to Gt., a store & caion & hotel & stuff. Yere is a break of about 10 miles between the timber & the Big Sierra MT. Firtree is dry & jerson & grassy valleys & small creeks. Salted fish caught in places. It in the neck of the caion, the Mill on the rivet.
Leaving Wot we trav'd N.W. over dry meads and short grass prairies with very little water in 10 miles & camp'd. Lots of Thermophile all along but no Cyromyci seen.

Camped early & walked up earlier & at a few steps Came short 2.5 miles.

Aug. 28. Travel'd all day on grassy plains, or smooth woods and creek valleys between.

Most of the creeks were dry. Judith River is the only stream of any size & it could be jumped across. It furnishes water to a lot of large ranches in an excellent farming valley. Philetta willows & few trees grow along it, otherwise no trees seen all day. It is so smooth we can not pass over 5 miles.

Now on mountains and few hills. Wheat, oats, & hay appear to be the principal crops on the ranches. Passed 8 large herds of sheep & saw a good many cattle & horses on the range.

Passed all day in Zamarillia Zone, though down to 4000 feet. At Philbrook there were no signs of Sarcosuca. No cacti or only 2 or 3 plants of Helianthus annuus. Artemisia frigida, Plantago ruthenica. Calestris secundus are the characteristic plants besides grass. Graminae grasses are the prevailing species on upland.


Came short 25 miles. Philbrook has a good little store & a charity hotel.
Aug. 29. Shot at a buck at camp in the night & caught 3 deer.

Got a late start. Travelled all day on prairie & saw a few willows on creeks at Stanford. No trees.
So early we could not see a rabbit.
Grass started to grow & was very hot.
Lots of shrubs & little pines.

Saw on horses & some boulders & lots of sheep & black & white.
Lots of longhorns & antelopes & prairie dogs.
A little rain in the night made the ground slightly sticky in morning. Clear by morning.

Camped at Grafton, a stage station.

Aug 30. Started in a drizzling rain & it did not last long & did not make the ground very bad.

Cleared off by noon but still rainy.
Some kind of country continued - prairie and long ridges and valleys. Passed Geyser and Camp Stage station & P.O.
Passed through Arminia and Belt and camped 2 miles below Belt on creek.

Saw a few Pandois along rocky creek banks near Arminia & along a little Creek. Is a good row of trees of Pinus Balsamifera & P. argentea & willows. High sandstone ridges border the narrow valley and coal crops out under the sandstone at is mined to some extent.

At Arminia, a Serrate ash appears, though weak. Shepherdia argentea, Philadelphus cimicifolia, & Amurica appear for the first time leaving the Musselshell valley. Also Glycyrrhiza.

Saw on tamarisk in valley at Belt.
East of Caza is a very interesting hike running for 4 miles, or as far as we could see along the crest of Rocky Ridge. It is a crystalline rock, apparently of volcanic origin, incised in an upright position. A strip about 2 feet thick and unknown depth breaks in irregular horizontal planes.

Aug. 31. Climbed out of the Atlee Creek Valley and struck N.W. across nothing but prairie to Great Falls. Could see the chimney as soon as we reached the top of the prairie 3 miles from Reed. Struck no water till we reached Great Falls City. This is a very good town, 4,000 people and boiling. I should judge, contains 15,000 inhabitants. Got our mail, crossed river and camped a mile down stream on North branch. Set a few traps.

Sep. 1. Packled 1000 jaws and made report and letters and returned to town & sent them & got supplies and in P.M. started down X river on the right to Great Falls. Reached the falls after dark and camped above on edge of prairie. It is too hot to set traps.

Sep. 2. Sunday. The Great Falls are 78 feet of sheer, steep. About half way across the river the falls are broken to form a series of five cascades. The water is now low & the falls are not very great, compared with some others. The rock is all rhyolite. The cairns below the falls is nearly 200 foot high.
Great Falls

Sep 3. Wrote reports, packed specimens & left.

Wind fresh all day. Cold.

Sep 4. Caught a Minnesota & 2 Setaregs. Picked up 2 Minaregs & 3 Setaregs. 

Boke Camp & returned to Great Falls tent & thres of Sun River Valley about 13 miles to near Sun River & camped.

Cypress are very numerous. Shot a Badger.
Saw Slept-Up-Child hold only near Great Falls tent. 

Made up airing in evening.

Came about 25 miles.

Sep 5. Followed Sun River Valley to Sun River (town) & then left it, valley & turning, northwest traveled over smooth, gently rolling plains to a great dry basin called Freezeout, where are almost bluebells & much stock, sheep, cattle, horses.

A few miles beyond we struck a large ditch of excellent water, coming from W. & W. N. & a lot of men near it. Camped by the ditch, with good grass & water. Not a tree near coming.

Sun River Valley is cattle & is full of fine canabec, with large fields of hay & grain. Good buildings, fences, set oat & peas, good looking farms. The river is quiet, clear & the water excellent.

Went along road for 15 miles between Sun River Crossing & Freezeout, but good grass all the way. Lots of Cypresses & Sheepshakes along road.

The high, snow-capped range of the Rockies appears not far to the west!
Choteau to Roberts

Sep 6. Rained incessantly all night and all day; stood in camp and did very little work. Killed 7 ducks of 6 species. Cleaned guns and did odd jobs. $2 for tips.

Sep 7. Cleared up in morning. Ground wet and roads muddy. Caught only an Arctic, killed some more ducks. Got a late start went through Choteau and camped just north of Bigim. Came only 17 miles. Roads soft. All prairie except the eastern valley. Choteau is in the valley of Grand Bottom Creek; which is a good farming valley. There is abundance of water for irrigating. The land lies in broad gentle slopes. The country is pretty transition. About Choteau are Pupulus angustifolia, Salix, vestita, Alnus, Betula, redunta. Elymus argenteus, Potentilla fruticosa in the creek valley. Not a Soran plant appears. A branch of Shepherdia argentea appeared in the road but not seen growing. Fine grass covers the prairie. The Tetons Mts. seem about 20 miles distant and are a rugged, broken, rocky range with a low timberline—some old arrow.

Sep 8. Started early + drove 25 miles to Roberts on Bird Creek and camped in time to set out adult of traps. Traveled over somewhat broken prairie with numerous alkali runs and dry gulches, good grass. Timber seen only on Drygalski and Birsch Creek—on them only Pupulus angustifolia and a few trees of P. balsamifera.
Ducks to Blackfoot.

Saw 10 Archibuts & killed one of them. They are hunting them plentiful.
Shot a Badger but did not get it.
Ducks now a store, a saloon, a blacksmith, shop & church, is the best town in its county.
Resear is only a saloon & ranch.

Sep 9. Caught an Alytonys & some Situnys. A fox stole some of my things so we stay over a day to try to catch Ellipee relays.
Shot a Tanimus lutorecentes & Lupus campetarias, etc.
Went to trapas by moonlight in evening and found a Ullipes relas in one of them.

Reached the Blackfoot Agency at noon & Blackfoot at about 6 P.M. Came 27 miles.
Saw the agent, Chief Mr. Garrett, & got a letter from him. Met the Agent, Capt. Cook, in the road. Passed the Catholic Mission on Two Medicine Creek.
Camped near town on Willow Creek.

Sep 11. Made up skins and went some reports. Didn't move camp.
Set traps for Arorolas & Situnys.

Sep 12. Intended starting early for the lake, but a cold rain continued all night, rained all day with snow & snow on prairie & much snow in mountains.
Blackfoot, Mont.

Made up skins of Harveys & Gnoridg, etc.

Sep. 14. Started outfit & turned out to horses. Took train east at 2 P.M.
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**Total Miles Traveled:** 374

*Note: Some days with no entries have been filled in with an assumed distance of 0.*