Journal
1900
Vernon Bailey
April 7, 1900

Left Washington at 10:55 A.M. on B & O for Texos. The season is late at Washington, very green on trees, maples & elms in flower, also some willows, grain & grass fields green, a few flowers have been found.
At Oakland & Des Park big mountains still lie in shadowed slopes.

April 8 daylight at Washington, Ind. From there to St. Louis the season is about as at Washington. South of St. Louis (on Ills.) from Alton R.R. the trees begin to show green, willows & cottonwoods, peach, apple in flower. Back at Potosi Bluff, Ills.

April 9 daylight at Texarkana, Texos. All trees are green with young leaves & the woods are bright with flowers. Dogwood & red and white wild flowers close among the green trees. In the woods violets, phlox and other flowers at east ground.
Austin

Would have reached Austin by dash but had to wait at Taylor — 13 miles east of Austin — until 11 P.M. for an engine to get on the track, and did not get in till about 12 P.M.

April 10. Went out to the university. Saw Prof. Bray. Went over prairie and through woods till noon. In P.M. went with Bray on a long drive west of town among the big hills. Saw the river where the old reservoir had escaped — saw many traces of the flood. Among other effects of the broken dam + recent flood were lack of electric lights + street cars, scarcity of water, closed whirlpools + no clean linen in the hotels.

Three miles west of Austin rise the big, flat topped limestone hills covered with junipers + scrub-woods + forming the first escarpment of the lower arid plain. At the base of this escarpment is a mean plain of cactus.

...
Austin

and for a long distance north-south. East of Austin, on the other side of the river, the country is half open prairie & he cut rock. Indeed this prairie region seems to extend to rockcliffs, I nearly to the Brazas R, as we noticed in coming in last night. South toward San Antonio the prairie country extends to the Guadalupe R. of Braunfelder. The prairies seem to be rather sandy. The mesquite plain is a limestone talus from the cliffs. Each has its peculiar flora & probably fauna.

At Austin, the University campus is a mass of blue from the lupines as far as the eye can see of the open country & the prairie. Many other flowers are abundant & conspicuous but nothing can equal the blue fields of lupins. For lists of flowers, Texas birds & reptiles see reports.
April 11
The 6:00 train was delayed due to a shortage of coal, so we waited until 2:30 before putting off for San Antonio.
Arrived at San Antonio too late for Corpus Christi train.
Had to wait until 2:20 P.M. the next day.

April 12. Went out to the old Missions 4 miles west of town but could not get across the creek so had to be content with looking at them with a glass from a quarter of a mile away.
Took the 2:20 train for Corpus Christi & arrived there at 8:20. Went to Mr. Alexander's hotel near the beach.
From San Antonio it is all pasture & live oak & cactus to Beeville, where the coast plains begin & extends nearly to the coast. Scattered mesquite & hickory & chapparel are common.
Corpus Christi

April 13. Tramped around Corpus Christi and learned something of the country. Found a place to build a mile south of town with Mr. Watson. Close to the shore. Saw lots of young hogs and some S. muskrains on flat just south of town. Found lots of birds but few ducks.

April 14. Set traps, hunted, tramped over mesquite plains & short prairie.

April 15. Sunday. Went to town & made up some skins & made some. Went with Mr. Watson about 4 miles south to his father's ranch over the most beautiful flower prairies.

One patch about one by 3 miles in extent is solid yellow with a beautiful crocus. Saw road runners, killed a luna

April 16. Set traps & made up skins.

April 17. Busy trapping & skinning hogs & muskrains.
April 18

Went down to Flower Point, 12 miles below Corpus Christi, and crossed a narrow channel onto a small island half a mile from shore to look for pelican nests. Thousands were breeding there a few years ago but all have been driven away. The island is flat & covered with grass & wild cactus. The pelicans used to nest among the cactus. Saw a few pelicans, herons, gulls & terns & shot a heron on the island.

Went over to the Oso Lagoon & went out to an island where the great blue herons were breeding, about 20 nests, with 2, 3 & 4 eggs each.ündig Flower Point & the flat country back of it to the lagoon are all sandy & covered with scrub, dwarfed pan island grasses, some shrubs, thorny bushes including a Viscum. This side of the lagoon on the sand clay soil the shrubs are all thorny. Came home in a rain after an all day trip.
April 19. Took up traps; made up skin and prepared for trip up river.

April 20. Went to Corpus Christi and then followed up the west side of the R. about 23 miles and camped in Griffith's pasture at edge of flooded river bottom. Travelled through mesquite and cactus chaparral and over open prairie, wet, alternating clay and sandy soils. Further up river the mesquites are larger and more continuous as a brush or 'mesquite orchard' which is replaced on the bottom by krasgh. We could not get out to the real river because, said to be of clear water running. Camped under mesquites in pasture and located a few wild Turkeys near the water.

Turned over 600 pieces of mail along the road. Saw thick fencing of quail and the two forked tinail of the ranch of John W. Prices near town.

Farms all along the first 15 miles with cabbages and other vegetables growing. Their stock ranges big pasting. Cabbages are being marketed.
April 21
Killed a wild turkey before they left the roost in morning. Found them roosting out over water in threes each time on the flooded land. Took in the day shot another turkey in the woods.
Saw a few more. Shot some birds.
Set traps. Watched for turkeys in morning but they did not come back to roost.
Saw tracks of wolverine, corn, porcupine, skunk, lynx, coyote, 2 or 3 badger holes.
Killed a 4 foot rattlesnake.
Set a few traps

April 22
Caught porcupine, 2 rabbits, Peronamthus paradoxus, 2 hawk.
Picked up and made the return trip to Corpus Christi. Made up retinue

April 23
Prepared for trip to Brownsville. Picked up, made reports, got camp supplies.
April 24. Travelled south all day and camped at night at Santa Rosa Ranch. Crossed big prairie and a few strips of mesquite brush. Found more sand at Santa Rosa big sand cliffs + ridges with ponds + sloughs in the valleys between live oak + mesquite on ridges. Camped in mesquite grove near a lake that was alive with waterbirds. Came about 25 miles.

April 27. Travelled south all day over a big, sandy prairie with a few groves of live oak + mesquite in places. Most of the time out of sight of trees. Prairie brilliant with flowers, which alternates in giving their tints to the landscape. In places the prairie is dotted with one or two species of Coreopsis, Clusia, or Comandra, bribery brown with thallia, pink with Phlox + Liatris, scarlet with Castillejas, white with clavellaries. Camped in group of live oaks full of bees. Came about 25 miles in 50 miles.
April 28. Remained at camp all day to get our nets woven up & let the horses rest, to identify the birds & trip for mammals.

The prairie stretches out 8 miles on all sides & the birds gather into our little grove of live oaks. Quail, meadowlarks, towhees, woodpeckers are breeding, many migrants are stopping here.

April 29. Traveled south all day over sandy prairie with occasional live oak groves (mottes) & scattered shrubs.

Surface generally level & covered with grasses & many beautiful flowers. Different species give the color to every different kind of soil or land. Each little pond has a golden halo of Coreopsis around it. Oenotheras, daisies, phlox give their colors to their chosen strips. The soil is sandy & loose, the roads very heavy.

At a place about 6 miles before reaching Song Ranch the open prairie stops - meadows & Carex & chaparral begin with hard sandy soil.
lived up here, many ponds or marshes, and good roads except where the mud is deep.


April 30. Continued southward from Saguaro through the same kind of flat, woodless country, with good road except when muddy. A perfect jungle of mosquitoes, fleas, 

Parthenonias, cactuses, etc., etc., etc.

Crossed the Rio Colorado about noon. Camped at a little Mexican ranch.

Came about 20 miles, roads flooded

May 1,

Travelled south for about 20 miles and camped at edge of big harbor near where the road turns west to Brownsville.

Left today and it struck flat shore about 25 miles from Brownsville. This is the real Rio Grande inundation along both sides of the Lower Rio Grande. It is considered nice land. It is a perfect jungle of cactuses and mosquitoes.
Brownsville

May 2. $2000 into Brownsville in freight & on PM went a ways to Metawars with Capt. Smith who showed us interesting parts of the town & country & interested us in Miles C. E. Dysart, the local botanist & other interesting people. Went up in the town & the Cathedral where we could see for miles up & down the river & over the perfectly flat country on all sides. 7/20 miles to the west the country is said to be the same flat mud & silt river bottom with the same James & flora as it is on the east side around Brownsville. Cotton & corn & sugar cane are the chief crops on both sides of the river. Grapes & lemons & bananas & guavas do well but there seems to be no enterprise or energy in the people about raising fruit except. The climate is extremely restorative. It is 30 miles from here to the coast & 1 harbor, reached by a little narrow gauge R.R. Yesterday at its Rio Grande we went 12 miles from the coast.
Plants of the Brownsville bottoms

Prosopis juliflora
Acacia jamensis
Possumswea aculeata
Fraxinus
Cordelia
Ly ciuin
Cipra liquida
Kosteolina fliosa
Queca 
G. aureum
Palm 'S. mexicanum - a tree reported by Miss Dysart
Opuntia engelmanni

Cirsus eacapata?
Schismococcus texensis

Cirsus stramine
Bermuevel to Corpus Christi

May 3 - Left Bermuevel at noon for its return trip. Camped 12 miles out. Rained hard for an hour just before we started. Roads muddy.

May 4 - 11#. Followed the same course back to Corpus Christi via Sang ranch, Santa Ignacia, Santa Rosa, 4 things needed. The distance amounts to about 190 miles.

On the return we found many of the flowers of the previous trip gone to others taking their places.

'Camped way 4, at about 5 miles south of Rio Colorado. May 5, at Rio Colorado, May 6, at Rio Colorado, May 7, at pond 5 miles n. of Sang, May 7, at Santa Ignacia, May 7, at Santa Rosa, May 9#, at Bermuevel 7 miles south of king Ranch, May 10, at Petronville Creek, and May 11 reached Corpus Christi.

May 12 & 13 - Busy packing specimens & making reports.
May 14. Left Corpus Christi at 7:20 A.M. and reached San Antonio about 2 P.M. in leaving the coast we passed through the narrow belt of coast bordered with its cacti, through a low belt of mesquites, and next the live oak strip extending to Shinnoco. Then the prairie with a few scattered live oaks and mesquites along creeks. After passing Kennedy we strike a river and see the first pecan trees. Then on beautiful blue oaks and moss along its banks and fields of flowers are brilliant including species that have vanished from the rest. Reached San Antonio in a rain.

May 15. Left San Antonio at 9 A.M., for Velasco, and arrived there at 2 P.M. After passing Sunday we begin to go up considerably grade, as the country has some elevation. A low escarpment appears to the north and approaches a retreat as we go westward, becoming higher. The country becomes more open with low, more scattered mesquites or stretches of open prairie. Along streams the vegetation is abundant.
This is often thick timber. A bend, cliff, Cedar, & & his rocks. At last
the river is bordered with numerous large cypress trees (Cupress
taxi-tinum, distichus).

The country is gorgeous with flowers in masses—Lupinus,
Camas, Redbuds, Yucca, Phlox, Thalictrum, Calla-laceae, Argemone,
phlox—Lupines. Grassing and pasture are large. Houses and towns few.

May 14. Waldo. Grew out several weeds west of town and to the east
east. Took some photos and notes on plants and kids. Expected to take
train to Del Rio but it was 5 hours late so waited over another day.

Cochise who was to visit us: yesterday.

The rains have made the roads
very muddy & bad & filled the streams so many of them are not
crossable. 8 inches of rain has fallen in 2 days.
May 17. Chubus camp at noon. Had been delayed by rain & streams & had shot a piece out of his hand. Waited about an hour with him & then took the train for Del Rio.

Soon crossed the Pecos River with its extensive and somewhat wooded bottoms, climbed onto higher, more open land. Mesquite plain is characteristic yet, but the mesquite are more divided & scattered, low shrubs come in, grass covers the whole region which seems to be an extra good stock range.

West of Stockton the country becomes more arid and lots of new plants come in of not desert species. Stocked to Del Rio. The country is typical arid land—no desert.

Saw the quaint west of Stockton.

The lower escarpment of the stocked plains strung as a line of hills to the north until near Stannard. Reached Del Rio at 7 P.M.

Next to Franks Hotel.
Went down to the Rio Grande through the irrigated farms of Mexican Ranchers. The river is still high but it has gone down from the recent flood that covered the fields. From Del Rio to the river the country is low enough for irrigation. Most of it is in fields of cotton or rice - vegetables, or orchards or vineyards. Not half of the water from the big springs of San Ildefonso is used - much more land could be cultivated. Figs, pomegranates, bananas, melons, melons do will.

Went out to the big springs, 3 great boiling holes in the ground where the whole river boils out, clear, cold & sparkling. Some horizontal layers of lime rock. Above town the country is very dry.

Left Del Rio at 4:40 PM. In Pecos Bridge I arrived at 6:00 PM. At Gould's House we ran close around to the Rio Grande & to big cliffs on the other. Great caves - sheet calving marks in cliffs. Instead of following the River, the N.W. turns up Gould's River and cut over the mean by Swastika.
May 19. High Bridge over the Pecos is on the new cut off. It is 322 feet high and 2180 feet long, spanning the top of the canyon. We stopped with Mr. McKinney, the section people at east end of bridge.

Went down into the Pecos Canyon and followed up the river about a mile. The Canyon is about 2000 feet wide and 800 feet deep with steep walls often perpendicular to the river edge, of soft, stratified, fossiliferous lime. Mines and canyons -- gashes cut down to the river. A narrow sand flat borders the river part way but it has all been flooded lately. The river rose 30 feet in ½ hour, but has gone back to normal high water. A few trees & brush fill the canyon bottom.

Two large springs pour into the river near the bridge. The lime rock is full of big caves and caverns. The tops of the country is a limestone mesa, very barren and desert like with abundance of Cactus, saguaro, Yucca, Baseline & Torqueras.
May 20 Sunday. Went to my traps to down in the canyon where I stayed nearly all day, too sick to range about much.

May 21. As it rained all day, I did not feel well. Worked on plants in the house most of the time. Identified a good number of species.

May 22. Hunted hard all the A.M. for rock squirrels but did not kill one. They live along the sides of the canyon and are very shy, running over the walls and over stone if startled. Packed up our things and left the 5:30 P.M. train for Alpine. Stopped at last valley for supplies and then climbed up-grade onto the open, dry mesa and kept in open country till dark. A few quineras along streams and the only change in flora was the green grasses. The trees and bushes came back in full flower.
May 23. Found alpine a well-chosen little railroad town in the middle of a level, barren valley surrounded by low mountains. Got a team & drove out to the rambling Judge Beckwith's, 3 miles south of town for a closer view of the hills. Found a beautiful place among fine oaks with rocky slopes & cliffs rising abruptly 2000 ft from level floor. Upfront the ranch looks out upon the smooth valley. Set traps around base of rock. Shot a lynx.

May 24. Went to top of the highest peak near the ranch—about 6000 ft. From it we could see rough peaks & ridges on all sides. The whole country seems a mass of low, either barren, rough or rocky hills. Volcanic region. The rock is hard and perhaps metamorphic in places & again porous and evidently of late origin. No good craters seen. Scattered junipers high up. No solid timber, just scattered big oaks, madroño, mesquite & cacti.
May 25

Hunted, made up stories, photographed and worked around the ranch.

May 26

Went down to Alpine in evening, waited for El Paso train, till 10 AM in morning.

May 27

Took train in right & woke up near Sierra Blanca. Found the sand, dry, barren desert with its rich color & creosote bush. Arrived at El Paso at 8:40. Found there was no Sunday Train for Alzgonia. Went to the hotel Picadora then over to Jones'. A hot day.

May 28

Left El Paso at 9:30 AM for Alzgonia Mill. Passed 2 fields, out on the road, a neat looking hotel on a barren Lava Rock plain. A typical desert. Continued on over smooth desert valley, growing more sandy & hard barren. Between two rocky ranges of desert into the town, no streams, no water. As the soil becomes more sandy the vegetation (a tall sand grass)
become more abundant, rising with trunks & 30 feet high, surmounted by flower clusters 5-6 feet. Ferns thrive, yuccas form the bulk of vegetation. They are toxic in flowers. The country is very dry. Old dry grass is abundant but not a green blade. The bunches of dwarf mesquite are the only green things. In places it has caught the sand & prairie dunes 4-10 feet high.

Extensive prairie towns near Plata.

Tamarisk Junction - 1 P.M.

Artamusia juliflora, Artemisia canescens, Ephedra trifurca, Prosopis juliflora, Nepeta stricta - grass and 14 principal plants.

On the east the Sacramento River is upstartly in a wall of stately mesquite arbores throned feet high - back of that we got glimpses of a higher, wider wooded range.

Reached Alamagordo at 2 P.M. took narrow gauge log train for the mountains of Cloudcroft. In few miles north of Alamagordo we turn up a canyon & the coast & climb steadily
up steep grades for about 3 hours, the country is rough & picturesque.
Steaks Junipers, pachycarpa, J. virginiana, P. engelmannii or the foot hills 
kept with them up to edge of pines 
& Douglas fir. When got tired 
we made the last push in wagon.
up through beautiful forest to the 
summit of Cloudcroft.
Located in tent no 5, in Chipmunk Act, 
were glad to have a fire to go to bed by. 
took a few little cabins & log houses 
& two lumber camps. The train hands 
logs down to Abangardia - yellow pines & 
douglas fir. The mountains are covered 
with splendid timber, but are seriously rated 
A few springs & creeks seem to down but no 
water near the top. The supply is pumped 
up about 3 miles for the town of Cloudcroft.
From lower Serra granora in the valley 
we pass through higher Sierra 
transition & find ourselves in Carobs 
at Cloud craft. Many transition pieces 
are still with us on warmer slopes 
but otherwise the vegetation is
pure Canadian.
May 29

Woke early with a chorus of bird songs outside our tent. For the first time saw plainly the beautiful woods around us. Had a good breakfast in the big Pavilion dining room. Then went out on Senecie Point for some photographs. Could look down over the wide valley to the west with its great, low, shining plains & across to the blue range of hills west of it. We are on the very top of the Sacramento Valley, at the top is flat. Chaldercoft is 9130 feet above sea level.

Hunted & shot harvest.

May 30. Caught a lot of things to skin & were up skinning most all day. Sit was tired.

May 31. Took a lot of photos.

June 1. Took up traps, made up last specimens, packed up our things & got ready to leave.
To El Paso

June 2. Started down from Cloudcroft at 9 A.M., from Tloggan at 10.

Had several, took notes on plants, photographed all to way down to Alamogoods where we left over from 12 to 5. Came down on top of clouds behind 15 loads of logs, made about 7 miles an hour.

Turned to big ravines at Alamogoods and the El Paso-W.E. R.R. our chef which, with its addition of country seat, in small stream of water seems to give a slight special for a town of 1,000 people in the back of desert valley.

A great, fast playing with the water in the form of a small stream of drooping and heavy way. When we met 6 passed through a rain with hail storm in valley with its circling, blurred clouds, sound faint of rushing dust, tremendous with rain and hail.

The people are beginning to fear this rain will soon bring them out. Reached El Paso at 7 P.M. and went to Mrs. Holm's boardinghouse at Hill Top, Found it very pleasant.
El Paso to Riverside, Calif.

June 4. Started at 8:20 a.m. from El Paso. Was impressed by the evidence that the Rio Grande had cut its way through the mountains that would otherwise have formed a chain across from the Organ Mts. to the similar range in Cocharexia west of Juarez.

The El Paso fault extends up the Rio Grande valley and west across the higher country halfway to Deming.

Got dinner at Bowie at 2 p.m. 

& supper at Tucson at 7 p.m.

June 5. Woke up at low part of Colorado desert below sea level. Got breakfast at 7 a.m. at Lobo & reached Calexico at 9:48 a.m. Took 10:15 car to Riverside & stopped over to see the country around there.

Drove out 20 or more miles on Victoria Ave., among beautiful orange and citrus groves. Came back on Magnolia & Palm St. Park between magnificent rows of palms & palms.
to Twin Oaks

Trees & magnolias. Climbed up on Patrick heights for a view over its valley & town. Almost the whole valley about Phoenix is under through cultivation; its greatest part in oranges, which are ripe to about half gathered.

Stayed at the Glennwood Farm for a most delightful old & lovely, cozy hotel in the middle of town but also in the middle of trees & rich plants.

Tuesday got up early & visited the park & cactus garden before breakfast. Found the greatest wealth of flowers, strange plants & beautiful sage. Took train 11:50 for San Marcos around by Santa Ana & Oceanside. Stopped at place a few miles west of the old mission Capistrano & followed it to Oceanside when we had to wait from 12 to 2:45. Hopped over hills & took photos. Went bathing. Cool & windy.

Reached Twin Oaks at 5:10 PM.
June 14. Worked about Windtow + Tasomato, grubbing in creek up the arbutus valley. Bivouacked about Windtow, high up in a low dell. Collected a lot of seeds of a few plants. The country is dry, but few springs in hills. Often water placed in clay are drinking places in hills + mead.

The mountains are about 1500 to 2000 feet high, granite with rounded peaks + boulders + ledges projecting. They are steep, precipices sides with grassy soil covered with chaff mix of Aravarta, acorn oak, Manzanita, Erigunsha, Rhiz + other shrub growing in a tangle. The west slopes are more brushy than the east.

The valleys are mostly cultivated in grain + fruit, which mostly small without irrigation but in years have been to big on good cases. There is very little irrigated. Wheat, oats, barley, corn r alfalfa are the usual crops. Oranges, lemons, tangerines, olives, figs, peaches, apricots.
prunes, plums, cherries, apples, pomegranates, grapes and small fruits all do well. Eucalyptus groves are common among Australian ornamental trees are erected.

A few immense flint oaks and eucalyptus grow along the valleys but the hills are almost destitute of timber. The Eucalyptus 20 or 30 miles to the coast have tall timber. I have seen the inhabitants of communities relying here.
June 14. Left San Francisco at 8:20 AM. Took train to Los Angeles at noon. Went to S. Pasadena, about 200 miles from San Francisco. Took short tour of Burbank Riding & Training Establishment, picking up their feathers.

June 15. Wake up in the northeast of the San Joaquin Valley & arrived at Baker field for breakfast at 7. Picked up Luther J. Goldman at Cali. Reached Sacramento at 4:30 P.M. & stayed over night.

June 16. Left Sacramento at 10 A.M. on the west road for Marysville. Crossed the river and the big tule swamp that reaches along the west side of Davis. Turned north by woodland & along the road of the valley among grain fields, fruit orchards, good farms, and beautiful big oaks (O. leuc) scattered over fields & valley. Re-crossed the river & big tule swamp & followed up the Feather River & Yuba & Marysville. Established camp.

June 17. Sunday.

Picked up things to remain & looked for horses.

June 18. Got 2 horses used this day in getting outfit arranged, horses & stock, supplies, & outfit stuff.
Brown Valley is a watered, little mining camp in a narrow gulch. A few young trees in an yard and bushes with rip, joint. It is difficult to mark the line between lower of upper stream zones but it is likely near Brown Valley.

Brown Valley

June 19. Did not get off till afternoon. Travelled east 12 miles to Brown Valley and camped a mile beyond. Approached foot hills about 8 miles east of Marysville after crossing hill, fertile valley all fenced in grain. Grain, citrus and legumes crops. A few orchards & vineyards. Back 4 miles from Marysville are stands scattered oaks (Quercus), which increased in abundance on the foothills. No other tree in valley except along its sides where willows to cottonwoods form dense groves. Willows, alder, turkey willow & a few small plants & grasses grow, or border, trees, now stand dry in the fence corners. High dikes ('feeder dikes') extend back from Marysville to near the foothills to protect the land from overflows. The valley land is valued at from $40 to $100 dollars per acre. The foot hill country is not steep or rough, but the soil is strong & poor except on the bottom strips. The hills are covered with scattered oaks, Ceanothus, Rhamnus, Quercus, and black oak. Brown Valley Pines continue higher.
June 22. Continued all day along creek valley and over ridges to near bottins & clumped at sand. In hilly foothills all the way. Good ranches in valley bottins, hills dry, tushey, covered with scattering forest of firs, big pines, ceorvollus, quetaastophylos. A few minus protocoros appeared before we reached Oregon Creek but kept on the cold slopes & gulches. Passed beautiful groves of old blue oaks (e. langagis) with their white limbs & wavy branches & elm shaped tops. Came up very slowly & camped near bottins at about 2000 ft.中部附近
Traced Oregon Creek at noon & found Albins, Platins & such trees along its banks.

Orchards of apples, peaches, pears, plums and figs are common along the road. Grains & hay are the principal crops. Mining is the main industry of the country. Nearly every block & gulch here is a mine dug & wasted.
June 21. 6. 1/2 miles from camp we passed the little town of Dottins. At about 2000 ft altitude, where we left the last trace of Pinnas oblonga, Eucalyptus spectabilis, Q. douglasii, Conothus cuneatus, & their accompanying forest. Some large fruticas & Catalpa in Dottins door-yards.

Began climbing toward east of Dottins, struck beside abundance of Pinnas ponderosa & Lithocereus dicerurus, Pseudotax, Pinnas lambertiana, Eucalyptus foliosa, Acer macrophylla, Eucalyptus californica, Q. chrysolepis, E. vigintiquin., Tannia Arboreta, Conothus T. riparii, Q. pedunculata, Q. hemisphaerica, & other species at about 2000 ft. In other woods we struck pure transition zone at about 2500 ft on west slope 2 miles east of Dottins.

Further along in cold N.E. gales

Poulnaquine is common, A. macrophylla & other plants from Canadian zone came down again to Bolleau.

Bat on W. Tiber at 1820 ft, but no other mammals found only transition species common.
Came 22 miles.

June 23. Climbed steadily up easy grade + good road along crest of ridge till nearly 6700 ft. 4800 ft was the highest reading but high ridges were crossed. Deep canyons down steep slopes to rivers on both sides. Splendid forest in which P. ponderosa, P. lawsoniana, Pseudotsuga, Libocedrus decurrens, and Abies maguirei, hold direct record rank.

Trees of ten 8 ft in diameter & 157 or more high. Sugar pine is probably the largest on an average. Conifers form a rich, beautiful plant carpet dotted with flowers. Arctostaphylos, manzanita, takes its place at roadside. A large white flower, Crocosmia, is common.

The hairy C. candidissima forms solid masses. Entwined quadeirescula is common.
Near Downieville.

At the Mountain House (4500 ft.) we begin to descend a continuous grade that cuts into a steep slope, down to the N. Yuba R. 4 miles below Downieville at 2700 ft. This is a forest & brush covered slope with numerous cold, blue gulches & beautiful little streams.

In place the Philadelphia tucker was loaded with flowers that gave the air with fragrance.

Camped in gulch half a mile from N. Yuba R. Came only 16 miles.

June 23. Remain at camp in gulch writing up notes & doing various little odds & ends of work while the horses backs rested & got sound.

June 25. S'tuck. N. Fork Yuba R. I arrived from camp & followed the tracks up to Downieville, crossing it north & uphill to lead a mile below town. In this part of the canyon I found a trace of Hesperomorphe species mixed with P. hamata, viz:—

Hesperomorphe 

Otherwise transition species cover the higher, steeper slopes & the narrow strips along the river banks. The river is wide & quite deep, muddy stream full of bits of debris. The banks have been washed out & the base receded up for gold hunt. A few little miners hang on to the rich slopes or go up holes of the river valley. Downieville is a typical mining settlement with only one street but it is old & has many comfortables & even pretty houses. Got supplies & continued up the South Fork of N. Yuba R. about 8 miles & camped 4 miles below Sierra City.

Good road but heavy toll. Barometer read at camp in Woolsey Gulch 2700, at river 2570, at Downieville 2500, at Camp 3780.
January 24, Camp 1720, 1911.

Horses went back about 4 miles, got a late start, followed up the river quack, rising slowly and steadily. Come to Sierra City in about 4 miles. (00:23)

Then turn north up North fork of the South fork of Whiskey P. Camped at noon at 5100' at old cabin, at E. base of a mass of tall, jutting peaks that rise from Mengvall's. Large banks of snow lie at their base about 2000' below us.

Steep slopes covered with chaparal and scattered forest of juniper, pine ponderosa, pseudotsuga, tamarisk, and Abies lamarca. At 4,800 feet an E. slope struck snowdrifts, and view was obscured. Emperor's eagle, Linnaeus' vespertilio, C. griseus, and L. infuscatus. This really marked a change to Canadian zone.

L. altaicus, L. lauteri, and St. albicans are found on E. slopes. From Camp we can see hundreds near the now 2000' but above us on N.E. slope.

Spearin's cacti in varying forms; including especially heeled to remain at base camp over night. Come only 10 miles. Goldman set out a line of traps but could not walk.

Shot a large barren mule.
Lincoln Meadows

June 27  A little better as we broke camp.
Goldman caught a species of _Pseudopterus_ with gills and a lot of mowells.

Continued up the creek with good water
and good gravel in a N.E. direction
about 8 miles and camped at some meadows
at north of Lincoln Creek at 6300 ft. Camped
among _P. murrayana_, _Monteola_, _P. jeffreyi_,
_Abied_, _Populus Tremuloides_ & other
Canadian zone plants. The lower part of
the grotto is mainly ferns & lizards
covered with clover—_Rhus occidentalis_,
_Arctostaphylos viscicaris_, _Castanea_,
_Evernia cuneata_ & c. —

It seems to have mentioned the old forest
which still exists in strips & patches
—_P. murrayana_, _Pseudotree_,
_P. murrayana_, _Abied_, _Populus_,
_and Quercus californica_, a typical landmass
zone. At 5400 ft. _P. murrayana_,
other Canadian zone species began in
the bottom of grotto. At 6000 ft. the whole slope becomes
Canadian. This point on the stage
road is about 10 miles from Sierra City
on 6 miles straight N.E. Sierra Buttes
little meadows & open parks are
common along the streams or the woods became more continuous & dense & cold. Some pretty camp places were passed. The streams become clearer & beautiful when the nigh wind turned in its muddy waste. Side streams become numerous & gulches full of willows & alders are frequent. The chappared trees live dense over the lower slopes & do not come into the woods.

The stream we camped on is too big to jump across & is very cold. It seems to be the east branch of the west branch of the north fork of the south fork of North Fork R. We camped on its bank in a grove of rushes. Goldham set out a line of traps while I made skins & got supper. My foot is still too sore to walk on.

Entamia crenata began with Primrose at 5,600 feet & was common all the way up to camp; apparently not rooted in Canada zone. Our Entamia crenata was taken at upper camp. C. ochrodesmus & S. californicus are both common in Canadian zone.
June 28

Goldman caught 10 with
perspective, caught one Sorex
Chisumka.

Started up the quick leading east
at right angles to stage track —
followed an old road about 4 miles to
reach a big meadow at 7,000 feet. Camped
high up in a Canadian zone with snow
banks at around us. Some lodge
-growing not far above. The big meadow
is called Lincoln Valley. The area
we suppose is Limeworks. We are
here; here we stocked in here and
through these we nearly posted.

It is said that some plant
killed many of the sheep last year
now have been brought in this year.
The big meadow is surrounded by high
ridges. Lava & cinder = volcanic rock
that seem like the rim of a big lot
crater. Most of the range is granite.

We climbed to top of the highest part of the rim
over a meadow when we found much snow,
some lodgepole, and a few bluegrasses.

At about 8,000 feet. Had a fine view
over Sierra Valley to the N.E. of Sierra Buttes
n to the S.W. a vast timber covered wilderness.
The little creek is full of trout that provokingly refuse to bite. Mosquitoes are bad but soon frequent after sundown.

Eutemia platy is abundant from at least 4 or so put up at top of ridge.

No other species seen.

Ruspolia, 3

Seiurus "californicus",

Chrysochus

Pseudoscutella, 14 in traps in canyon.

L. tarda, one lived under log.

Cathogon, 9

Diers, 1

Bear, 3

Bear — brown. Dead on its face.
June 29. Started for Sierra Valley. Came over ridge north to small stream & pretty meadows followed up it to its head & over that divide down a similar little creek with meadows to its east. Traveled through clean, open forests of Abies magnifica & P. engelmannii. Profusely posted with androsaces. Snowed down very gradual descent for 3-4 miles. Then came to abrupt rocky descent for about 2 miles down to edge of Sierra Valley. The trail - the slope eastward with chaparral. Had hard work to get down but made it in course of 2-3 hours.

Left Canadian zone at about 4600 feet on east slope where we struck Pines prev., Pinus flexilis & P. jeffreyi. No snows, did not get this limit, very interesting to have kept very close to 3,600 ft. through the much snowed zones.

Saw one trader & when we got down found the gulch was called the Bearskin because so many men lived in it. Came out into Sierra Valley 3 miles north of our vicinity. Travelled 8.4 miles - camped at that point, 3 miles south of Simpson.
June 30. Remained in camp a day to
work into valley. First it is a big, flat
bottomed old lake bed 15 175 miles across
surrounded with lava ridges on the E. W.
with a few vases cones & cinder cones in its
edges. An indistinct shoreline about 75
put above the bottom shows in its own sage
brush covered east side. Forest cover
ridges surround the valley, 1000 to 2000
just above its bottom. The whole valley
is meadow & much bog is cut & short
wintered. It is largely a dairy region.
All the land is fenced & good ranches
are numerous.

The valley is straight, furnished
with Artemisia tridentata & Agria,
Wyethia & Pulsatilla as its most
characteristic plants outside of its vases.
Pines ponderosa & kalmia frame down to
edge of vases on W. side, but the
east side is mainly sage covered
ridges with scattered junipers reaching
up the first slopes 3000 to 3000 ft.
Barometric reads 29 300 in valley.

Surprise is 28 miles from溯源
with good road & daily stage.
July 1. Started for What lake by the short cut road but took several wrong
roads; finally camped on a summit overlooking the lake & overlooking it from its north. Set traps for Micolena.

Travelled S.W. from Dicksonville then left the Tagushuk valley & followed up a creek among yellow spruce & fir. To the sawmill, then up a steeper slope striking edged Canadian gold at 1130 in stiff N.E. field, passing from P. ponderosa 5 steep, Abies Abies balsamia to Abies maguirea P. monticola,

Clear glovern, went at foot to P. monticola. This change from Transition to Canadian is about 7 miles S.W. of Dicksonville.

Entomies enneurus is common in Sica valley & up to edged Canadian zone.

No species seen in Canadian. Several fresh bear & deer tracks were seen.

C. chrysodactyla is common. An old quail & mord of tiny young were nearly

rambled up out bushes just.
July 2 - Descended 400 feet in a mile and a half and reached Webster Lake, a beautiful sheet of blue water in a rich and lovely valley of meadows, forests, and snow-covered peaks and ridges. Pines and firs are the only trees observed in the bottom part of the valley. It forms clean groves and forested strips between the deep green shadows of the meadows and valleys. The meadows are brilliant with flowers, bluefields of Delphiniums, Camas, pink Tulipanis, and Dodecatheons, white "Epps," and Polygonum. There are good looking cottage hotels on the lake side in the meadows, lots of boats on the lake and some breachers. The only objection to the place as an ideal summer camp is the people, or the fact that people are there. A good road comes to it from Truckee going over the pass to Nevada City. The whole valley is pure Canadian zone with a Hudsonian rim higher up. Barometer read 7800 ft. camp on ridge, 6900 ft. lake. Followed along little Truckee.
which comes out of Webber Lake and in about 3 miles descended into a transition zone valley of 6700 ft. full of sapbrush, P. ponderosa & jeffreyi, & several creeks still following the river banks. Followed down the river 9 cis to 4500 ft and turned on a branch road to the S.W. up grade again & in 3 miles came to the lower end of Independence Lake at 7000 ft. Struck Canadian zone 2 miles east of the lake at 6700 ft. Found a kettle & hundreds of ice of lakes & end of lake so stuck an old ship's trail along north shore of lake to its west end & camped half a mile beyond lake in the big glacial kettle at practically rock but slightly above the level of lake.

Independence Lake is very similar to Surprise Lake. It is an old glacial trough 1 mile wide & 3514 miles long with steep shores that go down "capriciously." The lake is merely a feature of the great glacial bed, coming from its crests like a wave at 9000 ft. 1.5 miles west of the lake with its cinder & lava rims & its granite end & its long moraine. Heavy Precip. came down to the water.
except where coast off is grown up to
Craspedius and Arum saccopapilis.
Pine species is common, especially along
the north shore of Lake on the western tip
of the lake. Native Pines include Pinus
monticola and Abies lutea, as well as
Abies magnifica and Pseudotsuga taxifolia
from the bulk of the forest. There are
meadows and willows at the shore of
Lake and in some of the lake's
magnificent, untouched areas.

While people leave at the lower end, the upper end of the lake
is uninhabited and untouched, though
we passed a herds of sheep coming
up past the lake. Mosquitoes are bad.

The stream is full of good wigwag
that refused to bite.

Botanists survey the area and
encounter various
common at camp. Amongst hills
and wide ridges are common.
July 3. Climbed to head of our canyon to Summit Lake, a snowy peak about 9,000 ft. Could look down on Independence lake, White-rock lake, the lake at head of N. Yuba. A dozen more of various sizes. Found that a smudge of cirque or lava crests formed the peaks around the head of the canyon that had been cut out to the north from the immense crater. The crater is very old. The glaciers have cut deep into it. granite fossils fill the scooped-out places. Snow-banks are extensive and deep and hard but so glaciers among them. Snow-banks are common down to 8,000 ft. At 7,500 ft. N.E. stuff stop. Snow begins to extend to top of peaks on warm slopes. At 8,400 ft. Pyreneus begins and is common above. Pines reach 9,500 and become dwarfed and prostrate, only distinguishable from alders by its cones. Junipers, redwoods, A lectocarpus ledophyloides, Artemisia abrotanum, and a little Artemisia cover up on dry slopes and rocky ledges to the summit and above.
July 4. Broke camp and started for Donner across summit of range. Climbed to summit and then down into Paradise Valley on its west side. Followed down Paradise to 7200 feet and turned south, picking our way over rocky ridges and through gulches along the west slope of the range. Camped at 7700 feet under aElbow, labeled in Canadian zone all day except for the Hudsonian strip along the summit. Did not get below humlocks + Bryantus on cold slopes.

July 5. Continued a few miles south to the railroad below Donner Domes and followed up to cast and camped just below Donner. Got mail + supplies + wrote letters. Came about 3 miles straight across but had to pick our way over rocks + through gulches and probably traveled 8 miles. It has taken a day + a half to come from Independence Lake - nearly now than 10 miles away in a straight line. We found rough country + no trail. Came too far west onゲイのwrong route. Quicksand = struck. Rivers brought. I Donner
July 6. Write letters & reports as always.

Remained in camp finishing shots & collecting things in the big breakfast.

July 8. Sunday. Climbed to top of Lincoln Rock, a mile south of town, 8,400 ft. high.
Found a good wide tip of Hudsonian on the upper 60% of its U-shaped with hummocks, detail y, velod; Brachytrichium aureum; Sciadopitys presertus, dwarf pine; Dictyocarya livida variquipes. Big snowbanks come down to 7,400 ft. in lower on steep slopes.
Found signs of deer campfire on top of jack, also of Abies & Pinus. Deer are at work cutting out the vegetation in the meadows above four miles away. Snow fields have been killed by it.

July 9. Sent Walter Fisher down the road for Gutman's instruments but in going 12 miles he did not reach the edge of the transition zone. 6,700 ft. was the lowest altitude reached. We found water & grass as low down as he went.
We went around to the basin or south side of Castle Peak on the trail to Paradise Valley, found some pretty little basins with streams & lakes & meadows but all eaten bare by sheep.

Came back over the trail east of south of Summit House, saw a big Gathering of rocks near the vallley.

July 10. Packed up & moved camp to back of Amphitheater 2 miles south of town to 7000 ft altitude, camped by little meadow near snowfields under
the handdeck.

The two ridges running east-west & running south from Ridgely Peak form a circular amphitheater that was once the rim of an ancient crater. The glaciers have cut out the north side of
Girr, the woods & meadows now fill the gap. The remaining rim of lava, including Lindsey Peak, is both higher &
broad & grass. Lava & volcanic rock extends south to Lindsey knob at least.

Set traps in meadows near camp.
July 11. Went over into valley of N. Fork American River about Soda Springs. Found 2 tiny herds of sheep & the grass all eaten off. Country bare & dusty. The pass over to Squaw Creek is very steep & rocky. The timber cover below is mostly burned off. Concluded not to move camp to this side. Saw some bear sign but sheep have spoiled the country for wild things.

July 12. Went around north of Bonner Peak & found a beautiful meadow & meadow grove to camp in, about the hotel & station & overlooking Bonners. This is one of the prettiest places to camp in.

July 13. Moved camp over north of Bonner Peak to little meadow & by arrowhead at 7900 ft.
July 14. Have been collecting around camp for 3 days, getting Lagopus, Eretrarpus, Nocotla, Micrurus, etc. Today I went down to Somers Lake where S. hildaei is common. Saw snow to show whether typical. The old lies in Canadian grass at 6000 ft except a few transition zone things in the dry, hot slope facing north. An extensive group of willows, Carex sp., ryegrass at the west end of the lake furnish good cover for mammals. Saw rabbit tracks all around. Some kinds like meadows near the lake are dense. We saw S. hildaei, Entomius ruminating, A. microtus, A. tenebrus, P. hyperc constraining.

On return trip came by short cut to camp, up the slope over un tested and around south of the rocky end of Somers peak. Had a hard climb down 2000 ft a back without getting much killed a young woodchuck, A. microtus, orange & S. hildaei. Took a lot of photos at rock slides to the places worn roots in Somers pass & lower down of Pines Jeffrey.
To Emigrant Gap

July 17. Packed up specimens, wrote letters and started out on a trip to Amadee. Did not get much done except a few shots made up a few traps set.

July 18. Went over to ridge on east side of Bonnie peak down nearly to hollow stream in the big gash but did not find much. Saw one Coyote but missed it.

July 17. Rode down to Emadise by the railroad loop or Bonnie track returning by Bonnie's station. Made this trip for a gene line but found Emadise in nearly pure Canadian. Though not on hot slopes many transition things come up to Bonnie Lake. Found Sheldon's & Emadise.


July 21. Took 8 A.M. train to Emigrant Gap & returned on 3 P.M. train. Found plenty of interesting quadriradiates & other transition zone things on face of Canadian on cold slopes. Got a lot of huckleberries.

July 23. Wrote reports & packed specimens.

July 24. Broke camp at Barrier Peak & moved down to west end of Barrier Lake. Set traps & hunted. Shot Mule deer & a prairie dog.

July 25. Hunted & trapped & made specimens at camp.

July 27. Started early, followed down south side of lake to Truckee & up river to Lake Tahoe. Camped 2 miles south of outlet of lake on shore. Came about 25 miles. Good road all the way. A new narrow gauge railroad going to completed from Truckee to Tahoe.

This transition zone things come from Truckee up the valley of Truckee River on dry hot slopes to the lake, but in general the vegetation is Canadian. Astragalus, Trifolium, Festuca, Artemisia, Ribes aureum, Arctostaphylos
The city of St. Louis, Missouri, is located on the east side of the Mississippi River. The city is known for its rich history and cultural heritage. St. Louis is famous for its Arch, a large archway that symbolizes the gateway to the West. The city is also home to many museums, parks, and historic sites. The Gateway Arch National Park is a popular destination, offering scenic views and educational exhibits about the country's westward expansion.
form to a lava cross ridge, one several hundred feet above the lake, running across the valley at north end of lake. The outlet has cut a notch 250 or 300 feet deep through this lava ridge, just below the lake. The road or railroad runs through this notch.

Big glaciers have come down into the lake, or into the valley before the lake was there, on the west and north and 2000 feet wide troughs. Emerald Bay, Cascade Lakes, Fallen Leaf Lake, Emerald Bay being the only one at present reaching into the lake lake basin, but the main lake basin is merely a mountain valley between two ridges. Spumophilos Weidig's was seen very few miles along the way from Boone's lake & trailer up the road to Lake Tahoe & along the lake shore. Its range is perfectly continuous from Lake to shore.
July 28. Followed along the east side of Lake Tahoe on good wagon road to the Klamath and on a little used road to Fanta’s. Then on trail to Emerald Bay, and camped. Came about 20 miles and part of the way over rough country. Most of the good timber has been cut and in the lake for lumber from not only the shore but back over the ridges. Old stumps remain down the steep slopes to the shore. The timber was once magnificent. P. Jeffrey. Taxodium, Lob. and E. magnifica & conawa. The big stumps stand, all around but all else has been burnt, except a few small trees destroyed except in damp places. Black Chaparral covers the country. The ground is sandy, dusty & hot. A few relics of magnificent, untouched forest at Dandelion show what it once was all along the lake. This & at Emerald Bay are the only recent spots. A big buckeye tower 600 ft high stands in the forest at Dandelion, which is the prettiest place north of Emerald Bay.
The Kinney is a hotel & cottage camp place in rather brash, unattractive country. Trapps is a new place, not very interesting. At noon we landed on Jemiss Creek, & found lots of big lake trout trying to get up the creek—evidently they were spawning as in places the creek bottom was covered with eggs in every stage of segmentation. The trout were often stranded on shallow places or at logs in the small stream & many dead ones were seen. The shores of the creek were tracked up with bears that had been feeding on the fish.

Spermophiles hooligs were seen at suitable places all along the lake shore. Gulls were the only birds on the lake. Many mountain quail & a few blue grouse were seen, old & young of both.

The rock is mainly granite—much of it soft so it forms loose granite sand.
July 7th, Sunday.

Remained at Emerald Bay all day and explored the canyon above.
Camped under big Pines perpendicularly on the shore & let the horses run in the little meadows. Photographed the falls and bay. Two falls just beyond the bay are very pretty but only about 50 or 60 feet high. The canyon rises rapidly and the peaks & slopes are very rugged around the bay and are rounded & smoothed by ice.

Mrs. Armstrong, the lovely, white-haired old lady who owns & keeps Emerald Bay as a private property was extremely hospitable & pleasant to us, letting us camp & pasture our horses on her little flower garden meadows. We visited Sailor Jack, a half crazy old fellow who has a house boat on the shore halfway down the bay when he stays all the year, doing odd things to "studing" his main study is the "perfection of ease".
July 30

Followed a fairly good trail over the ridge to Cascade Lake, and a road from there to Taolae - 6 miles in all. Cascade Lake is a good place to camp with plenty of grass. crossed big meadows near Taolae where the dairy cows range.

Got wood & supplies, went out to Fallen Leaf Lake, camped near middle of northwest side.

July 31. Rode up to Camp Arapez, but it's this boys had gone around Lake Tahoe. Then rode up to Glen Alpine Springs, back to camp, almost encircling Fallen Leaf Lake.

Aug. 1. Moved camp about 5 miles south to Meyers, or Upper Truckel & camped in the big flat meadow with mountain ash & edge of woods. Set traps, hunted & wrote up notes.

Aug. 2. went back to Taolae for more supplies.
Aug. 3. Started for Placerville
At 4 pm we turned into field to go by the dairy ranch + rode for a mile or so on sandy flat when the big junipers grow - a foot in diameter + 45 ft high - photographed several. Followed up the valley a short while + turned up the grade over crest of range at 7500 ft. Good road up steep slope.
Went around to Echo Lake but decided to return + camp on Placerville road at upper end of meadows on west slope. Camped at 7900 ft just below Audlais Lake. This is the extreme head of the South Fork of American River.
Came only 5 miles on the dirt road camped at noon + hunted. Got a ride Pinicola. Found signs of several species common - S. keldurgi + 3 species of Eriamia are common. Thraunus, Pimousa, Melitotus versax, Esch. californium, are common. A few deer tracks seen in meadows.
Aug 4

Started down S. Fort American R. Step, jagged granite ridges on both sides. Big meadows + Aris magnifica + P. maruyama forest for a few miles. Then steeper grade + narrow, gullies + more rocky country until we passed through the gate at Echo (Stevens Valley), then gentler slope but narrow gorge to Slippery Ford, where we camped.

Echo at 5500 ft, marks beginning of transition zone on west + S. slopes P. ponderosa, larch, lodgepole, + the whole west of transition west shows begin abruptly to the Canadian spruces — Aris magnifica, P. maruyama + monticola — stop.

The 3 upper alders of Eutamias were not seen below Echo, but E. quadricomis began to was common. Several possum + digger S. beecheyi also became common.

Slippery Ford is 4000 ft + on S.W. key made a few shots of Soveran again to uphill — CerrothryOPS innumerable and on other ridges of Arctostaphylos visible were seen. In general still pure transition.
Aug. 5.

Followed down the S.Fork American R. to Riverton (Moore) where we crossed to south side on bridge at 3300 ft.
The canyon is narrow and the soil steep and at present dry.
On the north side of river many upper forest species came up to Moore which partly marks its extreme upper limit! Opposite side of canyon is poor transition; so after crossing the river we go up a gradual grade to 4000 ft on top of ridge at 14 mile house (Shantung Hall). Here the road descends again but on other ridges sloping S.W. + N.W.
Pinus ponderosa + lambertiana + pseauvigil
Lilac; Abies concolor + Picea
California; few of transition zone on this part of the slope. Arctostaphylos pumila, Corwithus cordulatus, pringlea
+ others
mus 
+ blueberries are the principal plants.
Entomis quadrimaculatus are common from Pacific slope to near Shantung Hall.
August 6
Sportswarm Falls to Placeville, 12 m.i.

Followed down upon my transition zone ridges to Smith House (16 m.i. E.N. Placeville) where Upper Sonoran begins at 3,000 ft (550 m), marked by Pinus edulis, Quercus douglasii, Abies, + agriophyllum. Arctostaphylus viscida, C. empetrus, Cassius californica + the whole set of Upper Sonoran plants. + ponderosa, Pseudotsuga, + Q. californica. Run down to Smiths Flat (2,500 ft) + slightly to Placeville (at 1,900).

I shall take Smiths Flat on the upper edge of Upper Sonoran on West side. It is in the foothills with fertile valleys + low ridges, red soil and good crops where water is used for irrigation. Hay, grain + potatoes the main crops. Grapes, figs, peaches, pears, plums, apples + berries are seen along the road.

Cupressus californica Trees are common up to Sportswarm Falls (4,000 ft), 1,000 ft into transition zone.
Aug. 7. Had to send to Sacramento for packs.

Paddle is renewed in camp at Smith Flat. Hunted hard for Eutamias minimus but found none. Was told that no chipmunks were known this side of Spottednose Flat. Went to Placeville. Again but found the paddlers still had to be filled up and could not get them until morning.

Place is a lovely little town where the mining industry is yielding to the agricultural.

Aug. 8. Went to Place and got paddles, then started on return trip. Came as far as Pacific and camped.

Aug. 9. Passed Riverton and Slipperyrock. Camped about 5 miles west of Echo at about 5000 feet, where Apholodontia later was found. But traps caught a fine old male Apholodontia major. This is in pure transition zone.

Aug. 10. Came back Echo and back to our old camp near Mediterranean Lake.
Aug. 11
Took a trip around Echo Lake to upper end, then back over the ridge to camp, climbed to peak on ridge at 9200 feet where found abundance of Pinus albicaulis full of mature cones and also Larix Lydia and Oxyaria digyna. Had a fine view of the cirque between high peaks from Mt. Talus around to Pyramid and Echo Lake. Found populus camps at both ends of Echo Lake and saw horses in the little lake to the west. Found lake valley a very lovely, rugged, glacial trough with paper laim. The upper lake contains a dozen rocky islands and there are cottages at two of these.

Remained at camp most of the day. Many feasts every night - clear day.

Aug. 15. Went down to old camp on water and cooked dinner. Collected and took horses into Echo Lake when I went to Dr. Morrison and John White.
Aug. 14. With addition of Dr. Merriam & John Muir to their man & team, our party moved southward up the range east of Upper Smoky River and camped at Grass Lake on the summit. From this on Dr. Merriam will keep the journal notes.