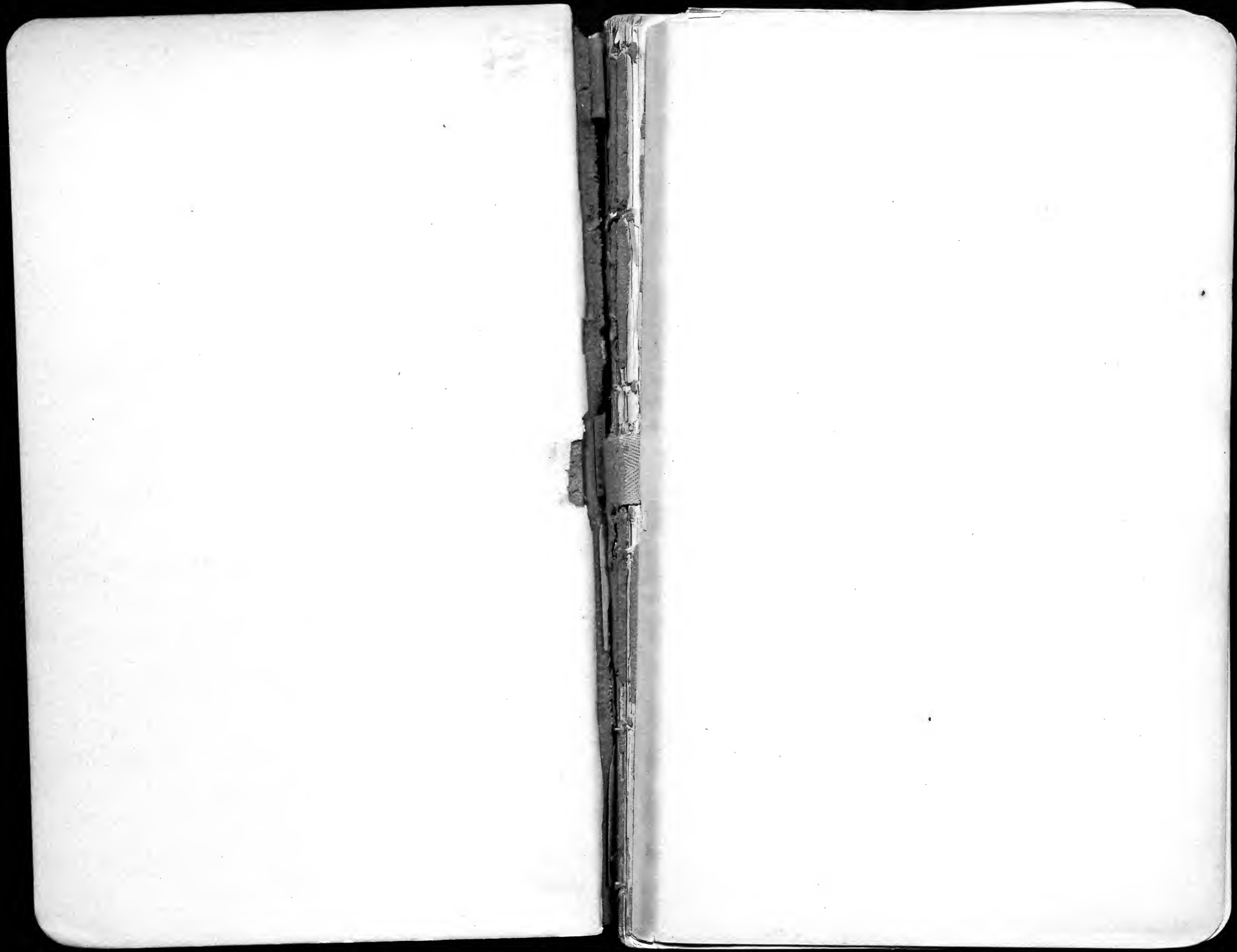


JOURNAL

1899

Vernon Bailey



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April 3 Left Washington at 9:20 P.M. on Norfolk Western R.R. for Lake Charles, La.

April 4, Daylight near Roanoke, Va. Snowing hard & 2 inches of snow on ground.

Reached Chattanooga, Tennessee at dark. Left the snow about noon.

April 5, Woke up in forests of Pinus palustris in E. La., reached New Orleans at 8:20^{am.} & left at 9. Reached Lake Charles at 6 P.M., raining. Went to U.S. Hotel, a wretched place.

April 6, Called on Mr. Krapp & learned that I could stay at Iowa Station. Took first train back & located there, 12 miles east of Lake Charles. Set traps all of P.M. Caught 2 Geomys & 14 Microtus.

April 7, Caught a lot more Microtus & 3 Onychomys. Made up skins & set more traps. Met Mr. Levi Spalding who traps & hunts & knows a good deal about animals.

April 8 Caught more *Microtus* + *Thomomys*
+ shot some birds. Made up skins
till 12 P.M.

April 9 Sunday. Took up traps, made
up a few skins, packed up + went to
Lake Charles. Found I could not go
from Cameron around by boat to
Galveston so decided to go direct to
Galveston by rail in the morning.

April 10, Got up at 3:30 + took 4:20
train for Galveston via Houston.
Arrived at Gr. about 11:30. Went
to Tremont Hotel + explored the island.
Found no signs of *Geomys* or *Perodipus*
or other mammals of importance.

April 11 Mr. Bray came last night
+ I found him this morning at the
Hotel Grand.

Took the 9 o'clock boat over to Bolivar, on
the point east of the bay to see if that
was a good locality to work. Found
it flat, no *Geomys* or signs of small
mammals so decided to try the north

Virginia Point

side of the bay. Came back to Galveston and crossed over to Virginia Point. Took my gun and started over the prairie to find a ranch where we could locate. Tramped till dark without any success. Staid at a ranch over night & slept in barn but decided not to stay longer.

April 12, Got up early & ate breakfast by lamp. Started out again in search of a place to stay. Soon found a ranch where we could get board & be in a good locality for work - with Mr. Lee Dick, about 2 miles N.E. of the station at Virginia Point, out on open prairie but near an arm of the bay & salt marshes.

Wired Bray to follow & he came out in P.M. Set traps, caught geomys & shot a spilogale & shot birds. Made up skins & set more traps.

Virginia Point

April 13

Caught *Oryzomys* + *Geomys* +
Spilogale + shot a Cottontail. Set more
traps + made skins most all day.
Clear + windy, warm.

April 14. Went to traps + got a *Mephitis*,
a *Spilogale*, a *Rossom* + a *Mus musculus*.
shot some birds, made up skins and
wrote a little on reports.

Clear most of day, windy but ~~too~~ warm.

April 15 Left Virginia Point at 5:36 PM
for Houston and arrived there at dark.

Went to the Grand Central Hotel and
staid all night so as to go west
to Richwood by daylight.

All prairie from Galveston to ~~the~~ 3 or
4 miles of Houston where the trees begin
near Buffalo Bayou. These trees are
scrub-pines, oaks, cypress, *Crataegus* + etc.

The prairie is flat and mostly
covered over with the usual mounds
and *Geomys* hills are seen wherever
the mounds are. *Sisbania* bushes, killed
by frost, are common, also *Bastaria* of 2 species

Houston to Richmond

April 16, Left Houston at 9:15 A.M. & reached Richmond at 10:20

Prairie country all the way except where one or two streams carry strips of timber across toward the Gulf.

Much of the country occupied by cotton and corn and ~~some~~ sugar cane farms.

The usual prairie mounds are common most of the way, though absent from several wide areas. Gramp's hills common where the mounds are and so where else. ~~except~~

Sunday, wrote most of day. Rained

April 17

Wasted most of the day trying to find a place out in the country to stay to work. The people are too lazy to be obliging or else too poor. The ranch owners live in town.

Niggers rent and work most of the land and raise cotton to sell & corn to eat.

There is fine timber along the rivers in dense, mass ~~deep~~ forests, but most of the country is level prairie and rich soiled. The roads are white with sand since the hard rain of yesterday.

Richmond Texas.

April 18, Set traps in timber a mile south of town and along railroad out on prairie. Killed a lot of birds and tramped over a good deal of country.

April 19 Bray returned from his trip to Orange and Lake Charles, where he went from Hornston to get the ranges of several species of pines.
Went to traps & made up specimens.

April 20-21

Busy trapping, hunting & making specimens -

April 22, Took up the last of my traps, packed up and took the 10:41 AM train for Port La Vaca.

Rode all day over the level coast prairie crossed by strips of timber along the streams. From Richmond to west of the Colorado River the country is uniformly prairie and heavy timbered strips like the coast prairie of S.W. Louisiana & east Texas, but west of the Colorado River bottoms

Port LaVaca

there is a change to more arid conditions, dryer prairie with more sand in the soil and a scrubby growth of timber. This is noticed particularly at the next stream we cross, near Louise, where the trees are mostly low, scattered live oaks & post oaks. ~~the~~

From here west to Victoria we are in a drier region. From Victoria south to Port LaVaca it is all level prairie with scattered Mesquite & Mesquite, black, waxy soil, no mounds or grass, good grass & lots of cattle, few farms, plenty of jack rabbits & limited grouse.

Port LaVaca is on the bay shore. The only timber is mesquite & Huisache (*Prosopis juliflora* & *Acacia farnesiana*).

Went to Bay View Hotel which is the best place we have found in Texas. - new & clean with good service & good food.

Port La Vaca

April 23 Took a long tramp up the shore and found a host of new plants - mostly chapparral shrubs of the Rio Grande Country. A big native yucca, Opuntia engelmanni, vulgaris?, and a slender one like texillata, Prosopis juliflora is abundant, so is Acacia farnesiana, and a small one, + Sisbania cavanillesia, Berberis triplata, Bumelia and Lycium, 2 or 3 species of Condalia, and a few Parkinsonia aculeata. + others

This chapparral strip is confined to the shore ridges + most of the way is very narrow - but very dense + very thorny.

April 24 Left Port La Vaca at 9 AM and returned to Victoria + then to Cuervo where we arrived at noon. Found Mesquite + Huasatcho prairie up to Nursery and then struck open growth of post oaks + live oaks + kept in them to Cuervo. The country becomes more hilly as we get north. We follow near the river which may account for both hills + timber

Quero to West Point

April 25 Set traps, hunted and tramped over the country most of the day. Made up a lot of bird skins

April 26 Got a horse and buggy + drove across onto the big rolling prairie west of the Guadalupe River. Found some new plants, saw a Caracara and shot a *Lepus texianus*. Caught only Geomys in my traps. took them up. shot a big bull frog that would weigh 3 or 4 pounds. Had it cooked + found it rather tough, otherwise very good.

April 27 Left Quero + traveled north to West Point. To near Yokum the scrub oak and half open country continues, then fine rolling prairie begins and continues to Flabsonia. Then we enter the oak openings again and have such desert plants as cactus, mesquite, acacia, forbesia, Sisbania, yuccas, + etc. Live oak, post oak, and black jack are the conspicuous trees near West Point. Harder timber grows along the river bottoms.

West Point to San Antonio

April 28 Left West Point at 12:08 and returned to Quero and thence N.W. to San Antonio. Crossed to west side of Guadalupe River at Quero and out onto the rolling prairie. The scrubby mesquites are abundant on this prairie and become rarer as we go west. The big, pale yellow flowered *Opuntia* & the smaller, dark centered flowered one are abundant. At Westhoff the country has become almost typical mesquite plains with abundance of cactus - including the bushy *Opuntia* *suffruticosa*. *Acacias*, *Cordylia* & *Mistletoe* are common. Where we strike the San Antonio River all is dense Mesquite & Cactus with a whole set of desert plants. Big Neotoma houses (the first seen this year) are common. A badger hole was noticed, Gophers seem to be common all the way. This mesquite & cactus country continues with little change to San Antonio & beyond.

note:- A trace of the arid, mesquite flora reaches to the west edge of the Colorado River valley (on the high prairie 10 to 20 miles west of the river) & shows in scattered mesquites, cactus, yuccas, & etc. - The pure mesquite & cactus plains reach to the west edge of the Guadalupe River valley west of Quero.

San Antonio

April 29. Took street car out to Ft. Sam Houston & walked beyond into the mesquite forest. The country is dry and markedly arid, still almost solid green with shrubbery. *Prosopis juliflora* is the dominant tree. The few *Sisbanias* are mostly killed. *Diospiros mexicana*, ~~and~~ *Leppia lyssioides*, *Cordyba*, *Berberis trifoliata*, *Altis occidentalis*, *Quercus virginiana* & post oak are all common. The big *Yucca* grows in places. The two big *Opuntias*, one with tawny yellow & one with dark orange flowers, are extremely abundant & the smaller one with yellow flower & orange center is only little less so. The *Opuntia suffruticosa* is abundant & does a large share in making the thicket an impenetrable mass of thorns - Cactus wren & Mocking birds nests are common in the *Yuccas* & thorn bushes. *Motomva* trails & burrows were found but no houses. The short gray wren (*Tillinsia*) has killed many of the oaks

to Kerrville

Left San Antonio at 4:30^{P.M.} and arrived at Kerrville just before dark.

Soon after leaving San Antonio we begin to climb and at the edge of town begin to notice a thing of mesquites and more open country. Soon the big limestone hills appear & we are cutting our way into the first escarpment. Some of the hills & cliffs seem nearly 1000 feet above the valley in terraced, horizontal layers of limestone. Except for the bare rock they are covered with scrubby growth of mesquites & oaks & junipers. The land is all stony, but the valley bottoms are fertile & well farmed in spots. As we continue the land does not change materially to Kerrville except to become more open & less covered with thorny growth. In places the dwarf "shin oak" forms miles of thicket. Live oaks appear in places.

The climate seems to be quite different. Much drier & cooler. The cactus are not in flower & vegetation has an early spring look. The air feels much cooler & fresher & drier.

Kerrville to Lacey's

April 30, Waited at the hotel till we could see Dr. E.S. Palmer and did not get started out to the country till late.

Got a rig and drove over to Lacey's ranch. Crossed the Guadalupe River & keeping nearly due west followed up Trustle creek to a mile below Lacey's, then up a side branch to his ranch.

May 1 Set traps & shot a lot of birds
made up skins.

May 7 Took up traps, made up a few skins, packed up & returned to Kerrville.

We were sorry to say goodbye to Mr. Lacey who has treated us with the greatest hospitality and helped us in many ways with our work. He is one of the best specimens of a typical, wholehearted, generous Englishman I have met. He has a good ranch but does not give much time to farming or business. Collects butterflies & knows birds & mammals well.

Kerrville to Fredericksburg

May 9 Left Kerrville at 7:30 and reached Fredericksburg at 12. 26 miles, fairly good roads most of the way. Kerrville is 1750 feet. Fredericksburg 1695, the divide between is 500 feet above Kerrville - 2250. Scrub oak country all the way. The last half of the way becomes less rough and stony, & is largely improved. Great fields of cotton & corn & wheat look good. Much of the land near Fredericksburg is sandy and very fertile.

No geomys hills were seen till near F., where they are numerous. Tramped over the valley in P.M. looking for signs of Microtus pinetorum & set traps in numerous ridges probably made by moles.

Stopped at the Schling Hotel, Fredericksburg is a typical German town with solid, substantial houses, & a neat, prosperous appearance. The farms are well managed & the whole country seems prosperous.

Friedrichsburg to Llano

May 10 Left Friedrichsburg at 8:30 and reached Llano at 6. 45 miles over mostly good roads. The rain made the wayland very sticky, but fortunately the road is mostly over sandy country. At about 18 miles from F— we strike sandstone and soon after granite. At 20 miles we go down over a considerable granite escarpment into a broad valley, & keep going toward the sandy, a big creek or small river. Then over ridgy or flat country to Llano. On coming down from the granite escarpment the mesquites increase & then are the dominant tree for miles. About 7 species of cactus & 2 of yuccas are abundant. In places the bee blossom, *Lycium*, & *Ziziphys* form quite a chaparral. Jack rabbits are abundant, we saw one *Urocyon* & 2 *Sciurus harrisi* & on the granite ridge 2 beautiful black *S. buckleyi*. Saw Group hills all along on sandy ground. Saw *Geococcyx* & *Calamospiza*. There are more large ranches and fewer good farms after leaving the vicinity of Friedrichsburg. Llano is a wretched place.

Llano

May 11 Were thoroughly disgusted with the Southern Hotel, where we stayed all night. So crossed the river & found quarters in the military school near the Depo.

Tramped over the country in forenoon & saw plenty of *Lepus tex.* & cottontails but found no fresh signs of small things. A tremendous rain in the night beat down all fresh tracks & filled up burrows.

In p.m. Bray went down to Austin & I set traps for *Neotoma* & *S. buckleyi* on rocky ridge a mile N.W. of town. Saw several spew-ophiles & shot one half grown one. Another hard rain passed over us but did not last long.

Llano is a border town of the roughest & poorest sort. At some times it has boomed but now many of the best buildings are empty. It is a bare, dusty, ill kept place, full of loafers. On our side of the river there is the advantage of plenty of room & few people.

Llano to Burnett

May 16

Left Llano at 2:40 and came down to Burnett to take the stage over to Lampazos.

Crossed the Colorado River, with its red, muddy water, & then entered some limestone country again, where junipers are abundant. Passed within about 5 miles of Park saddle Mtn, which is some 15 miles from Llano. It is a granite ridge, or set of ridges, standing 1000 feet above the valley & covered with scruboaks & junipers apparently.

The country is generally rough but in places along the valleys there are good fields of cotton & corn.

Flowers are so numerous as to color the ground for miles.

Burnett is an odd little town on the Texas plain, built around the courthouse square. The little hotel is really pleasant & well kept.

Burnett to Lampagos

May 17. Drive across from Burnett to Lampagos - 25 miles. The valley at Burnett is fairly good farm country. Mesquite & Liveoaks, post oak and black jacks make a scattered tree growth. We soon begin climbing gradually and 5 or 6 miles out are on top of the San Gabriel divide (1454 ft. by Geol. Sur. part), a limestone ridge 25 miles long, 5 or 6 miles wide where we cross it, covered with dense growth of shin oak. There are some post oak, junipers, viburnum, shrubs *capallina*, & other shrubs but the shin oak predominates. Coming down the northeast side of this ridge we strike broad prairie with vast sweeps and slopes of grassy open country. Small groves & bunches of trees dot the prairie, distant buttes & ridges rise above it. In places *Psoralea* & *Sylphium* are common. Grass is luxuriant where not pastured to close. Numerous flowers color the prairie.

But little of the country is cultivated, large tracts are fenced for stock.

No Geomys hills. Soil hard & clayey. The country about Lampagos is beautiful.

San Angelo

May 18 San Angelo is on the open, mesquite plain in the genuinely arid region. There are great stretches of smooth surfaces with only short grass & little desert plants, but much of the country is covered with a scattered growth of small mesquites. The Concho River has cut a narrow channel in the limestone & has steep clay or rocky banks.

A double line of fine large pecan trees grow along its banks. The conspicuous plants ~~are~~ beside mesquite & pear are *Cordyba*, *Lyssium*, *Acacia ramana*, *Mimosa proserens*, *Diospiras*, *Alnus*, *Zyziphus*, *Schrankia*, *Yuccas*, *Opuntia engelmanni*, *O.* — (dark centered), *O. suffruticosa*, *Echinocactus*, *Cereus*, *Warrilaria*,

Prairie dogs are numerous and generally distributed. *Spermophile* holes & *Neotoma* nests are common but I don't know the species. There are no *Geomys*. Badger holes are common & a badger was brought into town alive today.

San Angelo to Sterling City.

May 19, Left San Angelo at 8 AM.
for Sterling City & arrived there at
6:30 - 43 miles & good roads. We had
a heavy load & poor horses.
Country very uniform. Mostly
Mesquite plains with short grass &
scattered shrubs of *Lycium*, *Cordylia*,
Zizyphus, *Acacia*, *Berberis*, *Mimosa*,
cactus & yuccas. The country is
all limestone in horizontal strata.
Terraced ridges & buttes stand up
500 to 1000 feet above the plain
in places. The first buttes are
near Water Valley where we had dinner,
and the next set near Sterling.
These buttes seem to be covered
with shin oak & some have juniper
on them. The few small streams
crossed have Pecan or walnut trees
along the banks. In the Concho Valley
at Water Valley & Sterling City there
are some farms. The rest of
the country is fenced up in big
pasture tracts. The road runs
through the pastures & we had
gates to open every few miles.

To Sterling City

Prairie dogs are numerous and generally distributed all the way. They are constantly scampering out of our road but are not wild & let us pass close by. The young are nearly half grown & are out in families. Our driver said "If they were called by their right name they would not be one of the damned things left in the country." He said they were just as good as any squirrel & if called squirrels they would be eaten by the people generally.

Saw a few badger holes, lots of *Neotoma* nests, & some *Spermophilus* holes. There are no Gopher hills, probably on account of the hard, lime soil.

Saw a lot of *Colaptes auratus* & one *Amphispiza bilineata*. Shot a *Myiarchus cinerascens* at Sterling.

A cool, breezy day but a long, slow ride. Got in too late to set traps.

Sterling to Colorado

May 20 Started at 8 AM + reached Colorado at 6 P.M. - 47 miles. Good road, big load (6 passengers + a buckboard load of trunks trailed behind) - little horses so we had to go slow. A long, tiresome day. At Sterling the barometer read 2400 feet, at the highest place in the road - 13 miles out - it read 2650, at Colorado 2400. The country is comparatively level, with the exception of a few buttes + ridges near Sterling. The whole distance is over a mesquite plain with the usual shrubs - *Lycium*, *Crotonia*, *Microseris*, *Berberis*, *Rhus*, cactus + yuccas. On the buttes near Sterling is much dense oak scrub 2 to 4 feet high. *Juglans reprensiva* grows along some streams -

Limestone + hard soil to stream 18 miles from Colorado where red soil + red sandstone formation begins.

Neotoma micropus houses abundant all along. Some S. mexicanus seen, Cynomys common all along + scattered. No Geomys. Saw 2 Coyotes. No antelope though often seen along this road.

to Big Spring

Lepus texianus, common. Badger holes seen. 2 Lynxes at ranch town.

Perodipus holes are common in Colorado valley out 6 miles from town.

Same sort of country along R.R. west of Colorado to Big Spring. On highest ground the scrub oak was common. Date when we reached Big Spring,

May 21 - Tramped out over the mesa + set traps. Gray went to top of #3 buttes a mile west of town where he found scrub oak. The buttes are 250 feet above town, flat topped + capped with horizontal layers of limestone. Are a remnant of the next step of the Staked Plains. The mesas back of town are 50 to 100 feet above town + form one step in the break down. From town east the valley opens out onto the red bed plain of the Colorado R. valley. with its red, sandy soil + mesquite + chapparal bushes scattered over.

Colorado

May 22 Trapped + hunted + made up skins

May 23 - Same.

~~Went to Colorado in~~

May 24 - Went to Colorado in morning + engaged team to go to Gail + Lubbock + Amarillo. Our man had to go to ranch for his horses + was too late to get off today, so we finished our reports + staid over, getting things ready for a start in the morning.

May 25 - Loaded up + got off at 8 a.m. The river was high so we crossed on bridge + went around 2 miles farther to strike our road west of town, then continued nearly due west all day, over rather broken country near the river valley, often looking down from the benches over the river from the south side. Came down to the river again at 5 P.M. + found it up + booming - out over the banks + uncrassible. Had come 2.5 miles

so we camped to wait for the river to go down. The water came from a rain last night somewhere on the head of the river. There was no rain here or at Colorado. The river is rapid but not very wide until it gets out over the banks. It is thick with dark red mud & stinks loudly from its load of dead cattle. We found a pool of not very clean & sweet rainwater on the flat & used it.

The country is all red sand with a few rocks & little buttes standing up above the surface. The highest mesa tops are open & grassy, but most of the country is scatter over with mesquites & a few small brush & cactus & yuccas.

A few Grouse hills seen on top of highest mesa. The gray cottontail seen & one killed. Shot a *Neotoma* under rock. Saw a few jack rabbits.

to Gail + beyond 5 miles

May 26 The Colorado river has fallen 12 feet during the night. We crossed easily with water only to horses bellies. Climbed easily onto higher prairie + kept on open, grassy plain most of the way to Gail. Mesquite becomes now abundant in the lower ground + scarce on higher. *Opuntia arborescens* is abundant + just now in height of flower. It is villianus. *O. davisii* is less common + has inconspicuous yellowish flowers + sheathed spines. *O. engelmannii* is small + not very numerous. *O. missouriensis* (?) is fairly common - so are *Echocactus* + *Warrinellaria*. Grass is abundant till 3 miles of Gail - then very short + scant the rest of the way.

A heavy rain night before last is the first rain of the spring near Gail + the grass has hardly started. Prairie dogs + rabbits find poor feeding + have gnawed the bark from much of the small mesquite + from the *Opuntia arborescens*. Saw a few dead prairie dogs near Gail drowned by this rain + freighters told us of seeing hundreds dead along the road.

Camped about 5 miles NW of Gail by
pools filled with rain water. Grass poor,
but a good camp place. There has
not been a space of 4 miles between
water pools all day.

Prairie dogs are rather more
numerous than before & generally distributed.
Perodipus holes seen in one place.
Mole houses numerous, Jack rabbits &
cottontails common, badger holes
common & one badger skull found & an
old dead carcass seen. Saw one Coyote,
no antelope though they are said to be
common.

Saw one rattle snake, the first
this year. Shot a Pituophis that measured
7 feet 8 in. - was about 3 in. in diameter.
It could easily have swallowed a full
grown prairie dog. I could save only
its head. Shot a beautiful Crotophytus -

Outs Las Estacado

May 27, tried to get an early start but did not get off till 7:30

At 15 miles west of Jopit we went up over the escarpment onto the top of the real sloped plains & kept on top the rest of day - 20 miles farther - making about 30 miles in all. Camped by a little lake on open plains & cooked on a fire of chips & a little dwarf mesquite brush.

The top of plain is generally level but slightly undulating with numerous shallow depressions full of water. We have passed probably 40 lakes & ponds today, & find the water fairly good to drink. A short grass is just starting up & makes the turf green. In places dwarf mesquites on to 3 feet high are scattered over the prairie, again for miles there is not a bush. A few *Opuntia arborescens* & *devisi* go onto the edge of the plain, *O. engelmannii* is scattered all along. Prairie dogs are numerous, 20 burrows to an acre easily & not a break. Saw 3 Antelope & some tracks.

Llano Estacado

May 28 Started at 7:30 + continued over the same kind of country all day to Lubbock. The barometer read 3300 at camp in morning 3100 at Taloba Lake (4 miles from camp) and 3300 again on the prairie a mile beyond. Then gradually rising to 3500 at Lubbock.

All smooth topped prairie with short mesquites + acacias scattered over most of it. Grass short + dry, has hardly started since the one rain.

Almost all of the shrubs + conspicuous plants of the lower level have disappeared and a few northern species - *Quercus*? + others have appeared. We are evidently on the edge of Upper + Lower Sonoran zones all the way with a mixture of both.

Saw a few antelope, several coyotes killed a *Spermophilus pallidus*, prairie dogs are continuous to 15 miles west of the lake. Then only in scattered colonies the rest of the way. Jack rabbits + cottontails common. No neotomas.

Lubbock is a town of a dozen houses on bare prairie -

Lubbock to Hail Cutes

May 29, On leaving Lubbock we soon crossed the almost dry creek, (branch of Brazos) - came out on prairie again to the north. Traveled nearly north all day about 30 miles & came 2 miles from Hail Cutes. All over flat topped prairie, slightly rising. Barometer had 3300 at Lubbock & 3700 at Hail Cutes. The last dwarf wisagmites & acacias disappeared half way & thence on it is simply grassy prairie with very few plants rising above the short curly grass. In places *Yucca glauca* are abundant & in flower. For miles there are dead ones scattered over the prairie, evidently killed by fire, & probably fires keep them from occupying the whole region. Group hills were common in the creek valley at Lubbock & at about 10 miles of Hail Cutes they began to be common on top of the prairie & were fairly common to Hail Cutes. Jack rabbits & cottontails common near Lubbock. *Sper. t. pallidus* common all over prairie.
A cool, breezy day.

Hail Center to

May 30, Continued straight north from Hail Center through the little town of Running Water and on over the same level, grassy plain with a slight rise all day. No trees, no bushes, only short grass prairie, a few windmills & small ranch houses on the edge of the circular rise, enormous pastures fenced in with barbed wire. In the afternoon we passed many ranches with plowed fields & corn, millet, & Kaffircorn growing. A few small cottonwoods have been set out around most of the ranches & at some we saw scrubby peach trees. The soil is excellent & with a little more water would make the best of farming land. Grass is good most of the way, Cattle are numerous.

Passed 3 or 4 prairie dog colonies of a section to several sections in extent. Caught a *Geomys castor* & saw lots of their hills - lots of *S. tri. pallidus*.

Came about 35 miles.

Cool & windy.

to Canyon & Awarillo

May 31 Got an early start & rode the last 32 miles to Canyon by 5 PM. Over the same level, smooth, flat topped prairie. Except for a few fields of Yucca glauca there is nothing but grass & low plants. A few new species of *Astragalus* were met with.

The prairie \uparrow rises gradually. At camp the aneroid read 3800, on highest part of prairie - 4 mi. S. of Canyon 4050, in creek valley near canyon 3950, & at the town 4000. At Awarillo it read 4100.

Took train at Canyon at 8:57 & made the trip to Awarillo after dark. Stopped at Awarillo House.

June 1

Prof. Bray returned to Austin in morning & A. H. Higginson arrived on the evening train.

Wrote most of the time all day.

June 2, Hunted & set a few traps.

A hard rain last night washed out all traces of small mammals.

Awailla to Taseasa

June 3. Caught only one *Oryzomys* & *Perognathus paradoxus*. Shot a few birds - made up skins. in evening went to Taseasa - arriving after 11 P.M. & crossed river to the queer little old adobe town.

June 4 Sunday - Found ourselves in a little adobe town as queer a set of old ruins as there is in Texas. The Canadian river is a dry sand flat a quarter of a mile wide. The valley is sandy & full of Lower Sonoran plants - Mesquites, Acacias, & etc.

June 6 Took up traps & packed specimens & get ready for an early start in morning.

Have been busy for several days trapping in river valley, mostly near town. Should like to stay longer to work the sloughs & the juniper hills beyond the river.

To Awarillo + Portales

June 7 Took train at 5 AM for Awarillo + connected there with the Pecos Valley train for Portales, N.M. arriving at noon.

From Awarillo to ~~Portales~~ Bovina there is almost no change of ~~color~~ country from the smooth, short grass prairie with sloughs here + there, plenty of grass + lots of cattle. After crossing the N.M. line we enter a drier region and pass through a wide stretch of sand dunes. The country is evidently getting lower for mesquites come in thick though low + scrubby. At Portales it is just level plain but all scattered over with mesquite brush + some *Opuntia arborescens*. Lower Sonoran zone is evidently coming in. There are some *Neotoma micropus* nests.

Saw 32 Antelope 1-4 in a place between Canyon + Portales, mostly bucks but one doe with a kid. Group hills all the way.

Got horses at Portales + rode over to the gulch + springs - 5 miles east.
A hot day.

Portales to Roswell

June 8 Left Portales at 10:40 & reached Roswell at 2 PM.

From Portales to the Pecos river is a gradual slope with two slight escarpments near the river.

The country is rather level except for frequent ridges strips of sand dunes. Much of the soil is soft yellow sand. The grass is dry & dead from last years crop. There has been no rain this year & there is little green & almost no flowers. Scrubby mesquites grow over most of the country & at the river become larger.

Lysium, Condalia & other new plants begin 10 miles east of the river near the second bench. Larrea grows on valley mesas where we strike the Pecos R. Mt Capitan stands up 40 miles to the west. The Pecos is almost dry but Spring creek is a good sized little river near Roswell.

Set traps & shot Garry's woodpecker, *S. spilostris*, & *Atocoris*.

Stopped at Central Hotel.

A hot day. Lots of flowing wells.

From Roswell to Cedar Point. 11 M.

June 12 Got team & van & camp outfit and started for ~~the~~ Mt. Capitan, a peak that stands up in plain view about 60 miles west of Roswell.

Traveled all day over dry plains & up a gradual slope. Watched at a ranch out 8 miles from town & found no more water or ranches till we reached Cedar Point, a ranch 40 miles out. Camped here & set traps.

The country is so dry that scarcely anything green has grown this summer or any flowers come out. The little *Verbena* is the only flower at all common. Even cactus flowers are not common.

At about 30 miles out we crossed ^{dry} a gulch full of flowering *Chilopsis* & *Falugia*, and of *Lycium rupestre*, & *Shim oak*.

This growth continues up the gulch to the Cedar Point ranch.

Saw an antelope - *Dipodomys spectabilis* mounds are common all the way from about 12 miles out from Roswell.

Perodipus & *Geomys* holes and hills are common.

Cedar Point ranch to base of Mt. Capitan.

June 13, Caught a *Dipodomys spectabilis*,
some *Perodipus* + a *Perognathus*.

Continued up the gulch about 20 miles
to the little Mexican ranches at the base of
the mountain + camped at the old ranch +
spring called Las Palas. Barometer read
3900 at Rawell + 4600 at camp

Entered the juniper + piñon forest about
3 or 4 miles below camp and found some *Pinus*
ponderosa + live oaks + chestnut oaks.

Dipodomys spectabilis came up to edge of
juniper forest - *Spermophilus grammurus* begin
at the junipers + an arroyo around camp.

The junction of upper + lower sonoran zones
is not well defined but I can only place
it at the junction of lower edge of junipers
+ upper edge of Mesquites, or at about 6000
feet on the open east slope. This is also
the upper edge of *D. spectabilis*

Up El Capitan

June 14 Started up the mountain at 8:30 AM. and did not reach the summit till 3:30 PM. Found the climbing steep & rough but not difficult. barometer read 6350 at camp + 10000 on top. There is a higher peak just west of the one we were on - the real Capitan I suppose, reaching probably 500 feet higher but not near enough to be within our reach tonight. The Mts. are all granite + very steep + rough. Timber is scattered over most of them + much brush but we did not find a drop of water above the springs at the base. The dryness is unusual, there is little green or fresh growth + very few flowers. High up the slopes are mainly slide rock + would make good jagony's homes, but no signs of the animals were found.

Upper Sonoran zone reaches above camp to about 7000 feet on east + 7400 on south slopes but is much mixed with transition species down 200 feet below camp. Transition zone runs from about 7000 to 9000 on east slope + is marked by *Pinus ponderosa* + half the range of *Pseudotsuga* + *Quercus* etc., by *Arctostaphylos*.

Mt. El Capitan

The Canadian zone reaches from about 8000 N.E. in gulches, or 9000 east open slopes to the top at 10000 and is marked by *Pinus flexilis*, *Abies*, *Populus tremuloides*, *Acer glabrum*, *Spirea*, *Pachystima*, + *Quercus durandii*?

The top of the mountain is covered with *Pinus flexilis*, *Pseudotsuga*, *Abies*, + *Quercus durandii*? There is no trace of a timberline on this or the next higher peak. No snow, No water visible.

Very few birds or mammals high up.

In returning to camp we came down a dry S.E. slope + got some very high altitudes for Upper Sonoran plants

June 15. Went with Jose Montano to his ranch on the head of Blue Water + got the skins of an old + young bear he killed yesterday. He brought the skulls + one of a larger bear killed a month ago. Made up skins most all day.

El Capitan -

June 16,

Finished up our work and at 10 AM started down the road. Lunched at Cedar Point ranch & camped at night on the open prairie about 20 miles west of Roswell. Saw one antelope, shot 5 cottontails, set a few traps.

Found pools of water on the prairie & camped by one. A heavy rain last night soaked the cow chips so we had a poor fire.

June 17. Started soon after sunrise & reached Roswell at 10 AM. Packed specimens & prepared to leave.

June 18. Mr. ~~Kaw~~ sent me out to his beet field where I saw sugar beets growing, about 12 acres. In afternoon we went down to Eddy.

Eddy N. Mex.

June 19, Mr. Reed introduced us to Mr. ~~Schlitz~~ Goetz who took us out to one of the best farms & through the best sugar factory & we were very cordially welcomed at the Union Club of Eddy & given cards of admission during our stay. Were introduced to many of the leading people of the town.

June 20, Mr. Higginson went with Mr. Reed to the reservoirs & got many bird notes and some specimens. In P.M. We were driven to the great Carlsbad mineral springs & then had a social swim in the irrigation flume with Mr. Reed, Goetz, & Hutchinson.

In evening left Eddy for Pecos where we arrived late in the night & went to the one wretched hotel, a sad contrast to the comfortable & pleasant Schlitz Hotel at Eddy.

Pueos to Calif

June 21 Staid all day at Pueos except for a drive over to Barstow, 7 miles east, to see the peets on the farm of Mr. Briggs. Wrote reports most of day + took train at ~~7 P.M.~~ 9 A.M. for El Paso.

June 22 Arrived at El Paso about 10 A.M. + had to wait till 7 P.M. for our train west. Went over to Juarez + saw some of the sights of both cities + wrote on reports:
A warm day.

June 23 Daylight at Benson, a long hot day, country badly dried up + scorched. Thermometer 110° + 112° in our car. Colorado River high, out over banks for ~~some~~ miles on west side. Crossed lowest part of Saltan Desert before dark, Supper at Ludlow.

San Joaquin Valley to Agui

June 24 Daylight near , breakfast at Mohave. Crossed Mohave Desert & through Teachepi Pass. Dark between Tracy & Sacramento.

June 25 Daylight near Redding, arrived at Agui at 12 & found no mail. Higginson went over to San Francisco to get saddle & cash.

June 26 Went up mountain just west of Agui 2700 feet above station & 5050 above sea level. Set traps, shot birds, & wrote.

June 27 Higginson arrived & we made up a few skins & shot some more birds.

June 28 Left Agui at 2:30 & arrived at Shovel Creek at 6. A very interesting & picturesque ride up the canyon of the Klamath River. There is an elegant hotel at Shovel Creek kept by Mr. & Mrs. Edison. The country is grand.

Stovel Creek

June 29 Left Stovel Creek with a big
throughbrace stage & 6 horses and took one
of the most interesting and picturesque rides
of the season. Reached Klamath Falls at 6 P.M.
From Stovel Creek our road followed up the
river some miles, then climbed gradually
up the south side of the canyon to the
Topsy at the top of Topsy Hill. Barometer read
2600, on top of Topsy Hill 4100, highest summit
on Chicken Hill 4400. Chicken Hill is said to
be 4700. Then came down grade
through splendid forest till we reached the
Klamath River again at —

The trip settles the fact of an almost
unbroken Canadian strip of Mts. from
Pitt to Shasta, through which the Klamath
river cuts a deep canyon with cold
side gulches that offer a Canadian bridge.
At the same time the river canyon forms
a thoroughfare for transition & some
Sovarian species from Oreg. to Klamath.
The canyon is narrow but with open,
barren, hot slopes scattered along the
north side & hot flats near the bottom.

Two Lepus californicus were seen in
the canyon near ^{Stovel Creek} Stovel Creek, & Stillers pass

Klamath

juncoos, & etc were mixed with chats, California woodpeckers & etc. I suppose this is the lowest pass over the mts.

There are many beautiful places to camp. Stovel Creek is an attractive spot in the canyon & has the best hotel we have found in this part of the country - (2 pr day) kept by the Edisons. Nice people & a nice looking crowd of guests.

June 30 Got saddle boxes & rode over to Po Valley to find our outfit but the horses had been taken to Casey's ranch in Horsefly Valley. Pushed on, (while Higginson returned to Klamath) and went through Bonanza, then nearly to Rayston, then turned east & ran by guess till too dark to follow cow trails & camped. My horse was tired out from his 55 mile trip so I lopped him & rolled up supplies in my saddle blanket by a big tree. Slept by spells & built fire to keep warm by spells. Very sore, very hungry, very cold, not very happy.

July 1, Found Cassey's ranch after a few hours & got my horses & started back at noon. Reached Beranza before dark & put up for the night.

July 2, Drove in to Klawath Falls in the noon & in P.M. rode over to the Apophgate Ranch. Sunday.

July 4, Packed up & drove to Carr's ranch on Tule Lake. Stopped an hour in the Fish Hawk colony.

July 5, Waded in Tule Lake all of forenoon & found nests of Acchnophorus, Coot, Wrens, & Yellowheaded Blackbirds.
Made up skins & set Microtus traps.

July 6, Caught Microtus & Peromyscus & found nests of black terns, coot & others. Waded in lake to my waist for hours. Can go out in tules 40 or 50 rods, bare bottom, gradual slope, water warm & free from alkali. Full of weeds & tules & algae, full of little insects. Ducks, Coot, grebes, pelicans, avocets, & terns are numerous & breeding.

Julio Lake

July 7, Left Carr's ranch & moved camp to the lower ranch opposite the big island on east side of lake. In afternoon went out on island and rode around the edges and down to a little ranch on south end. Got a boat & went out to some rocky islands where pelicans & cormorants were breeding. There are numerous photographs on the rocks along shore of the island.

The island is mostly of stratified volcanic rock, partly of ash & cinder layers & partly of a porous lava. There is much broken pumice & obsidian sand on the beach. The plants of the island are mainly serotum & it is said to be the only part of the valley where stock will winter without feeding. It is covered with good grasses among which is much *Oryzopsis membranacea*.

July 8 Caught a few mammals.
Went onto island again & photographed the photographs.
Made up skins & set more traps.

Tule Lake to Ice Caves

July 9, Left the ranch & traveled south to end of lake & on to Dry Lake, then turned west and traveled about 12 miles to foot of Glass Mountain & camped at the ice caves about 6 miles S.W. from the S.W. corner of Tule Lake. The caves are at the east South end of a cinder cone just in edge of *Pinus ponderosa*. The snow streel deep summit of Glass Mountain is 4 or 5 miles S.W. of us. From Dry Lake the road runs to Spasta Valley past the ice caves, a fairly good road. Splendid bunch grass & lots of it. No water except in the caves & that is down where stock can not get it.

The caves are part of an old lava stream with the cone run out & the roof fallen in at intervals. A hollow tube 20 feet in diameter runs down the slope of the mountain for miles. The roof is 6 or 8 feet thick in most places. The surface of the lava flow is hidden by a deep layer of pumice. Snow & rain fill up the caves & the water settling into the low places freezes & does not thaw in all summer. The water is a foot deep ^{thick} on the ice now but the ice must be many feet

Glass Mountain & Medicine Lake

July 10, Left camp at the ice caves + rode over Glass Mountain to Medicine Lake + back. It is about 12 miles over. Arrived read 4600 at camp, 7500 on top of ridge, 6900 at Medicine Lake. From the caves ~~we~~ traveled up the gradual pumice slope in a S.W. course + crossed the range at lowest point just north of the highest peak. Then down the west slope into a great pumice basin in which Medicine Lake lies on the west side of the east base of a long, high ridge.

Glass mountain is probably 9000 feet high + has a distinct timberline + considerable snow on the N.E. side. Many of the crests + ridges are pure obsidian of all sorts + kinds + colors. Craterlets are scattered all over the slope - some are rough masses of lava, others are cinders.

Medicine Lake is a beautiful, deep blue, clear lake, a mile long by half a mile wide, surrounded by an extensive forest *Pinus murrayana*. Beautiful meadows + little streams make the shores attractive. There are good springs, lots of grass, open parks, swas on the ridge just above. A good place to camp

Ice Caves to ~~the~~ Mud Lake

July 11 Left the Ice Caves + came back to Dry Lake + then south to Mud Lake on the Lookout road. No water between camps. Mostly over rather level lava country covered with junipers + pines ponderosa. Good soil, splendid bunch grass, good open timber. No body lives here till we reach Mud Lake where there is only a ~~lake~~ little pond + a small ranch.

Came about 32 miles. Barometer read 4700 at ice caves, much lower at dry lake and 4900 at Mud Lake.

Low transition zone most of the day

July 12, From Mud Lake the country rises slightly till a little past Happy Camp and a few higher up trees - Libocedrus + Abies - come in. Then it descends to edge of valley + goes down rapidly to bottom of Big Valley at Lookout.

Top + slopes of the high country covered with more or less scattered part of Pines + junipers with a few Quercus californica mixed in. Valley open + covered with sagebrush. It is hard to see any Sonoran things in Big Valley, though a rather warm valley.

Dipodomys tracks all across plateau.

Big Valley

July 13

Staid at camp half way between Lookout & Bishop & wrote reports most all day.
Killed 5. *oregonus* & made up skins.

July 14, started for Susanville & followed the south side of Big Valley to Willow Creek then up the creek to near Hayden Hill mining camp & camped in gulch among pines & junipers.
Came 20 miles.

July 15.

Staid all day & trapped & shot & made up skins.

July 14, Climbed the big hill to Hayden Hill mine & then struck south across the plateau to Grasshopper Valley, then over the next ridge to Eagle Lake. Camped at east corner of the lake at Eagle Lake ranch.
Came 35 miles.

Barometer read at camp 5150, top of hill 6000, Hayden Hill Camp 6200, highest ridge 6400, Grasshopper Valley 5700, Eagle Lake 5600, the actual altitude of Eagle Lake is said to be 5150.

Lava plain, open sagebrush country with pine & juniper on ridges. Transition zone.
Came 35 miles.

To Susanville

July 17. From Eagle Lake we climbed a low ridge of lava & came down into Willow Creek Valley & followed it to the lower end where the creek cuts down through a gulch to Honey Lake. Then climbed over a ridge & came down about 1000 feet to Susanville. Willow Creek Valley is an old lake basin about 5 by 10 miles in extent. It is mainly a grass valley, all fenced & farmed. Pine timber covers the surrounding rocky ridges & uplands. Sagebrush grows over dry open places.

On coming down the slope to Susanville we left pine timber at the top & soon struck Cronathus divaricata, Argemone, & other Sonoran plants - Croton & etc. The valley is very dry & hot. The middle part is irrigated & is all in green fields of grass & grain. Camped near town in a barren pasture.

Got mail in evening.

Came 25 miles before 1 o'clock.

Susnaville to Mountain Meadows

July 18, Remained at Camp writing
+ making a few specimens.
Very hot.

July 20 - Packed specimens, finished
our writing, made up a few things -
another hot day.

July 21, Packed up, got supplies in
Susnaville + started west on the
Prattville road. Crossed the first
divide and down to edge of Mountain
Meadows where we camped about 12
miles west + a little south of Susnaville.

Climbed to top of nearest high peak
to get range of trees. Set traps
for *Aplodontia* + other things.

Soon after leaving Susnaville we have
Quercus californiensis + all trace of Sonoran
flora + are in transition forest
the rest of the way. *Pinus ponderosa*
+ *jeffreyi* are mixed at the lower edge
of forest but on top of ridge it is
only *jeffreyi*. This is the more abundant
species + crowds out *ponderosa* except
low down. Other common forest trees

are *Pseudotsuga*, *Abies (Laricina?)*, *Libocedrus*,
a few *Pinus lambertiana*, *Populus trichocarpa*,
P. tremuloides, *Juniperus occidentalis* & *Cercocarpus*
grow on rocky slopes. *Mazus* & *Cerastium*
form the underbrush. The forest is
open & dry but for long distances
is full of fine lumber trees. The
pines are large & with ~~concesses~~
tall symmetrical trunks. There is much
cedar of a convenient size for lumber.
We passed one little saw mill but
the whole region is valuable for timber.

Sheep have eaten all the small
vegetation till the ground is bare -
& fire would not run except in the
dry clapperal. Very little of the
country shows signs of fire though
great smokes are rolling up to the
west of us.

After crossing the divide we are
on the head waters of Feather R. (N. 74° E)
& our camp is at the first water.
at about 5000 feet.

Mt. Meadows to Clear Creek.

July 22, Broke camp + followed down stream through Mtn. Meadows + on west to where Clear Creek comes out of its big springs + runs into the N. Fork of Feather R. Found such a delightful place to camp + work we decided to stay here a day or two. Set traps, shot birds - Clear Creek comes out of several great springs from under the lava cliff. The water is very cold + beautifully clear. *Pinus murrayana* grows all along the meadows. There are good woods all around. Sheep have eaten all the grass except in the little pastures.

July 24, Broke camp at Clear Creek + moved over to Burt Johnsons, on North Fork of Feather R. ^(Chester, P.O.) + camped again. Only 9 miles. All the way through a splendid forest of *Pinus ponderosa*, *Jeffreyi*, *P. lambertiana*, + *murrayana*, *Libocedrus*, + *Abies*. No water between. Sheep have eaten all the grass.
Wrote reports all rest of day.

Up Warner Creek to Hot Springs

July 25, Followed the Redding road about 9 miles west & then turned north & came down into Warner Creek valley, followed up the creek 4 or 5 miles to Drake's Hot Springs on Hot Spring Creek & camped in Drake's pasture. This point is about 8 or 10 miles by trail from S.E. of Lassen Peak & 12 miles south by trail from Cinder Cone & Snow Lake. It is at the end of a good wagon road. There is good pasture and fairly good fishing. Lots of deer. Good meadows & streams for trapping, birds are scarce for such a well watered country.

The Canadian & Transition zones pass by each other on the ~~two~~ opposite steep sides of the valley, ^{the Canadian} going lower on the N.E. slope & the Transition reaching above us on the S.W. In the bottom of the valley the two meet about at this point - 5500 feet - but are very much mixed.

The Divis ^{or Bumpuses Hill,} Kitchen is a mile above Drake's. It is a group of hundreds of hot springs, steam spouts, mud pots, growlers & little geysers. There are other hot springs at Drake's & in the vicinity. It seems to be the last remnant of Lassen's fires, breaking out at the base of the mtn.

Lassen

July 27 Sent the wagon around to Morgans while Higginson + I went with saddle horses up the Lassen trail to timberline on the south side of Lassen, then down to Crumbo Lake + down the trail to Morgans.

Leaving Drake's ranch we turned up over the high ridge to the N.W. + gaining the top at about 6500 feet travelled toward Lassen till we struck the head waters of Kings Creek, then up this for a few miles through hemlock woods + beautiful little meadows to its source at the base of the main peak, then up on the ridge on east side of mountain to about 8000 feet where we left horses + I climbed up to timberline on south side of mountain at 9000 feet. The upper slopes are sliding pines like Shasta - dry - not much snow - some big boulders down into timber - lots of pink snow.

Hudsonian trees are mostly hemlock + *P. albicinctus*. Came down to Crumbo Lake through pretty little meadows. Tried to find Bumpass's Hill but found only some little hot springs that are not much good. Crumbo Lake is small but pretty - deep blue + clear + surrounded with hemlocks + Shasta firs.

Came down the canyon of Mill Creek + found the boys camped at Morgans ranch.

Mill Creek

July 28 Moved camp about 2 miles up the gulch & camped in a beautiful forest of Pines & firs & cedars near (just above) the Hot springs. Altitude of camp 5000 feet. Set traps & hunted.

July 29, Caught mostly Peromyscus, one Musorex. got a Logomys.
Made up skins & set more traps.

July 30, Caught a flying squirrel, a Musorex, 2 Sorex, Thomomys & Peromyscus.
Higginson caught a weasel.
Broke camp & went down to main road at Margans, then west over a high ridge & down to Martin Creek - a branch of Battle Creek & camped.
Came 6 miles from Margans.

The top of high ridge is mainly Canadian zone (5500 feet) with the big coned firs & Arctostaphylos nevadensis. Most of the Transition trees go over the summit. Battle Mountain is in Transition zone just below 5000 feet.

Down Battle Creek

July 31 Followed down the road, crossing Battle creek - to south side - at lower end of meadows, then down the ridge to Paine Creek, north past Inskip Hill & camped at a ranch near Battle creek below the forks. Passed entirely through Transition zone & practically through Upper Sonoran. At Paine Creek at 1000 feet the big *Quercus lobata* begins & are common on the flats. They grow to enormous size & I presume mark a lower sonoran limit. At the ranch where we camped Peaches & figs are raised in abundance.

In the Transition zone *Pinus ponderosa* Aug. is the dominant tree - Oaks & chaparral mark the upper Sonoran zone with most of the Sacramento valley species of shrubs. - *Arceuthobium*, *Fremontia*, *Conothus*, *Prunus ilicifolia*, *Arctostaphylos patula* & *viscida*?

Calyptra, *Aphlecona*, *Pipilo erythrophthalmus*, & *Edremita* for *Psaltiriparus* & common birds.

Dipodomys & *Lepus californicus* tracks are common.

Came 30 miles ~~all~~ down hill, rocky road.

To Redding

Aug. 1 Followed down the open valley to the bridge across Battle Creek then to the Sacramento at Balk Ferry + across to Anderson + up to Redding. Made fast time + camped at Redding at 4 P.M. ~~came~~ about ~~22~~³² miles.

Aug. 2 + 3

Remained at camp writing + packing specimens + waiting for word from the Alaskans.

Walter Fisher came

Aug. 4.

Started for Weaverville + leaving Redding went to ~~Little~~ Shasta, then to Whiskey town + up Clear Creek to Tour House + beyond a mile or two past the toll gate + camped in the gulch at 2000 feet. Set traps along creek.

Sovernan gave most of way, but transition species on N.E. slopes + in deep gulches. Much chaparral + scrub oak, scattered timber.

came about 20 miles.

Bully Hoops Mts.

Aug. 5, Followed up the gulch 5 or 6 miles + and camped a mile below the summit at 3000 feet. Set traps along the deep gulch where transitions + even Canadian plants occur.

Aug. 6 Sunday - Caught a few things + made up specimens, reset traps, staid at camp most of day, wrote a report + some letters.

Aug. 7. Crossed divide + came rapidly down the west slope past the Buckhorn ranch, to Trinity river, then over a high ridge + down again to Weaverille Summit 3400, Trinity River 2000, Weaverille 2200, Camp - 3 miles E. of Weaverille 2050. A few new plants came in on the west slope, *Acer circinata*, *Quercus garryana*, *Rhamnus purshiana*, *Pyrus rivularis*, but many of those of the east slope only lap over from the west. The change is gradual. Came about 20 miles. Dr. Merriam did not come.

Aug. 8 Moved camp up to town + started Heggins on a pack trip up Stuart river but man left so we had to stay over till we get another.

Weaverville to Diedrick

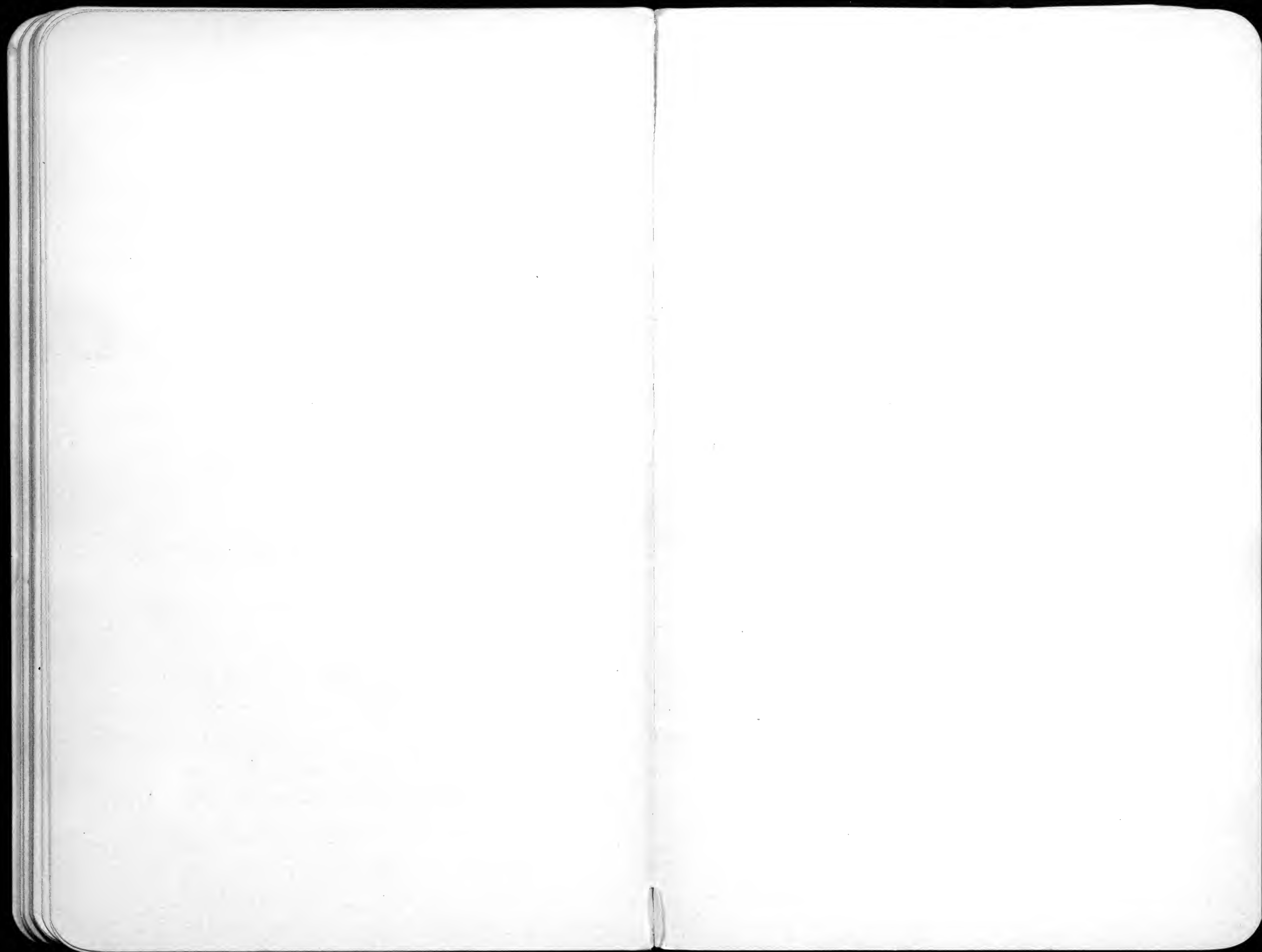
Aug. 9 Got a new man + started out rather late - Crossed a high ridge + came down to junction on the Trinity R. then followed up Canyon Creek north past the old mining camp of Canyon City + to end of wagon road at Diedrick. Came about 22 miles. Barometer read 2500 feet at Diedrick in bottom of deep, narrow gulch. The bordering ridges are steep + rocky + half bare, covered with chapped + streaks of timber. The stream has been mostly turned out into mining ditches, but the old bed is mostly over bare rocks. From Canyon junction to Diedrick the gulch has been washed out for gold for almost its entire length. Miners are still at work in many places, some Chinese + some whites. All is places mining.

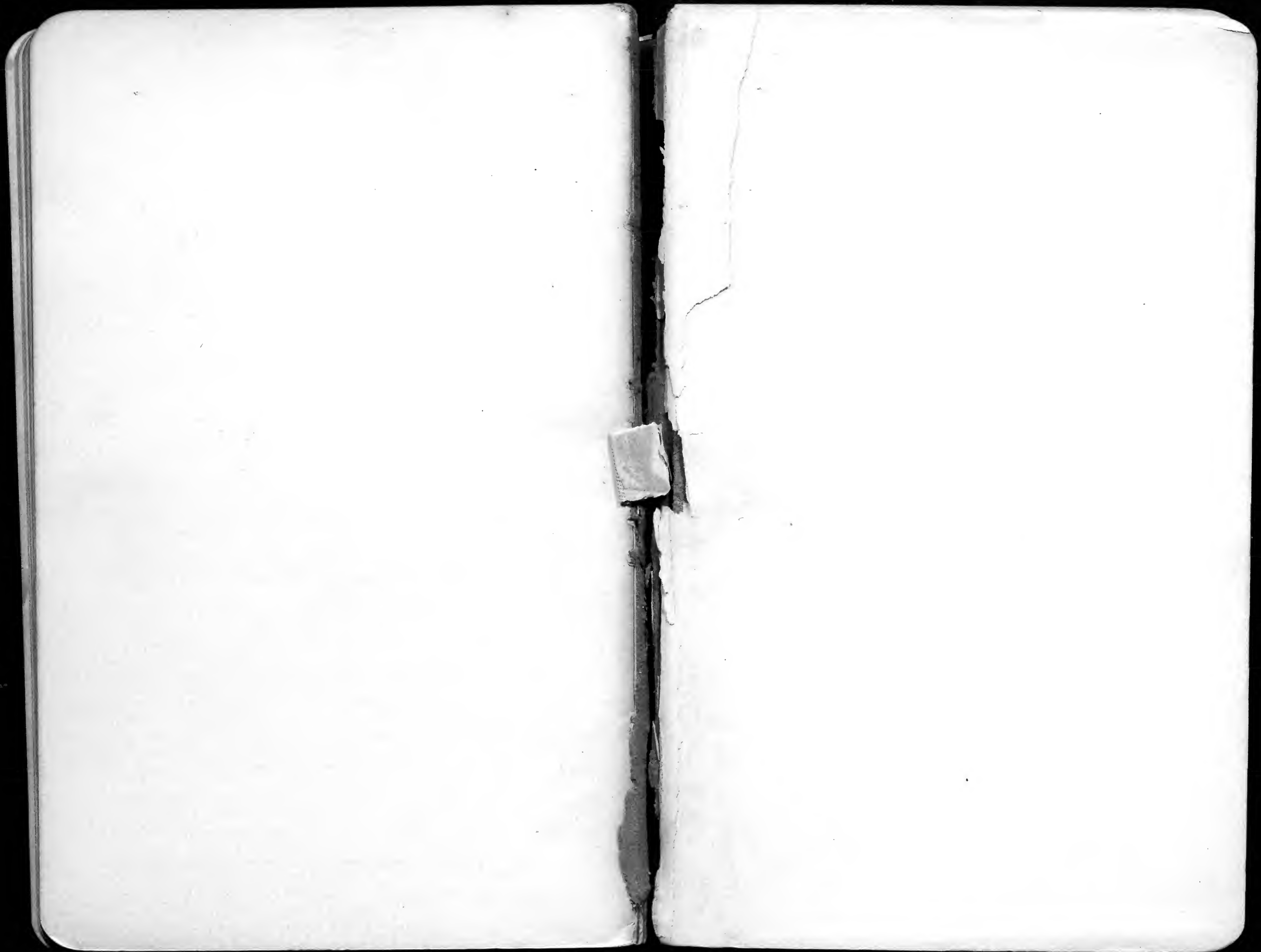
Diedrick is a mining camp, with a few little garden patches.

Bought 100 lbs of pay at $2\frac{1}{2}$ ¢ @ lb. or at the rate of \$50. a ton.

Up Canyon Creek.

Aug. 10. Left wagon at Miners Hotel -
put packs on Stack + Dutch + proceeded
up the canyon, about 10 miles to the
Meadows + camped at 4600 feet. Camped
at 1 P.M. got lunch + walked up canyon
about 4 miles farther to the lake at 4750 feet.





Judge Van Sicel

Alpine - Tex

