Journal Notes of Vernon Bailey

June 22 - July 22, 1927,

Minnesota to Reno, Oregon

See notes on bats at bat caves

June 27
1927

Journal Notes - Vernon Bailey.

June 22. Left Minneapolis 7:40 P.M. for Omaha.

June 23. Arrived Omaha 7:40 A.M. Up to Winnemucca, Nevada.


June 25. Got work & worked on reports & account of letters.

June 26. To Hogeun in evening & out to Hogeun by 10 P.M.

June 27. Out to bat cave in edge of valley 10 miles S.W. of Fallon where we found lots of Myctericus insignis & a few Antrozous pallidus breeding in cave.
 Fired into our colony and brought down two Antigone each carrying several young clinging to the nipples. The young of one were apparently but a day old, male and female, blind, hairless, with wings more like feet than wings. The thumbs with hooks at four fingers only partly webbed.

The claws were well developed and sharp and curved.

The nest used thus skillfully in clinging
d to its mother. Also the mouth was well armed with minute teeth like fine short of hooked for clinging. Each was firmly attached to a wide, flat nipple that gave it a mouthful to get the minute lips into and clung so firmly that I was afraid of pulling off its head to get the hind one loose from its death within the nest day. It clung with teeth of all its hooked claws at once its body in line with the mother so when she hung head down
so did the young one. I removed it next day and placed it in another live female who's young had been killed by the shot. Her young were twice as large as probably a week old with slightly bitter teeth at eye slut just beginning to open. They also were male or female, both saved for specimens, skins and skulls, etc. catalogue.

When the small young was placed in the nest of the other but it grabbed a mouthful of hair and clamped her with hooked claws and in a moment was let go and poked the nipple and grabbed it greedily. The old but began to object as soon as she felt the little one on her and tried to push it away with her wing but could not, so she reached down and took its head in her mouth and forcibly tore it loose from the nipple and pushed it away. It squealed and cut in shrieking 
tooth marks an incised it's head at in the
ear on the other side. She knew it was
not her or intentionally injured it to make
it leave her nipple.
The bat nipple are wide and flat for the whole
width of a wide mouthed young bat to give a greater
clinging or carrying surface.
After hanging all night in a cloth
sack in an outside open room where
the temperature was chilly the young bat
was cold and partially torpid in the wing
but not so nearly torpid as the old bat
in the same sack. It was not too
helpless to use its claws in hanging on or
slowly getting a new hold and if its teeth
had been set on a nipple it would have
been perfectly safe if the mother had
awakened and flown away before it warmed
up. However its temperature would depend
on here and if both became torpid together
probably both would warm up simultaneou

5.

The Necturus mexicanus were far more numerous than the Anteaters and about a dozen were killed at the same shot that brought down two of the larger species. Some 50 or more were captured in a net as they flew out of the retreat in the rear of the cave and we estimated 500 or more that left the cave a little later as it got darker. Those captured were all females, each containing one large embryo that would probably have been born in a week or 10 days. 3 specimens were saved and the embryos were preserved in alcohol.

On entering the cave we could easily locate the bat colonies by the constant squeaking from several crustacean in the rocks overhead. They seemed to be quarreling or quarreling for room or best places or it may have been a quarrel between the two species. In a sense they seemed to get along together all right.
June 28. From to River of Rocks to Fallon, getting some camp supplies that we could not find elsewhere.

June 29. Fixed up the Chevrolet Touring car for a camp trip and got supplies of our outfit ready for starting tomorrow.

June 30. Left Fallon 9:20 AM for Winnemucca and arrived there at 4 PM, about 150 miles, but very rough all the way. Camped near the Humboldt River about 4 miles beyond Winnemucca on the McDeeuit Road. Mosquitoes bad. Caught nothing in the traps.
July 1. Left Winnemucca in morning, heading north up the North fork Humboldt Valley about 20 miles soutn
over a low divide, a saddle, down into the music River valley and up along the eastern edge to Mt. Pilot near
the Oregon line. The valley has lots of ranches and broad grassy bottoms but the ranches are generally
located on the small clear cold mountain streams coming down from the side slopes, more from the
east slopes out of the considerable mountain range included in the Santa Rosa forest National Forest.

We encountered a dozen of these fine cattle and a
Ralph Creek drove up to the old ranger station at the toot
of the canyon for lunch and walked a mile or two up the
canyon, hunting for woodchuck and mice. Found
signs of neither but probably did not go high enough.
The peaks are above timberline and have big loads
of snow on the cold slopes and some timber in
the gullies, mostly poplar tress as well as apparently
aspen and mountain mahogany higher up.

The middle slopes are mostly sagebrush and Russian thistle
up the a I wrapped them with a broad belt of
transfers and a narrow sort of Canadian zone.
Nos signs of junipers were recognized on the slopes.
West of Quinn River is a high butopped plateau called the Quinn River Range which is too high for several could not be found in Canada or many snowbanks. I named it as Kaunation with the broad Quinn Quinn River Valley between the two extending 20 miles north of the desert into Oregon but cut off from the Barren Valley barrier by low ridges not much above its level.

Reaching ME Desert 85 miles north of Winnemucca about 4 PM continued in north east toward Reno for some 30 miles over the first ridge and down onto 6140 Creek and camped before reaching the highest summit in pure sage brush country. Found big ground squirrels common about camp that seem like meadow but not. Also lots of the gray c.m. vole and get specimens of both 6140 and 6140. Ctenodactylus, oxyphius, pedunculus, 6140 and 6140 are common.
July 2 - Collected two of another big yellow ground squirrel real like elegans, all these species on this same ridge were camps and practically together.

Collected 2 species of rattlensakes and several lizards.

Wandered the trail over from the top of a high butte near the summit of the Steens Mts, all snowed and high stood up most conspicuous of all the others I saw.

Albord and the Owings valley lay below me.

Continued on down to Rowe in the Owings ood and camped for the night about the ridge a couple of miles. This is a low but valley, at upper bottom with lava flows overlaid badland lacustrine deposits.

Gathered a lot of wood of some large various like a buffalo but larger than a white canined buffalo 8 miles back from Rowe about 20 rods north of the road.
Found no good trapping ground at our camp as the valley is alkaline and crested and there is good water in the Owyhee River and many irrigated alfalfa ditches. Sheep seem to be the principal industry and hay is raised to winter or feed them on. A little barley or wheat is raised for the horses.

Grass is good over the center and thistles and Rattlesnake grass are the chief sources of food for the horses and a few burrows were seen.

No sheep or cattle.

**Plants of Owyhee Valley**

*Artemisia tridentata sub* 
jasminum spinescens

*Trifida* in our place common.

*Zizyphus spinosus* - abun.

*Corina* -

Chrysanthemum, gray

*Grajia pygmaides*

Euphorbia crassota

*Escobata virgicata* in places

*Secale* 

*Eremurus*

*Salix*

gray
Atriplex empediptera, abn.

... hastata...

Purum-

Okruntra

Nictriana

Mirtjulis, small

Sink of Whiteside Co., July 4th 5.

Activia tridentata, abn.

... sparsus

... astylois...

... Cn. sphicitus...

Gallergia

... Grayia

... Eustria

... Atriplex camphorata

... canadensis

Sarcobatus

... ignicolor furillus

... Achmea lutia

Dryopapis
July 3 - Went 90 miles east to Jordan Valley for supplies. Then returned about 5 miles and camped at the southeast on Jordan River above the Cow Creek lake valley in the midst of great lava rock plains covered with sagebrush.

Country all upper Sonoma with a good representation of Artemisiaspinosa, Grayia, Eriodictyos, Chrysothamnus, Ribes aureum and aureum, Trigynops and the narrow leaved gray willow.

Low lava cones on all sides and bubble cones over the lava fields.

Country on edge of transition or Sonoma with mesa tops clear sagebrush and warm slopes all washed mainly Sonoma.
July 14. West to Rome ad then up Red Rock Creek ad over low slopes to Sheep Creek and Antelope Creek ad then over the west divide to a great Playa at what seems to be the end of White horse Creek. Turned back 4 miles ad camped at edge of a bare wind flat apparently 5 x 7 miles with big slanted clumps around the edge. Set traps in the sand dunes ad out on the hill tops. This sandy valley is pure uppermoss as shown by plants ad animals.

July 15. Caught Pecosus, Pecorovatus, Micropedopus, Oryhorns pecanasus variegis ad Citellus ovalis. Saw cacti, cacti, pinnus and signs of Victoria probably Deciduous ad one set of old Thorny hills. Coyotes ad badgers adn. jackrabbits adn.

Continued up to Whitehorse Ranch about 10 miles ad camped a half mile beyond on the Denis Road just west of the Creek ad set traps both ways out on the desert west ad back in the meadows.
The Whitehorse ranch is typical of the old-time ranchers, big and rambling with good buildings, corrals and fences. They raise horses and cattle and hay mostly wild native grasses, ryegrass and timothy. Grass but no alfalfa or other crops. There is abundance of water in a large stock and many irrigation ditches carry it over meadows where grass grows big and out around the edges in lots of saltgrass. Big pastures make winter range for stock. There are lots of willows, bullberrys, and tall sagebrush but no timber in sight. The surrounding valleys are all Upper Savanna but the meadows above are probably Savanna.

Saw lots of butterflies and ants on one of the green buttes but mosquitos is all over the valley. Jack rabbits, coyotes, badgers abundant. Mormons tortoises hills all over meadows.
July 14 Caught 200 wrens towards Nesteran 
cinera & N. distinctum nevadensis, P. decipiens
publi, Ompheus l. fuliginosus, Scamper
cinera, M. dermestus castaneus, Podocetes
americanus, C. cupreus 

Our first trade seen 
Continued on Denis' road but went up
Willow Creek too far and went to turn back.
Found a large beaver asp side, alive @
two large beaver willows on Willow Cr.
Several holings
Climbed over low divide of Mountains
from near went down to Tract Cr.
and thence across south end of Abandoned
Valley @ south to Denis.

Got one wet @ went @ some
back north about 5 miles & camped
on cold stream out of another bed
of Steven Wolf. Some 300+ trees so
were called it Climaticus Creek from the abundance of Climatic

...
July 7. Caught my Pneumatia in the trap
when I crossed over McCorodgeri.
Came about 35 miles north to Andrews where
we got gasoline and a little grub and went on
to the north end of the valley, or what seemed
the north end where it began to go down
toward the north but kept on the Burns
Stage road over the northern arm of the Creek
Mt. to what was probably Mulh. Smith.
Andrews and then back south 25 miles to
Diamond. Came 100 miles from Andrews.
The rock was mostly very good but one long
grade with probably 1000 feet rise over the
bridge. To the N.E. Alvar Valley seems
continuous down to the Skull Springs
country and leaves Matheas River Valley
but we did not go far enough to be sure.
It is certainly all low and sorcerous.
The bridge is basically familiar with
mostly Artemisia absinthe, Juniperus
occidentalis and along with grasses willows
and Populus angustifolia. Made many
collections to date west.
Camped in meadow at Diamond. Marginal had
Mohenan St. high
Alvard lake full of water. Many other pools,
mashes and huge playas in 3 or 4 basins
of the large Alvard Valley, near Twin Tarn Lake,
to Talley Farm. Low ridge toward Whiting
Playa, and a low gap almost connecting with the
big Andrews Playa.
July 8. - Scort up the Cococumogo Creek and camped at end of good shrub miles from Diamond - town. Rooms shaped.

Varieties grown species and down the canyon -
Populus tremuloides, Alnus, Salix, Cerrus,
Climatis and other herb plants along
the cold water creek.
July 10. Back to Diamond and over to the Blitgen River, then up the valley beyond Blitgen and the P. Ranch and camped in the boughs of a tiny beyond the last ranch and overlooking the whole length of the valley. Chimed the high ridge to the west—overlooking the Callos Valley and made some good comparisons to the life zone map of Oregon. Both the Blitgen and Callos Valley are upper zones while west of the ridges between are transition. The common junipers seem to be all accidentalists and usually transition all around the Steen Mts. and to the west. No junipers were found east of the Steen Mts., none of the Monospermum group anywhere and no conifer trees so far. The Steen Mountains gone way checkups very well.

The great extent of marsh along only of bottom land included in the region of Blitgen valleys is a surprise to me, being hundreds of square miles of rich, well watered land, most of it yielding valuable grazing, hay or crops. The enormous tule swamps are especially valuable winter ranges for cattle and enormous quantities of hay are cut for winter feed.
Eventually vast areas of these valleys will be cultivated in oryx and grain as there is ample water supply for efficient irrigation. But the old idea of stock raising and open winter grazing still dominates the country. A great variety of crops, such as potatoes, fruits, and vegetables can be raised. Comfortable homes will take the place of bare ranches and stock corrals.

Waters can be pumped for irrigating many pieces of land not easily brought under ditches, and most of the water of the valleys is pure mountain water. At present no crops or trees are raised in the valleys except a few stunted poplars at some of the older ranches and in a few places a little alfalfa, barley, wheat or hay for hay. In gardens are rooted potatoes, onions, lettuce, peas and in one garden a little corn.
July 11. Drove down the Blitzen Valley to the Malheur Valley and across the Narrows and to Burns, 70 miles, got mail and camped by the Silver River a mile north of Burns.

Upper Sonoran Zone all the way with abundance of characteristic species of plants, mammals, birds, and butterflies.

The water is high. Malheur Lake and Valley Grass at crooks are big and the narrow valley begins to look prosperous again.

July 12. Drove to Crane and around north end of Malheur Lake. Saw Burns at Voltage and learned that the water is coming back and is 2 feet deep in the old bed of the lake. Still low but apparently coming up.

Camped at the Narrows, or about a mile SW of town near a rocky point and set 64 traps for Microlophus. Found lots of tracks in yellow sand sagebrush country, not a weedy grass but in the sandy soil.
July 13 - Caught only one Microdyopus the dozens of them trampled all around any baits and a few ate some bait. They assume not to care for rolled oats and the Victor worms kept do not spring easily enough to catch any more. Dig out one Micro but he escaped. Found several of their holes. Caught 4 Proctopus. Collected plants and drove down to Harney flats and put it with considerable water along the N.W. side. The greater part known dry.

Back to Burns cd out to Experiment Station 8 miles east of Burns. This Abel Smalley is in charge and doing splendid work. Just starting pump on new well today to irrigate 30 acres. A 25 horsepower pump throws 2,000 gallons a minute. Will have report ready by fall. Apply for it to Platt at Davis, Calif., or to the Ag. College at Corvallis, Oregon. Returned to Burns and camped for ordering specimens.
Mr. Shattuck says the climate of the Malmus Valley is not adapted to corn or any of the tender crops on account of frosty nights during every month of summer, but that over will irrigated areas there is much less frost, owing the heat retention of moist air and that at slightly elevated localities there is less damage by frost.

The rainfall of the valley is a fraction over 8 inches but in the hills west of Reuss about 17 inches, only 10 miles away.

The crop adaptations of this great inland agricultural area, to be, are only in the beginning of experimentation but will eventually be bound by just such work as the experiment stations is doing.

Alfalfa, Canadiana field peas, Sunflowers and grains are the promising crops now with enormous yields from abundance of good pure mountain water pumped up into very rich alluvial soil.
July 14. Called on Prof. Hudson, state Botanist of M. Fellows at Burns cd not get off until 9 A.M. From north to Canyon City cd not to Dayville 44 miles beyond is a good camping place in the John Day Valley. Mapped the life zones and made many corrections in the map. Found Hamilton live practically continuous from 10 miles north of Burns to John Day and in the bottom of the John Day Valley all along. The west north side of the John Day Valley with an open southerly exposure seems to be pretty poor: evergreen not many of the brush tops on side slopes on the south side of the valley but the moist of the often marshy bottomlands are cool cd have much Populus tri boreosa, Alnus, Betula pendula, etc big beaked willows. Good crops of grain at Dayville and com potatoes of some corn are raised cd we saw next seasons of many orchards well loaded with apples.
July 15

Left Saugus at 6 A.M. and took the road west to Prineville, a very poor road to Mitchell and then a fine graded and smoothly surfaced road over the Ochoco Hills down to Prineville. Soon left the Sonoma valley of the John Day and came upon high, rounded, green ridges, mostly pines, with scattered junipers, oaks, and sagebrush, but all bare with an absence of animal graces or sounds. The Altius is largely obscured. The yellow pine timber of the high ridge of mountains to the north a little above us and occasionally a yellow pine on a bank of aspens down in the valley to the west. A few dry grasses form on the plains and sheep ranches in the creek valleys when there is grass to lay. About 7 miles beyond Mitchell we struck up over the mountains through a broad belt of splendid Ponderosa pines, a forest, and higher up on the slope found a dense growth of Tamarack, Douglas fir, pines, firs, and along the streams, aspen of alders.
Crossed the low western end of the Ochoco Range at 5298 feet and should call the upper 1000 feet of this Canadian zone on steep cold slopes. To the south and east the range rises much higher with many patches of snow on cold slopes near the top. I have mapped a Canadian zone staff along the crest on cold slopes. Down the canyon the west we wound through miles and miles of beautiful open yellow pine woods to the foot near the big reservoir where the junction begins and continue across the open valley to Prineville and beyond to Bend. Prineville and Redmond are on the upper edge of Sonoran Zone. The edge of Sonoran and Hamilton is not very well defined. The varying backed and pad or crenation make the two indistinguishably.

The Prineville valley now has a large water supply for extensive irrigation and the Deschutes valley at Bend is taking out most of the water from the river and developing enormous irrigated areas.
For Reval we drove 20 miles S E. to the last caves, first visiting the Skeleton Cave, an old lava tunnel which we followed for about a mile unheeded, but gave up finding the end for lack of time.

It is the typical lava cave with rounded roof 10 to 40 feet high and 40 to 75 feet wide, sloping downward with generally flat sandy floors and white, not sandy or blacked by pillow rocks with a central ridge of double side tracts.

The temperature was too cold for bats, probably about 45°, but no ice or water was found in it.

Some 304 miles farther south and directly N E. of the Paulina Nuts, we came to the Revala Bee caves, a series of 7 caves just along an old lava tunnel in about half a mile. Most of these are blocked up by the drop, but two go down a few hundred
I., p. 27. The temperature of the Cumber DeCove where the ice is most abundant at all began dry in 35°.$^\circ$ A foot above the floor, the ice registered 32°. The outside entrance of the cave is much warmer.

The dry caves where there is no walls or ice are warmer, probably 50° to 60°.

The Staliton Cave I estimated at 45°.

The Devoa Cave registered 48°.
A mark put on contains some ice at the lower parts, in one there is water, the ice in the other is smooth dry ice, fairly clean ice when chopped up making good clean water. We used it for washing hands and dishes. These two caves are much too cold for bats, but the upper cavities and front rooms are warmed up. The other dry cavities are warm as full of cracks where bats may live and may find ways back to other warm chambers making good winter roosts.

A lot of bats came out of one to the entrances of the caves in the evening but we secured only one of it on Eptiteus fuscescens. A smaller Mystis was equally common but the specimens that fell among big rocks and bushes as could not be formed.
July 16, found two more cave entrances at Cave In, making 7 in all at the Avondale Declinations.

Also found the floors of all the caves strewn with wings and shells of numerous moths and butterflies and crane flies, where the bats had been feeding overhead at night. The moths seem to gather in the warm entrances of the caves as do many birds and the bats.

Came back 8 miles on our road and across 4 miles west to the Calf. highway and struck south toward Klamath Falls. At 22 miles south of Bindi we came to the Java Cave, the largest, deepest and most extensive of the caves we have seen. It came down about 100 feet deep and back as a large tunnel over 2 miles in extent but may go further. The tunnel is rather high and narrow, generally 75 feet high and about 14 feet wide. A little water drips in at the air is damp and cold. Well below the daylight the temperature was 48°.

No signs of bats or bat guano found and the man in charge stated no bats had been seen in or around the cave.

He also told of the Horse Cave, near Bindi, larger and more interesting than the Avondale Caves. There are said to be many other caves in the Caves beds.
From Redwood to H. Klamath. The highway is all completed of the most perfect road I ever saw, all oiled and smooth, with few curves or no grades or hills except the one long easy drop from the summit at 5272 altitudes down to H. Klamath Jet.

Much to my surprise we were in a continuous forest of Douglas Fir from the west side of the Paulina Hills 608 miles north of Hipkins south to H. Klamath, with the exception of a few warm slopes where yellow pines came in at the long grade above H. Klamath where Sugarpines, Cedars, Balsams and Aspens came in. The extensive forest of Douglas grows on a yellow gravel or prairie plain where I suspect cold water runs over the rocks below and keeps the roots too cold for yellow pine for the sandy surface bears abundance of Pinus taeda, and Carag larvae all the way. I have wrapped it as Canadian grass but with much doubt and hesitation.
The railroad at Reno is building southward beyond Lapine and will probably come through to some point farther south. The wonderful yellow pine forest is being rapidly reduced to stumps and brushheap, but generally a good stand of seed trees is left to reforest the otherwise worthless land.

The great extent of lodgepole pine forest extending from the Pailinie Hills west to the Cascades and south to St. Klamath will probably be lumbered later as it contains many trees of small size and yielding good box lumber.
July 17, Sunday. The bears did not come around until after dark but tipped over all the garbage cans and made tracks all over camp.

Drove up to Crater Lake and walked down the trail to the lake and drove along the rim a quarter mile, as far as snowbanks would allow. Then drove back down to Klamath Falls and camped at the Automobile Camp 3 miles out on the road to Merrill and Alturas, a regular camp city with cabins, tents, shower bath, wood of water, store, garage, gasoline, barbeque and recreation center. A well planned camp with shade of rows of tall Lombardy poplars.
July 18. Came back to Klamath Falls and took my things to Bisbee Hotel and left AM at 9 a.m. at Vernon start for home via Alturas, Susanville, Reno and Fallon. They will make it in two days over good roads.

Have had a wonderful trip and done an immense amount of work in the 18 days out from Fallon. Could have kept them and the car longer but couldn't pay even 75% mileage nor for gas or oil because my relatives furnished the car and did the work for one so the trip was too expensive for any of us to continue very long.
July 19 - Got my luggage readjusted. Saw Silver Applegate and gathered what information I could on plants and crops.

July 20 - Went to the County Agricultural Agent, Mr. Henderson, went over his last annual reports for information on crops, climate and livestock and also got a lot of circulars and bulletins that will be a help in my magnificent. Also got maps and information folders from the Klamath Agricultural Club and some county maps from the Forest Protection Association.
July 21 - Took bus over to Shobriens, 11/2 miles, leaving at 2 PM & arriving 77.
Came by way of Olnea, Dairy, Rosanga, Whiskey Creek, Beauty, Pby & Donna Creek. Was able to make many observations
on the life zone map and get a good idea
of the country and its products.
There is a large reservoir at Deneen
and at the edge of its water are close to
the road were 2 flocks of Canada geese,
about 100 in each, and perfectly oblivious
to persons by. Saw a jay flying in
meadow near Shobriens. Several deer
Woodpeckers along the road at a pair
I tally quails near the mouth of Whiskey
Creek. Note very sign on Donna Creek
but my driver says there are a few
frost on northern branches of William
River, north of Pby & north of southeast.
Considerable snow on Conger Hills
and the higher parts of the Wassen Hills.
July 22

Spent the forenoon getting your maps data from timber maps in Tehama Forest Office and got important data which was added to a copy of map of Fernwood Forest.

Climbed up into Sierra Mts.

Far enough to get plenty of Abies alba and Populus Tremuloides in cold gule.

Listed Sovereign + Family plants and birds.

Returned to Klamath Falls in afternoon, 2:30 P.M. and found my gone was checked very well from east to west.

Was told at Fort Klamath that there are lots of beavers all along Sprague River, probably *Eisenura* to the head of Aresos Creek and Sprague River almost went out in high water might appear indiscriminate.