

JOURNAL 1936

JAMES W. BEE

NOTES 1936

1-3-36

a group of Scouts of our troop 51, Grand Utah made overnight trip up to John Gessford's cabin in Rock Canyon. The purpose was to offer the fellows experience in winter camping in preparation for the Snow Week which was to occur later during the winter. made trip to cabin with snow-shoes and skis. Three types of experiments were put to use. One an open lake-type tent with fire in front, the cabin, and a box type tent which I personally used. This box tent, which is shown in picture 1-1-3-36 is just a ^{one} man tent which I constructed as the result of experience with open tents on cold, blizzard nites when smoke and upheav was a nuisance. This box tent proved highly satisfactory with the type of weather we experienced during our stay here tonight, the sky being clear and very little wind. If we had had a snow fall the story would have been different as the flat topped tent would ~~have not~~ have not supported the weight. The tent was originally planned for use in cabins which had roofs but no stoves or heating facilities. The box tent has a small stove made out of a can with small stove pipe. It is supported above the pine filled floor by 4 stakes upon which the stove is nailed. Found that the floor was too unstable to support the sewed-in tent floor being supported as it were upon the fir-bows. While the temperatures were sub-zero outside I found it comfortable inside where I sat upon my sleeping

1-1-3-36

2-1-3-36

3-1-3-36
(see enlargement p. 2.1)

in pajamas. The manner in which the tent is guide. Can be seen from the picture. I am pictured standing outside of tent with wool shorts and all. My recommendation for shorts in winter is negative. That is when one experiences real camping and hiking ways. If, however, one can foretell adverse weather conditions and when one has a favorable day with normal hiking ahead; it's ok. This tent picture was taken just in front of John's Cabin, in Rock Canyon. Next day we made a few side trips where tracking and skiing were enjoyed. On our excursions found several white snowshoe rabbits.

4-1-3-36
(see p. 2.2)

The rabbit, Coyote, ^{porcupine} and squirrel tracks were the most frequently encountered forms. Recorded several picture of the areas. The picture (2-1-3-36) was taken from edge of 3rd flat looking west down Rock Canyon with eagle cliffs on the left hand side and Squaw Peak on the right hand side. Lake Mountain & Utah Lake in distance. The flats supported snow deeper than ski poles.

5-1-3-36

Picture (3-1-3-36) was taken on largest flat looking east up into the Provo Cirque Canyon. John Gessford and Ray Snow are pointing to plaque tree on mountainside. Picture (4-1-3-36) is same situation

6-1-3-36

as above. This flat offers an excellent opening to photograph this broad view to the east. The weather permitted only a few minutes of pictures taking possibilities. This picture shows the clouds hovering over ridge. The guard cliffs on left. Maples in middle distance. Small mice tracks were observed on this flat. Picture (5-1-3-36) taken late in afternoon on

7-1-3-36



3-1-3-36 JWB



360103-2.2



4-1-3-36 JWB



the 5th flat or opening below Johns Colim. It records the long after-noon shadows with Snow Peak and perturbed clouds. Picture no. 6-1-3-36 taken just south of Colim near creek. Taken late in after-noon when our position was shrouded in shadows but the higher country still receiving rays of light. The picture shows the snow covered south terminal of the Cascade range. The last afternoon lights are always contrasting and most beautifully colored. The stream is completely covered with snow except in a few places where to get a drink one must lower cup or pail with wire or string. The final picture no 7-8-3-36 shows Snow Peak in a conifer outline. This picture was taken near above and as lights were fading. Many snow-shoe tracks under conifers here.

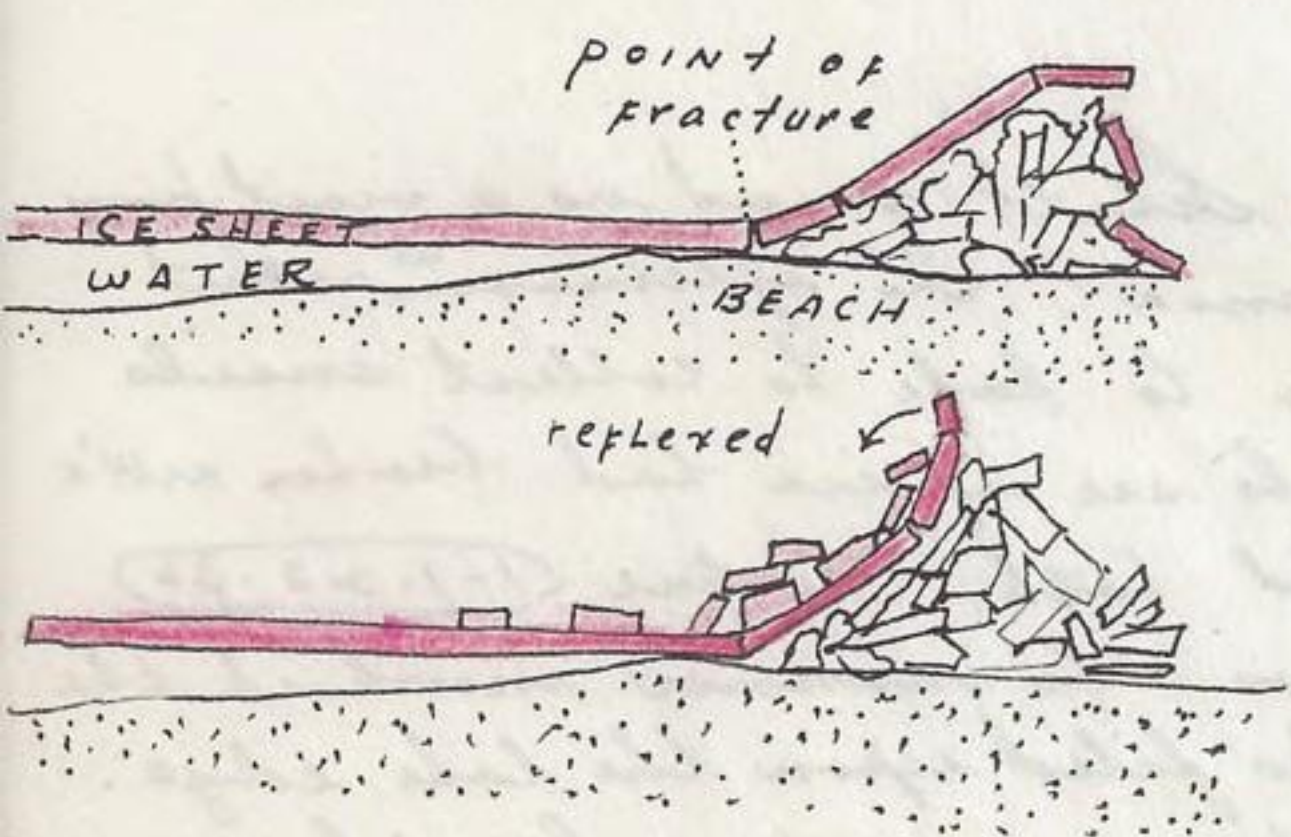
1-22-36

Jack Schatt paid us a visit from California. In afternoon, went down to lake to collect snails and to see if ice had broken and found both. Picture 1-1-2-2-36 shows the manner in which the ice is piled upon the lake edge. The driving winds when playing upon such a broad surface as an ice sheet several square blocks in extent soon drives the sheet

1-1-22-36

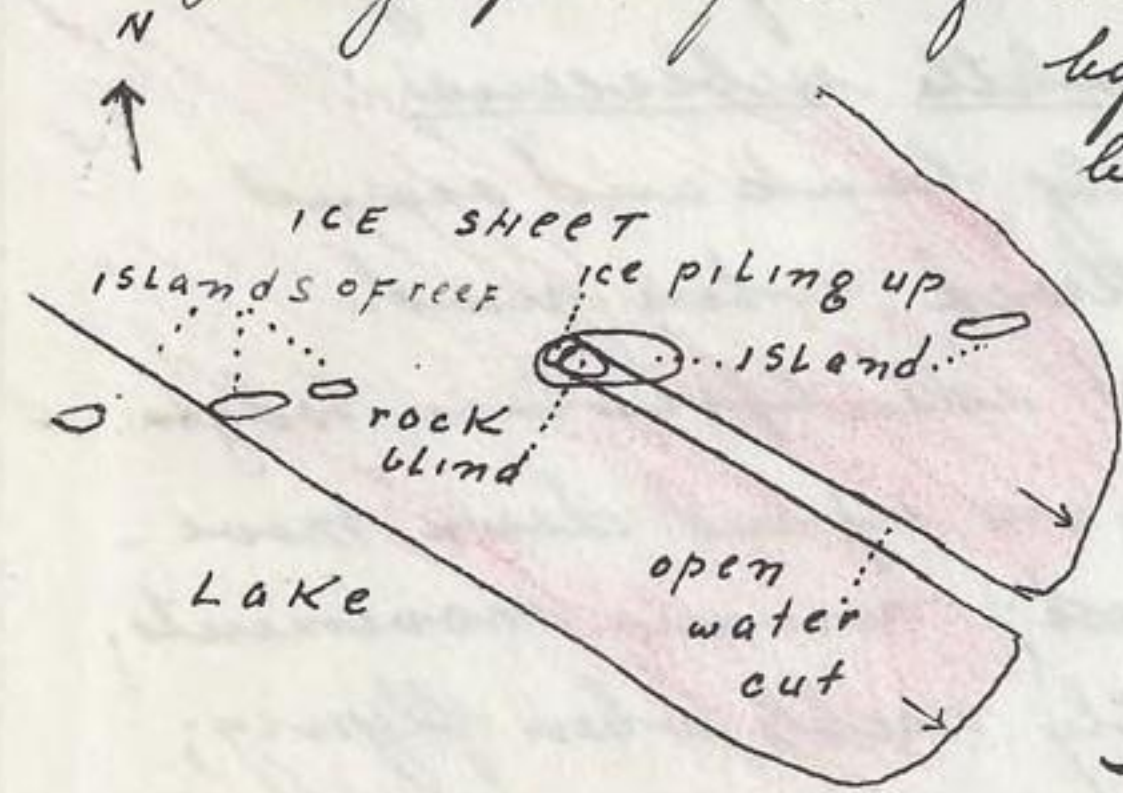
shoreward where it crumbles upon the edge. The high ice piles are formed in two ways with the method illustrated most common. From the observations of several years find that they are formed as follows. However, I have never been present when the high ice piles have been formed. I have however witness the process ^{and results} on minor scales. The lake generally remains frozen tight during the winter time and then as the season of temperatures and winds change there follows a reopening and clearing of the waters. During the period when the ice cracks up there follows a movement wherein the ice sheets are forced shoreward. The increased wind velocity may be the cause for the initial breaking up of lake surface. I have witnessed many expansion cracks during the winter time when the lake was completely frozen over. I have also found the lake ice to fracture and rumble at the same moment the area experienced an increase of wind. What ever the initial cause for the lake to break up the after results are interesting. The large blocks of ice which are now free, some square miles in extent, begin to move in toward the shore as the wind increases in velocity. With such a broad expanse for wind resistance & friction the ice sheet knowns to force which will turn it back except a change in wind velocity. Once the ice

sheet strikes the shore line or any point where there is ground resistance the new ice pile is formed. If the sheet is thick and competent it may advance landward for some distance before it is finally forced to pile-up. Sometimes ^{one} ice sheet will override another for a long way. The piling up process is more interesting and is accomplished with a good deal of noise from ice friction & cracking. An ice sheet knows no barrier or brake. When the strength of the ice will is insufficient ~~to~~ to push its column forward it buckles or begins to break as the sheet is lifted from its horizontal position. As far as stopping the tangential force is concerned it would be impossible as I know of ^{do not} many other force in nature which are so all powerful. The onward drive ^{damage} of the ice sheet is stopped as the ice sheet is forced upward at the point of fracture as the accumulating ice pile acts as its diverter. At times the ice sheet will become entirely reflexed and the ice blocks will slide down the top of the sheet. As they roll and slide down the smooth ice sheet they create a loud noise. If this is not followed it piles ice high on top and over the mound of ice or as frequently happen the ice sheet drives into a solid pile of ice and lifts it up in its entirety like a mushroom pushing up a pile of dirt as it expands in growth. As far as I know the waves tear down the ice pile rather than help to build it up. The formation of the ice piles ^{is} ~~are~~, no doubt, a combination of several processes probably involving the several distinct processes. I recall many years ago while hunting ducks in the Provo Bay south of Provo, an experience with an ice sheet. The experience was so real and intimate that I remember bravely awaiting death. I was situated out on the submerged reef about 3/4 way out. The blind was made of the travertine deposit like rock which forms the reef and was formed into a ^{small} circular enclosure to protect me from the cold north winds. The reef was a long extension of submerged travertine with island every now and then protruding above the surface of the water. Between the islands the water was about 3' deep with some channels cutting across the reef 4' or 5' deep. The waters to the north of the reef were deep and with a bottomless floor of mud while to the south the waters were wadable out some 1 1/2 blocks. No vegetation or any obstacle to interfere with the ice sheet movement with the islands barely above the lake level. All that remained to divert an ice sheet was the pile of rock



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burst up as a wind break. I did not realized that an ice sheet was advancing upon me until it struck the edge of the small 10'x20' island from the N.W. which is, incidently the normal trend of ice sheets. Without even time to know what had struck me, the ice sheet showed its death teeth 4' in front of me. Nor did it express any courtesy marks by pausing at the front door, but pushed onward, knowing no halt. The rock structure began to crumble and slide along, with absolutely no way of escape and with death inevitable decided to act just for the pleasure of it while it lasted. My mind was clear now and I ran to the front of the blind and started to jump up and down in attempt to stop the ice sheets wrought of damage. I managed to keep pace with the oncoming sheet by breaking up the ice before it struck the island. I continued this until a considerable amount of ice blocks had accumulated in front of the blind, at least to the extent that the barrier now forced the ice up and back as in diagram no. 2 of above. It was now partially checked by its own movements. The large sheet of ice was being severed in two by this rock barrier while the ice was piling up in front of me, two moving sheets of ice were tracking by me on either side with a clear avenue between.



Fortunately the wind subsided to the point where the ice stopped on its own accord. I remained upon this island not being able to make up my mind until darkness started to settle in. The problems I was up against were several. If I had started back on top of the ice along the reef and then if the ice sheet were to start up again I might break thru the ice and become lodged in the mud where the ice would either shear me in two or ride over top of me. If I had remained there the ice might have finally pushed up over the barrier, as a forced choice I foolishly waded out the open avenue and out around the edge of the ice. If the ice had started to move while I was skirting the edge and while treading in knee deep mud I would have been buried with the rest of the Indians that inhabited this country hundreds of years ago. Fortunately for all cases the ice remained stationary. The most nerve racking part of the ordeal was the continuous and loud noises produced from the crumbling and fracturing ice. Next day during more favorable day return to crumbled blind and retrieved the 9 ducks that I had shot yesterday but had left during the excitement. They were kept in good refrigerator however being under considerable ice. So much then for the way in which the ice piles are formed. I would like to be present when the large ones are formed.

a myadestes townsendi visited our home in Provo at 255 E. 1st So. This morning made a trip south of Provo City along the lower railway tracks toward Springville Utah. Near the Bullock Fur farm south of the round-house observed the actions of the Western Tree Sparrow. About 10 of these birds were feeding in some isolated weed patches. They were concerned with one isolated weed in an open situation bordering a fence line. Upon approach they left the weeds and flew into a small willow tree. Their call is characteristic and helps to identify the bird. A simple medium, high chirp is given having the tone of anger and protest. All the members of the flock have a part in offering this call. Their actions in general are not effected simultaneously but small groups of birds or singles or pairs leave the flock and fly to another point. Their flight is active and irregular. The dark chest spot is diagnostic. Their actions are considerably different from those of the Chipping Sparrow which they closely resemble. Could approach 30'. The birds would leave but merely fly to another part of the field. West of the pipe plant along the right of way of the railroad watched 30 anthuspenalitta rubescens. They were feeding and resting on the gravelly bank and around the puddles of water alongside the railroad track where good vegetation marked the course. Several good identification badges mark these birds. such as: Tilling of tail in an up and down movement; swinging from side to side as they feed; nervous movements; conspicuous outer white tail feathers, especially visible when flying; long spurred toes; song in both flight and normal; and group feeding. The wagging of the tail and nervousness is in proportion to their degree of activity. When resting or standing still there is no noticeable movement of the tail. They feed with a definite flock instinct and as the main group moves ahead the ones in the rear move on or catch up by flying ahead. The movement, while confused is directive and progressive as if by mutual reaction. They are most active when feeding. Sometimes they fly erratically about when their tail feathers show up plainly. The entire time is not spent in feeding but alternated with resting. whereupon the movement is stopped and head and neck drawn back against the shoulders. While feeding it made no difference whether they crossed a hard road, railway grade, shallow water etc, they showed adaptability. While feeding in shallow water one hopped upon a small mollusk. and with a few quick adjustments of the long delicate bill the snail was on its way down the river of no return. They fly with a erratic course & issue a sharp chirp. Had opportunity

360308-71

to observed the song Sparrow and Fox Sparrows along the poorly drained right of way of the railway where cattails and other rank growths of weeds and vegetation line the sides. The grade is generally higher and allows for vantage point for observation of a limited area of habitat they seem to nest and feed along here. One cow follow them along without the general screen filter of trees, brush etc, noted one to sing from a certain weed and from that same weed to remount and offer its protest call. They will continually keep in touch by flying up to a fence post and then right back again or onto wires, or even to come out of the growth to edge. They scratch like the Spurred Towhee and can run like a zebra. They seem to be equally spaced and control certain areas.

3-11-36

First swallows of the season at Provo City, Utah. at Provo River bottoms.

3-29-36

Recorded the following animals on southhillside at mouth Provo Canyon near Power plant. 20 Spurred Towhee; 1 Clark Crow; 14 Calif quail; 5 R.N. Pheasants, 2 C. T. Martins; 2 red tail hawk; 3 jack rabbits; 13 magpies, 4 Solitaires, 1 meadowlark; 5 Chickadees; 1 squirrel, 120 junco (shufeldt?); 2 R.S. Flicker; 4 house finch, several hundred rabin. The area included oak, artemisia.

3-30-36

Inserting badger number 160. taken at Indian Creek Bear Canyon in Provo Canyon above willowood.

4-3-36

a 15 minute walk across Provo City brought me to the N.W outskirts of Provo City, where one finds a decided increase in the numbers of birds. By this time the 30 lbs of traps began to bear heavily upon my shoulders. Here on the outer limits of the city at about 12th west and 5th north, a surprisingly large number of Robins had taken possession of one of the apple orchards where the old winter dried fruits still remained upon the branches. Approximately 450 robins added their chatter to the approaching evening. That number of birds too, can make considerable noise. Yesterday, I passed here and found a similar number of robins in this same orchard. Continued west and arrived at the Provo River where I crossed the rampaging waters via the swinging suspension bridge. From here crossed thru the cottonwood forest to the spring creek at its northern edge. It was here along the banks of the creek among the cottonwood trees that the night was spent as a trapping base. Without stopping to cook supper or further delay of camp ~~can~~ making, started with traps to visit the pocket gopher burrowage some 3 blocks away. This trapping area is located S.W of the south terminal of the Provo Bench Delta. This area is now an open field bordered on the south by the

360403-8

forest of cottonwood trees adjacent to the Bravo River, on the west by a railway fill 30' high, on the north by the high Delta at the foot of which is a channel and springs, and to the east by cleared field from the original cottonwood populated Bravo River floodplains. This area is no doubt a very restricted area as far as *Thomomys* population is concerned, and am wondering whether these limiting confines are responsible for their presence, particularly the railroad barrier and the pushing cultivation from the east. This area is used for pasture & not cultivation. This area is about 300' x 200' feet and is literally perforated with holes and elevated mounds. Some 3 years old denuded & reinvigorated by new mounds, some 2 years old and others recent. Also many winter burrows presents (cous), the ground, indeed had been completely turned over during the several known years of gopher habitation. The loose sandy soil permitted extensive operation, activity had been going on for several weeks. One area of about 100' x 100' had been completely turned over with no indications of the original surface. The new spring mounds represented about $\frac{1}{20}$ of the total mounds of the previous years. The area of greatest activity was sparsely covered with vegetation, but in the loose sandy soil, areas of lesser habitation had a more or less degree of pebbles and coarser dirt. However, there were also areas where the gophers were sending out lateral tunnels into sod damp areas. Mound debris ranged from mere dirt collections of a cup or so to several bushels. Holes found mainly closed with a few however open and recent dirt piles indicating recent activity. The arrangement of mounds indicated territorial rights. It was in such a situation that the trapping was conducted. First a new mound was found and then the tunnel intercepted between two mounds, where a no 0 steel trap was placed. The top was then covered with cardboard & sealed with dirt. The trap must be staked, while this is not as easy as the regular gopher trap setting it is highly satisfactory but must be visited frequently. Made inspection at 10 o'clock P.M. and collected no. (B50) and (B51). These traps were then changed to other holes. Next morning, one hour later collected 2 more nos. (B52) (B53) (B54). Next morning collected 3 more nos. (B55) (B56) (B57). These forms are *Thomomys bottae albicaudatus*. With only one exception all forms were taken from different territories. The one trap in one case caught two in same tunnel. On the 2nd of April

360403-9 Established
nos. 1 to 7.
caught seven from this same general area. This area is an Artemisia
and Chrysothamnus plot located about 2 blocks or so north of
the gopher village, long side the Oregon R.R. line. It appears to
have evaded the cultivation act by man and represents an area
about 2 blocks long & 300' wide of extremely dense and rank sage-
bush and rabbit brush, some 8-9' high. It is bordered on the
east by the railway tracks & delta and on the west by springs, a
canal and open boggy & spring ground. The plot itself is on a dry
and slightly sloping ground. The evening and night normal but
cool. Set a few traps here tonight.

4-4-36 (Continuation of above)

The results of above trapping were insignificant but signs indicating
future possibilities. Animals taken during last night were.

(B. 58) *Mus musculus*. Taken with bread & cornflakes
beneath a small sage bordering edge of Canal.

(B. 59) *Mus musculus*. Ibid.

4-5-36.

Last night set series of traps in sage-bush-Chrysothamnus plot of above
date. Unusually cold with snow at 8:30 P.M. This fact was very
interesting because it indicated that ~~some~~ some of the smaller animals
are out rather early in the evening before the snow arrived. All traps
and ground covered this morning. In traps caught 2 *Mus musculus*
This evening set 30 museum specials in above area.

4-6-36

Inspected traps of above and collected 3 *Peromyscus* m.s., 1 *Microtus*,
1 shrew and 1 *Mus musculus*. Made trip to west side of Utah Lake
on east side of Lake Mountain. Saw 1 eagle near point. Took set of
owl eggs, Pinyon Jay nest just completed. Mr. Wolfenden saw in
total 50 Coyotes low in foothills. He says they feed on dead ducks along
the lake shore. He also reported a mountain lion was seen in Tamarack
along lake shore near Pelican Point. Arrived home in time to set out
traps in area of Artemisia-Chryso plot of 4-3-36 above.

4-7-36

Last night cold, clear, moonlight. Examined plot of last night set. Examined
at 5:30 A.M. Collected the following animals: 14 in all

- Col. no. 70B. *Peromyscus* m. son. Taken with bacon along canal
- 71B. Shrew. Taken on bacon, partly eaten by another shrew.
- 72B. *Mus musculus*. along canal
- 73B. *Peromyscus*
- 74B. *Peromyscus* In damp situation along well beaten trail
of swamp grass and water cross. Trail very wet.
- 75B. *Peromyscus*. In dense rabbit brush.
- 76B. *Mus musculus*. At base of rabbit brush. Bacon bait. An
owl(?) devoured in total except skull.
- 77B. *Mus musculus*
- 78B. Shrew. In hollow in dense rubbish of twigs.

- 360407-8
 79 B. Peromyscus.
 80 B. Peromyscus.
 81 B. Peromyscus.
 82 B. Peromyscus.
 83 B. Mus musculus.

4-11-36

collected mammals from trap set last night in artemisia - chryso plat some as above. The animals represented are:

- Peromyscus m. son - near canal
 Mus musculus - In among dense rabbit brush. Considerable accumulation of dead leaves and stems
 Mus. musculus. Ibid
 Peromyscus. m. son - Caught by tail & died of exposure.
 Microtus - In dense underbrush of rabbit brush of dense dry grasses, leaves, stems etc. 40' from H20
 Peromyscus. - Ibid
 Sorex. Caught near no. 7113 in rubbish accumulation beneath rabbit brush.

4-14-36

Commenced trapping gophers in a pasture on 3rd east and 8th South, ^{Provo.} This area is just a remnant of encroaching cultivated fields. The ground is a grocery sod and is used for pasturing cattle. The results of trapping of this area are:

- no. 85 Thomomys.
 no. 86. Thomomys (taken at Henry Thomas field used last year for wheat.
 no. 87. Thomomys. (first member of a family taken from some burrow.
 no. 88. Thomomys.
 no. 89. Thomomys. (second member of no 87 family
 no 90 Thomomys
 no 91 Thomomys.
 collected on the 18th { no 92 Thomomys. (same family as no 87.
 no 93. Thomomys (same family as no 87.
 no 94. Thomomys.

nos 87-89-92 and 93 are from same mound and burrow. and represent a family about 1/3 size of adults. They squealed like a G.W. Teal when captured. They generally had grass in both their ~~po~~ cheek pockets and was bent in two upon insertion. Some of the holes of the chamber were bordered by bare ground where they had eaten the grass as far as they could reach from the holes. It was interesting to note in the case of no. 88. In this case the ground was not inducible to being dug and pushed out with the teeth & feet so the animal had taken dirt from its excavations by mouthfuls. The small dirt pellets characterized his series of mounds.

4-17-36

Observed western meadowlark in copulation. Female responded like shaking after a dust bath. County Fair grounds - Provo Utah.

4-18-36

Trip up Grove Canyon on west side mt. Timp. Trail clear of snow to crossover. Saw Dusky grouse observed. Two desert Sparrow hawks flying near mouth of Canyon.

Provo, Utah. April 15, 1936 is approximate date.
Date can be checked in Provo Herald files.

Freshman Is Ardent Worker In Field of Ornithology



James Bee

Toils Quietly to Discover, Prepare and Save Eggs of Birds

By MAURICE A JONES

PROVO—Much work is being done in Utah to increase the knowledge of our native birds. One of the outstanding contributors is James Bee, a freshman at the Brigham Young university and son of Mr. and Mrs. Robert Bee, 255 East Second South street, of this city.

Most scientists in the fields of ornithology work quietly in a desire to know the truth about bird life, and James is no exception. For years he has been studying our native birds and assisting in the preparation for scientific record their eggs, but only a few of his most intimate friends know of his work.

There are more than 130 different specimens of native bird eggs in Mr. Bee's collection. They vary through all the tints from white to blue, green and brown, some unmarked, others handsomely speckled, spotted, blotched or wreathed with different shades of brown, lilac and lavender, and their sizes vary from that of the diminutive humming bird, which has an egg .50x.35, to that of the pelican, which has an egg 3.45x2.30.

Prepares Carefully

Probably the outstanding feature of James' collection is his type of preparation. His desire was to create a preparation which would, as near as possible, eliminate breakage and the harmful effects of light and dust on the specimens. Summoning his ingenuity, he devised individual holders for each set of eggs.

After the eggs are taken from the nest, the contents are removed and the eggs rinsed and dried. They are then placed on a soft white cushion in the containers. The holders vary in size from two to seven inches in diameter, the size used depending on the size of the egg clutch. A dust-proof cover of convex crystal glass is then placed over the containers,

which keeps the eggs in place.

The holders are made of durable cardboard and the convex covers allow an abundance of light to penetrate, allowing at least 80 per cent visibility, and all handling of the eggs is eliminated.

Mr. Bee declared that the nearest approach to such a type of preparation is at the University of California. There the eggs are bedded in cotton, which permits only a small percentage of visibility.

Records Numbers

On the bottom of each holder is carefully recorded the American Ornithologists' union number, Mr. Bee's private number, the set number and the date and place of the collection. The individual holders are then grouped in trays and filed away in a cabinet.

Mr. Bee's natural history specimens will sooner or later find their way to a museum, where they can benefit a great number of individuals.

A study of our birds will do much for their protection and the knowledge thus gained will be for their best good, Mr. Bee pointed out. A scientific egg collection assists greatly in obtaining additional information and aids in the classification of our birds.

Collecting is done only under the supervision of the state and national government and is permitted only when some contribution to science can be made.

"The vultures and the eagles are the only birds that do not lay a second setting of eggs after one has been taken, and even they have been known to lay a second setting," Mr. Bee declared.

The rarest and most cherished setting of eggs in Mr. Bee's collection is that of a western goshawk which he obtained in the Wasatch mountains east of Provo last summer. James still carries the scars where the goshawk clawed him in an effort to thwart his purpose. It was only when the youth brandished a hatchet that the bird gave up the fight to protect her nest.

The quest for records of new native species and new records of migrant species is a task which Mr. Bee hopes to actively assist. He is certainly doing his share to add to the fund of knowledge of our Utah birds, of which we have been so abundantly blessed.

Nesting records are only available of 150 out of more than 200 of our native birds and he is working hard to make the record complete.

Desert Sparrow Hawks in Copulation, Mouth Rock Canyon, Provo. The female gave all vocal indications during act. Set line of museum specials on cliffs on north side of canyon at mouth. These cliffs offer excellent retreat for the *Neotoma* and *Peromyscus*. Set the entire series along the base of the cliff at the top of the talus slope. Along certain sections are recesses and shallow caves. The junction of the talus and cliffs is distinct and in reality acts as a barrier and therefore for these mice. The rock is glacial tillite with the tuffite quartzite connection directly above. The runway at base of cliffs is smooth and used by many forms of life. Set along erosion powdered crevices, caves, infocketing of rocks etc. Several *Neotoma* houses and signs.

5-10-36

Inspection of the traps set as above revealed:

- | | |
|-----------------------------------|-------------------------------|
| (1) <i>Peromyscus truei truei</i> | (1) <i>Peromyscus m. son.</i> |
| (2) " " " | (2) <i>Peromyscus m. son.</i> |
| (3) " " " | (3) <i>Peromyscus m. son.</i> |
| (4) " " " | |
| (5) " " " | |

This evening made another setting as of 5-9-36

5-11-36

Inspection of traps set last nite revealed.

- | | |
|--|--|
| (1) <i>Peromyscus truei truei</i> | |
| (2) <i>Peromyscus truei truei</i> (contained 6 embryos) | |
| (3) <i>Peromyscus truei truei</i> | |
| (1) <i>Peromyscus marmotulus sonoriensis</i> (5 embryos) | |
| (2) <i>Peromyscus</i> " " (presumably this species) | |

5-15-36

Harry Thomas and myself made overnight trip to head of Slate Canyon east of Provo. Started rather late and under quite discouraging weather outlook. The hour before produced no sun nor blue sky was to be seen. Left mouth of Slate Canyon at 4:45 P.M. with packs bearing heavily. The sky now was threatening and entirely blanketed with rain bearing clouds. Even with local storms and thunder around about we proceeded in our way along the new trail on the south side of Slate Canyon. Along course counted 58 different species of flowering plants. The flowers in blossom were gorgeously displayed along the very edge of the trail, all refreshed by the showers proceeding us. Occasionally a marmot would present itself in the trail or from some adjacent ledge or rock outcropping. The magpies left their nests and flew out over the canyon and finally circle around the ridge in front of us. The long spurred Towhee and Crested Jay occurred in pairs and frequently seen along the trail. Eight rest periods were called with each one favored with a chocolate square. The potential energy of these squares were taken just before signs of tire and fatigue. The views both up and down the canyon as well as all the lateral canyons were singularly beautiful. On our arrival at the first right hand fork we found that the threatening clouds had passed beyond and now we

a blue sky and prospects of a complete change of weather to the good. Two large snowslide encountered before reaching the right hand fork. 5 young conifer trees and many other tree fragments were lying upon the surface of the slide which completely filled the canyon and extended downgrade a short ways. From the forks on found very few gophers active however some working. Numerous coyote tracks many beautifully preserved in the mud of the trail, some indicating passage only but a day or so ago. Water coming down nearly all canyons but especially the right hand fork. The beginning of the higher N.S trending valley leading up to divide of State and Kolob Can. was not very inviting as far as the snow covered ground was concerned. 4/5 of the surface was covered with snow or wet saturated ground from running waters of snow. Coyote tracks now very common. A dusky grouse left its feeding ground upon the damp surface. It is rather peculiar but I have invariably found the grouse in this promontory point on previous trips. Continued up this beautiful valley and as we were 3 blocks down from the spring and lake we found the valley completely covered with snow. Arrived at the lake and spring and found a bare spot north of the spring about 50'. The sun had left and the atmosphere in general indicated a rather late nightfall but could still see in late twilight. Commenced setting up camp at once. Knowing full well that darkness would hinder operation. Both of us soon had camp tent up. It is a good idea to make it a rule that as soon as one person uses the axe he is to indicate the future position the axe is to take when not in use and then see to it that it is always returned there. A few large nail will help in tying up tent were time and extra rope are valuable. First place all material other than tent in a position where fire is to be build as it is then out of the road for setting up tent or firewood pile. As soon as the tent is up one prepares the floor and one gathers wood. It is important that the fire wood is in first thing before dark sets in. By now the tent floor was prepared and we soon had the equipment and sleeping bags placed in the tent. After all mineral tasks were accomplished we started the fire and put some tea water on. It is very important that the general duties of camp are performed before fire is started particularly when a large group is along as it interferes with the acts of hardship that one is used to. A fire is death to a working spirit. A prepared lunch is brought for supper. Just before eating we put on our dish water pan for washing again after supper. A candle was used during early part of fire when we desired a continuous ~~for~~ light. The fire soon was in good order and we did not have use for candle. The rest of the water not used for tea was used for the boiling of rice & raisins as we sat around the fire after supper. This preparation of food was for tomorrow morning but cooked while we had time and good fire. Dried apricots also cooked. washed

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what few dishes we had and then retired after getting down our notes. I also set a few museum special traps near camp. They were placed on the bank of the west side of a ephemeral spring lake which forms during the spring runoff. Placed near a clump of willows which were partly dead. Many signs of activity among its roots and surface along its side. Considerable dead and decayed aspen limbs and logs in evidence and contingent on all sides. Snow slide had frequently passed by here and one found many young aspen and entanglement which one finds associated with this type of vegetation. The willow plot however was isolated and free of this aspen growth. No doubt the Groundhog and chipmunk had used this area considerable as the dirt was free of vegetation but powdered. Several small holes present. Deer tracks near and water close at hand. Permanent spring about 150' away. Set these few traps but felt that it was too high, cold and too much snow. This point was free of snow. Stars wonderfully bright and shining clear than usual. Fire should be placed about six feet from front of tent. There is one more reason why a fire should not be started until camp is set up and that is because a fire sometimes goes on a rampage with a blowing wind and if one is not at camp until the final fire size is created it may blow into tent & burn up all equipment, but after camp is in shape one can spend all time with fire. A Audubon Hermit thrush sang beautifully this evening. Bonked fire and hit the wall.

5-16-36 (continuation)

up at dawn. Slept warm but tossed occasionally. Only natural for any first night but should prove perfect tonight. Fanned remaining red coals of reflector fire with hose and soon had hot biscuits in order. Another don't don't place can of warm jello in snow because it soon melts itself over and saturated jello snow is tasteless. Had the pleasure of breaking thru 1/4 inches of ice on cake before washing. Cool refreshing but numbing. The *Eutamias*, *Sciurus*, red-nosed sapsucker, robin, thrush, chickadee and junco were around camp shortly after dawn and long before sunrise. *Eutamias* looked cold and occasionally pausing to hold front paws against breast. Flickers drumming on an old hollow tree. Examined traps set out last night and besides a few *Peromyscus* a rare species of the long tail variety named *Perognathus parvus alivaceus*. Had mounting implements and material on hand and prepared a few of catch and packed for return trip to Provo tomorrow. After breakfast made a short side reconnaissance trip near camp. The small knoll where we were camped is dry on south side but deep snow on north side. Snow still in gullies and favorable slopes on the Provo Ridge high above. Fairly large snow slide down from conifers on Provo ridge down to border of south end of the large lake. Dog-tooth violet in full blossom. The aspens are just beginning to bud and leaf while those in lower Slate Canyon are in full foliage. Some of the birds observed during this morning stroll are: G.H. juncos chasing one another

about. Pine siskin early bird, numerous coyote tracks around the snow bordered lake just n. e. of camp about 100'. Bad & squirrel tracks also recorded. Snow banks and tongues running into lake on the east and south side but west and north side bare ground to edge of lake. Lake covered with ice except where water and springs enter. Snow on east side like ice and enter lake like a glacier 1 1/2' thick. The conspicuous knoll on the north end of the lake decorated with dog-tooth violets in full blossom. They are contrasted in green & yellow against the otherwise lifeless & bare ground. While the south side of the knoll is bare the north side is in deep snow. On this knoll 2 juncos fought more tenaciously than I have ever witnessed. It proved so interesting that a *Eutamias* ran over and took a ringside seat by the battle which was being fought in the dense conifer boughs. A Solitaire took a bath in the pond just as the sun hit the area. Two others in near vicinity. Audubon thrush and house wren in evidence. A Grey Ruffed grouse drummed all morning but did not start until after ^{early} dawn. The Dusky grouse drummed frequently throughout the day. It sounds like a single grunting of the carp. It is distinctly a grunt or whiff. The red-breasted nuthatch frequently issued its weird call. The pine siskin has three distinctive calls grading from a soft and gentle one to one with an airy tone and one which is an alarm call. Vireos present. Two long tailed Chats excavating a nest in the top of a hollow aspen stump 8' high. Discovered a new song of the eastern ruby Cr. Kinglet. A ruffed grouse near camp and rather tame frequently showing concern by raising feather on neck and shoulder. It flew across a small gully and lit in a group of fir trees. They show considerable curiosity when at camp. Spent remaining day skinning and mounting. Remained here second night and left the following day. Examined a large mound of dirt scropped out upon the snow and used this winter and could have been either a badger or coyote. Porcupine also present as well as the snowshoe rabbit. On return trip measured the distance from slate slide where trail comes back to canyon floor to mouth of Slate Canyon proper. It is 9,000 feet. This evening ⁵⁻¹⁷⁻³⁶ drove up to Pass Slide in Rock Canyon and found it to be 4 miles and 4 blocks from 255 E. 15th So in Provo to the slide. It is this slide that sends down the snow avalanche each year.

5-22-36

Joined Dr F.H. Test of the University of Southern California. He was interested in the hybridization of the R. Shafted flicker of our area. We collected two birds along Provo River bottoms n. w. of Provo. Took an adult ♂ from nest of eggs and a ♀ from nest of young. The parents of the last nest were feed ant pupae to their young. A sparrow hawk was nesting 100 away. Mr Test was traveling along the zone of hybridization of the yellow and red shafted flickers. A Mr Donald Smith was accompanying Dr Test.

collected a Coyote skull no 161 in Bear Canyon beyond Wildwood in Provo Canyon. Mr. Wolfenden has set of trap in his deep country. He also traps badger, porcupine and wildcats.

6/6/36

located nest and eggs of sharp-shin hawk at mouth of Habble Creek, Utah Co.. The nest of 5 beautifully colored eggs were placed in an oak thicket 17' high from the ground. Another old hawk nest 10' away and at same height. The old nest was in good repair. Bark, oak sticks and feathers of the bird were in the nest. Nest 7" in depth. Bird remained near and called continually.

6/8/36

Spent several weeks in the field with the Brigham Young University Biological survey group. Dr. V.M. Tanner, C. Lynn Hayward, Dr. Elden Beck and myself made up the party. We were to collect in the Colorado drainage of the Kaiparowits plateau, Escalante Desert below Escalante & Boulder, Escalante, Boulders and adjacent points. Spent most of our time at the Hall and at Willow Tanks spring south of Escalante. It was unfortunate but the notes which were copiously taken were accidentally destroyed so have lost considerable evidence concerning the areas visited. I have a partial bird list of certain areas and a few notes of the first part of expedition. The mammal & bird collections will be added later upon working them up at the University. The bird list of Escalante City & environs is:

- | | | |
|------------------------|----------------------|-----------------------|
| 1. English Sparrow | 11. Canyon Wren | 22. R.T. Hawk |
| 2. Western Wood pewee | 12. Mt. Bluebird | 23. Mallard Duck |
| 3. Western House Finch | 13. Mockingbird | 24. Killdeer |
| 4. Western robin | 14. yellow Warbler | 25. R. S. Flecker |
| 5. Brewer blackbird | 15. Say's Phoebe | 26. Arkansas Kingbird |
| 6. R.W. Blackbird | 16. meadow lark | 27. Water Ouzel |
| 7. Bullocks Oriole | 17. Lark Sparrow | 28. Savanna Sparrow |
| 8. Desert Sparrow Hawk | 18. Night Hawk (sp?) | 29. Hummingbird |
| 9. Mourning Dove | 19. W.T. Swift | 30. Canyon Jay |
| 10. Rock Wren | 20. R.W. Swallow | 31. D.H. Owl |
| | 21. Cliff Swallow | 32. L. Crested Jay |

The partial list of birds found at the head and divide of Birch Creek are:

- | | |
|------------------------------|---------------------------|
| 1. Clark Crow | 6. Western warbling Vireo |
| 2. Chipping Sparrow | 7. Audubon Hermit Thrush |
| 3. Pine siskin | 8. L. Crested Jay |
| 4. Western Tanager | 9. R. breasted Nuthatch |
| 5. White breasted Woodpecker | |

The few notes I have for this area (Head of Birch Cr.) are: 6/11/36 Located nest of red-breasted nuthatch in a live aspen tree. Hole 30' high on the north exposure. Tree bordering swampy situation nestled on a bench of an aspen covered mt. side. Both adult parents brought food to their young. While sitting watching these birds four Clark Crows stopped in top of a tree directly above. They were weary and left when they finally discovered me at base of tree. 6-12-36 Thrush singing bath

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murmuring and ³⁶⁰⁶⁰⁸⁷ hilt at camp. A Clark Crow lit in tree just at sunrise. It flew with a disturbed call. 6-13-36 Still at divide. Saw 2 deer in a most beautiful setting at edge of a grassy meadow surrounded by aspen and fir trees. Mr. Black who was stationed at the cattle gate near Escalante and representing the Forest Service has lived in this canyon all his life and reports a scarcity of snakes. The rattlesnake, blow snake and garter snakes are present however. Met Leo Munson at Escalante who owns the general store here and the Cheese factory at Boulder. From here we drove south to the Hall and Willow Lake Springs. The desert is near ruin from the excessive use by cattle and sheep. Some sheep were still in desert where they lay roasting in the shade of the junipers. At the Hall we camped in the amphitheatre where the early Mormons were said to have done. A great many sheep skeletons lay about. The most noteworthy point of interest here ~~was~~ were the deep pits in the sandstone on top of these outcroppings. The circular pits were probably 40-50' deep and 60' in diameter with the bottoms unapproachable by man, Indian or animal. The bottom supported a rank growth of grasses and shrubbery. Cottonwood trees in some. There was indeed a most noticeable contrast between this luxuriant and rank growth as compared to the desert lands where overgrazing at least destruction to the vegetation. If the vegetation in these pit holes ~~is~~ is the original types then a change has certainly taken place since man introduced them into the country. It would be very interesting to explore these pits for animal forms which either live there or have fallen in to these unescapable pits. A comparative study of the vegetation set-up would also be a worthy and interesting one. Upon these bare rock outcroppings one finds it almost unbearable to traverse in the hot part of the day when temperatures run 130°F. Many arrowpoints and Indian artifacts are found upon the bare rocks. Noted many Neotoma houses and several animals out on day ^{time} duty. How they ever live in such temperatures is a mystery because I felt many times that to return to camp would be impossible. One just has to experience these temperatures to realize their significance. The sand dunes produced many *Dipodomys o. cupidinus*, *Peromyscus* and *Perognathus l. oregonensis*. The Neotoma also common and found in all situations, even out on flats among the brush. (*Coleogyne* and *Krameria*). The evenings are pleasant with winds always blowing, some during first part of sundown rather warm like an oven but invigorating. It is now that one begins to find activity and life coming to life which during the day is completely stifled by the excessive heat. As far as I know the lizards become inactive but the snakes begin their activity. Frogs must be visited several times during the night and catches placed in a cooler, otherwise they develop gangrene and the hair slips. *Perognathus* commonly come from smaller size holes

but definitely associated with the *Dipodomys o. cupidinus*. At Willow Tank springs we found temperature even hotter but accommodations more ideal. We camped in a shallow east facing cove just north of the government water tanks. One must wear a water soaked towel over his head when venturing out during the day so that the nose membranes would not completely become desiccated and irritated. At this station found for the first time the rattlesnake *Lutesus*. They work at night and make trapping operations among the rocks and ledges a hazardous procedure. One night at 10:00 P.M. almost stepped on two of them but warned just in time. Found another one in the evening with its head sticking out of a *Dipodomys* hole. We collected all three specimens. I distinctly remember while sitting on the reptile cage at our noon meal when one of the rattlers began to rattle and I jumped on the stimuli by upsetting the table, water and all. The *Sceloporus magister* made friends at camp and remained in brush 10' away in shade of cove. They liked to sit on the limbs and would frequently climb high among the branches. At the seeps one finds numerous House Finch & Mourning dove. They characterize the spring area. One finds many rock loving forms of lizards in the rock outcroppings while the *Cnemidophorus* and sand lizard *Uta stansburiana* are found near rocks as well as in open valley where they move one by running like lightning. Found several Indian Camp sites up canyon. Leadly past the camp cove. This canyon made an interesting hiking canyon at the base of canyon found a large drift of sand on west side and which allow me to escape up narrow groove to top of canyon. Several round domes characterize this area. One must have a cooling device for mammals in mounting work as they otherwise spoil in your hands while preparing. The wind is also bad on the birds and smaller forms. At a small pond from a seep we captured many dozen bats with the use of butterfly nets as they flew into pond for either water or insects. Two species present. They flocked into the ponds in myriads and with the aid of flash lights could captured as many as we desired. I am of the opinion that they were after water. Finished our work in the desert and took up our work at Boulder and Posey Lake. met Mr. King who knew Mr. Nutter of nine mile trip into that country. Found the *Amnospermophilus l. cinamomeus* at Willow Tank Sp., Boulder and Natom. At Fruita we visited the natural bridge and collected in the Fremont beds river. On trail to bridge found several good Indian signs. Complete lists of animals and birds collected will be inserted later.

7-6-36

List of Birds observed at Vivion Park in Provo Canyon and adjacent country including Donnans and Wildwood. The list is from several days as

is indicated in the listing

7-6-36

Long spurred Towhee	Cat bird	B. T. Hummer
Western Robin	B. Cr. Night Heron	W. Chipping Sparrow
Yellow Warbler	W. Mourning dove	7/28/36
B. H. Grackle	Spotted Sandpiper	W. Warbling Vireo
R. S. Flicker	L. T. Chickadee	Fazuli Bunting
W. Cr. Sparrow	7/24/36	G. B. Heron
Calif Sea Gull	Cedar Waxwing	8/9/36
MacGillivray's Warbler	W. R. T. Hawk	Turkey Vulture
L. C. Jay	B. Kingfisher	M. W. Teal
W. T. Swift	W. Tanager	Mallard duck.
Bullock's Oriole	Olive-back. Thrush	Collared Plover
Mt. Song Sparrow	Water Ouzel.	Eutamias
		Aulospermophilus
		Citellus armatus (Vivian)
		musk rat
		skunk
		3 sp of bats
		poor rat
		beaver

On one trip from Vivian Park to Wildwood on the 7/27/36 recorded the following.

1. Mt Song Sparrow	Western Tanager ♂
Calbird	Olive back thrush (nest of 3 well inc. eggs.)
W. R. T. Hawk	L. T. Chickadee
Belted Kingfisher	W. Robin
Mc Gillivray warbler	L. C. Jay
Yellow warbler (young)	B. T. Hummingbird.
	Water ouzel.
	W. Chipping Sparrow.

also including under this date a few observations of some month and are: 7/24/36. While on trip up South Fork from Vivian at the old fish hatchery saw a single Cedar Waxwing in a poplar tree and flying along side of a pond near by. On return saw two birds in same locality. On the 7/27/36 noticed several Rana pipiens on railroad track several feet from water course at Vivian. While sitting along bank of Crovo River at Vivian at 9:00 P.M. a muskrat swam by along wave washed shore. When it saw me it jerked backwards and jumped 2 feet out into water. at 7:30 P.M. watched 2 skunk feeding around the cabin. It is a common site to see these animals at evening time and into the night at Vivian. It had rained 1/2 hr previous and the grasses + vegetation was very wet. On 7/28/36 observed the young of the Mt. Song Sparrow feeding upon the berries of the Kinnikinnick. They ate the hard seed but rejected the white covering. The bird was as large as the parent but with short tail. Saw 2 families of the Catbird and yellow warbler. Examined a nest of the Olive-backed Thrush with 3 well incubated eggs. In a willow tree bordering river. The nest is insecurely attached to its support and is located at one of the favorite fishing holes so will watch with interest to see just what influence the fishermen may have. A beaver has a ground house at the point and has felled several willow tree on all sides of the nest. Located 3 blocks up railway tracks from Vivian Park.



1-7-13-36

7-12-36

Sister Mary and myself made 2 day trip to top of Cascade Range from Vivian Park. Made way up Bundles Canyon in rocky gulch to first high main cliff barrier, hence south up steep canyon side to ridge divide, hence on a horizontal trail south and west to floor of cirque. Camped here among group of conifers with large rock slide to south and the majestic peaks to the west. During the night had a bodger * working just outside of tent. Next morning 7-13-36 we gained the top of the Cascades and spent the day following along the crest from the north end to the south terminal. The diptera was exceptionally common and collected many species for the collection. From a point above camp on the ridge proper where one could look west into Utah Valley and east toward the Uintahs, took a picture of Mary 1-7-13-36 with the several cirques of the Cascades in the foreground and Provo Peak and the rock Canyon Cirques in the background. The extent of the snow is pictured. Camp is located in front cirque in lower left hand part extension of picture. We made our descent down ridge in foreground to fault line and hence down slide to camp. There are several old deer on west side of Cascades in dwarfed conifer near top of ridge that surely are dying of old age. The ascent from the east side is problematical at many of its side exposures. Experienced very little breeze on top today. Returned and broke camp in the afternoon leaving just sufficient time to return to Vivian before dark. Shorts proved practical on this type of trip.

8-10-36

Collected and mounted three specimens of *Peromyscus m. sonoriensis* taken at Vivian Park in Provo Canyon, Utah Co., Utah. They were taken among



7-7-13-36

some willows bordering a swamp area at a point where south fork issues into the Provo River. Their numbers are 101, ♀; 102, ♀; 103, ♀.

8-12-36

Collected a *Autospermophilus* no 104 at Vivian Park along a railroad shoulder by trucks. mounted for collection ♂

8/13/36

Collected a *Sorex v. navigator* at Vivian Park in Provo Canyon caught in a slough bordering Provo River. This ♂ no. 105. is now prepared and in collection.

8/21/36

Water level of new canal dredged into mud lake as an extension of the mud lake. Utah Lake Channel is now 2 feet lower than the former mud lake floor level. North of the reef the water is half open and half filled with slime and vegetation growth. Six turkey vultures feeding on dead material on north side of reef. This draining of the lake is certainly playing havoc with the bird life and their normal activity.

8/28/36

Trip to reef in Provo Bay. Partial list of birds observed. Last one section of notebook having remainder of birds recorded.

- | | | |
|------------------|-----------------------|--------------------|
| English Sparrow. | Black Cr. night Heron | Red head duck |
| Brewer blackbird | Am. Coot | Mallard |
| nighthawk (2) | G.W. Teal | Common teal |
| R.N. Pheasant | Pintail | Gadwall |
| Hummingbird | Bank Swallow | Lesser yellowlegs |
| Savannah Sparrow | W. Willet | Spotted Sandpiper |
| H. Blue Heron. | F. B. Sawtcher | W. Vesper Sparrow. |
| Marsh Hawk. | Mourning Dove. | |

14 other ^{species of} birds were observed but not recorded.

9/24/36

For many years, possibly extending back to the time when first conscious of the changes of nature, I had always had a desire of experiencing the seasonal change expressed by the transformation of summer into fall. So with high hopes of witnessing fall ushered in I proposed a trip. I was to selfishly present myself with a four day birthday hike. The objective and original plans were completed shortly. The itinerary included the trail from Slide Canyon to head of state, hence over to Pole Haven to Hubble Creek. Vernal and Edith were willing to join me to maple flat. We left Provo after a final check of equipment and drove to base of graded Y trail east of Provo and were making headway by 3:30 P.M. The day was especially warm being normal I suppose for the west exposure, but accompanying

gentle wind spurred us on and over up. As we gained altitude the city below took on the appearance of a miniature doll town; the mirror like surface of the lake was gradually appearing larger while in the far distance new mountain ranges began peering over Lake Mountain. The slow steady gate established at the beginning of trip carried us almost to the base of the Y before any signs of fatigue began expressing itself. The 1/2 sq. of chocolate and five minutes rest did wonders. Reenergized we proceeded on. Vernal was experiencing the feeling of this monstrous mountain foundation and was looking forward for higher zones. The west exposure, Devils gate, new constructed trail with musical and tugging accompaniment, lost steep grade and then flat below spring at 6:25 P.M. Sun had just set in the western horizon, while partly rested and observed a fraction of the magnificent colors, the boiler tent was erected, wood gathered and a few fir boughs collected for bed. Fifteen minutes in all and then on trail again up the south side of slide to the springs of maple flat and hence across open flat fields to Mother Luna's nose. Fifteen turkey vultures were observed going to roost in the fir trees on ridge east of the springs. They were clumsily gaining good footage and finally settling down. Traversed the open flats bordered by aspen and highly colored maples to arrive at point at 7:30 P.M. From this vantage and inspirational point we built a small hardwood fire and cooked supper as we viewed before us and far below the attractively lighted city. The trains pulling through, car lights, signal lights changing and red neon signs all added to the attractiveness of the village. How little one plays in the scheme of things is magnified with all mans activities so apparently microscopic below. Sweaters felt pretty good at this altitude and time of night. With one final look we departed and retraced trail back again to camp in slide canyon where my guests departed to return to Provo, as I heard later they took 1 1/2 hrs to make the trip arriving at 11:30 P.M. By then I was fast asleep. Good bed of coals and warm sleeping bag felt comforting. Note clear with interlucent moon in western skies.

9/25/36 (continuation)

next morning arose before individual trees on mt. side were discernable. Had breakfast and broke camp. Was on trail at just the time of morning most desirable for hiking and observation. While slowly working up slide canyon I heard the lonely song of a sheep herder approaching nearer and nearer. The song ended abruptly by the furious barking of 3 sheep dog indicating a stranger. After an introduction he informed me that the sheep would be out of the mountains in 2 weeks because of snow fall which generally occurred then. He also stated that the deer are now further back in country and higher. Bade him adieu and continued on way. Filled water canteen at sheep flat springs. The flat and surround-

ing area was completely overgrazed. Only the straight stems of the elderberry bushes were left. The watering pond had changed, losing last its bushes and firm banks; nothing left but an inevitable mud hole with surroundings a pulverized dirt and dust. At the divide of sheep I noticed the herders tent situated just at the border of the quaking aspen west of the coral. Passing by the east end of coral proceeding eastward on trail to Secondary Ridge, hence to Cold spring at base of Provo Peak near the divide. From the divide of Sheep Springs at the coral the trail leads directly east but instead of going straight up the ridge turn left about 300' which will lead diagonally across slope to the north side. From here it follows on a horizontal level through the conifer stands to the divide from which one looks down into canyon with cold spring directly east. From this divide one drops down to the divide of Rock and Slate Canyon. At the west end of trail that leads along the north side of range had the opportunity of watching a male and female Williamson sapsucker. They were feeding upon insects upon the bark of a Douglas fir tree. The sexes are drastically different. They appeared unconcerned but darted from tree to tree with tremendous speed and agility. While watching these birds I distinctly heard the report of a gun fired three times in quick succession from the vicinity of the sheep herders camp. Without a second thought did not reflect further upon the incident. From this point one can see where Rock Canyon leaves the overturn fold and enters into the more broad valley of Rock. The trail thru the mixed stand of aspen & conifers is singly gorgeous, a little section of trail enjoyed as much or more than any other section part along the trip because of the association of trees, exposure and commanding view of the surrounding country. The narrow trail leads thru a stand of aspen and fir trees. The aspen leaves were a brilliant yellow. With the slightest provocation by a breeze the leaves would tremble and come sailing down to the ground. While a large percentage of leaves still remained upon the trees, the ground beneath was blanched with a golden hue. In this mixed stand occurred a most unusual and almost weird site. The young green firs were fashioned like a well decorated Xmas tree, modeled and bedecked with contrasting gaudy of gold and yellow. These yellow leaves among the fir trees shown like lights in the evening with lending a golden hue in contrast to the mellow and subdued lights and shades of and among the dark, green conifer stands trees. With the leaves still falling, emerged from the trail at the east end of the mountain and stepping to the brink of the ridge running N. and S, beheld a most interesting view of Cold Spring Canyon and towering Provo Peak. The spring was directly but far below. From this spring to the divide to the south the aspen trees were defoliated and bare while adjoining area the trees still retained their leaves. While viewing

the colors upon Prow Peak and Country in general, heard again the horse bearing the sheep herder. This time the gait of the animal was emphasized and hurried. He approached me extremely nervous like and stopping told of his trouble. 25 minutes ago I had seen his tent on divide a short way back but now I was shockingly informed that it had completely burned down. The shells I had heard had exploded in the fire. He claimed that \$70. worth of equipment, 2 guns, tent, bedding, and food had been completely destroyed.

Jokingly he replied that the only thing he recovered was his faithful frying pan. A candle left burning upon a wooden table was his explanation of the fire. The last I saw of the herder was when he had wrangled his pack train in preparation for a trip to the city to acquire a new supply of food and camping equipment. To verify the report I hiked to top of mountain and went to a point where I could look down upon the divide. With the binoculars could see a smoldering mass of debris where a short while ago stood a neat camp very unfortunate indeed but a valuable lesson for me to be more cautious in the use of the baker tent now used in my own camping. The trail from where I met the herder now trends south down the west slope of Cold Spring Canyon to the divide of Rock & Slate. The trail from here on to head of Slate Canyon to the south is standard but up & down, crossing many deep gullies made from drainage off of Prow Peak. At the cabin (without roof) on divide got more water and continued. At the lowest point on this trail found another spring. These springs are associated with a black clay soil. From the second divide along trail paused and went up right hand lateral trail to ridge. A wonderful view of Slate Canyon far below was my reward. The small flats below were snuggled deeply among the contour of rugged canyon walls and towering mountain tops, bedecked with a maze of dazzling colors. The thread like trail of Slate Canyon could be seen winding ever up among the rocky slopes, but soever far below. From this point a robin winged its way on what appeared to be a thrilling ride across this chasm from my point to a point higher upon the slopes of the Buckley or Steel plant mountain. Retracted to divide, picked up pack and wound up at bored spring at the lower end of the Upper Slate Canyon Valley. Had a bit here and then onward to upper springs to Fallen tree Campsite of 5-15-36. Made camp on some moraine knoll n.w. of spring and pond. Had supper later and then to bed again to the weird call of Coyotes howling on ridge just east of camp. It was on this evening that fall was so dynamically forced upon our dreary summer. The temperature took a decided drop, the wind started to blow, rain came intermittently and stormy black clouds appeared from a perfectly blue sky capping the upper peaks of the Cascade Range. Even the coyote call seemed to sense the on coming change and reflected his feelings in that ^{un}conny

360925-25
tone. Quite a contrast to the hot hillside and clear warm weather of the preceding day. My last conscious sense that night was hearing the howling of the upcanyon wind. It issued in a series of relays up the canyon. First I could hear it coming far below and it gradually approached, passed camp with a whirlwind velocity, continued up the valley and then all was quite waiting for the next surge on its way up below. Such a confused melody sent me to dreamlands where the annoying tent flapping was subdued.

9/26/36 (Continuation)

This morning upon opening the zipper of tent beheld the snow and frost covered peak of Provo Range. Slush and frozen shore banks of the pond added emphasis to the severity of the change. Prepared breakfast and was soon on trail to top of Buckley mountain or Steel plant mt. Gradually worked way to divide of Slate and Little Rock Canyon. Inspected further the site where I collected the *Lepidodendron* seal tree fossil. It is 80 feet this side of the divide. Gone to Mr. Hutchings of Teli. From this divide went west to secondary divide. The trail to top of mt. commences from the highest point on the divide and runs upward between the first two large fir trees, then takes a southern trend to lowest point of divide of the main ridge of the top of mt. Along this trail on east side of this mountain found the hillside thickly covered with chokecherry bushes, the berries large and in perfect condition. The unusual thing associated with its growth was the fact that there was not a single leaf on the bushes, presenting a side hill of berries clinging upon the remaining spirit limbs bare and slender. Upon reaching divide one sees a sight not expected. A large open ^{flat} clearing bordered by a few conifers to the east, aspen on the west and the coral to the north. Investigated the south ridge. Found some very interesting conifers here. Observed the bare spot that is used as a potential water supply gage by the old timers in Provo. It is not bare but supports an evergreen shrub. From the south end of this elevated sky field one can get an exceptional view of Provo Peak. From this point went north to top of high peak. From this peak one looks down upon all mountains bordering the valley east of Provo. From the top of this peak made contact with mother at home with heliograph sets. The clouds were low, frequent wisps of mist, high steady and cold wind. Conditions unfavorable for comfort in shorts. By erecting a stone wall beneath a fir tree on east side just below point was able to remain. The magpie was frequently observed around the top of this peak. It seemed very much at home. The small fir tree at highest point was measured being 5' 11". Well be interesting to measure it 10 years hence!! Measured from point where it left the rocks. Wind blew aspen

leaves up from west side to top and then out into space where they drifted aimlessly. Left the peak in a descent that I hoped would end the sever cold only to find that the piercing wind chilled me to the bone the entire journey back to camp. On way back come upon a fallen aspen tree that had come to rest across the trail since I passed here this morning. Arrived at camp in time to prepare supper, wash up before the last golden ray of sun had departed from the Provo Peak for another day. The moon jumped right into its place in the sky. It was 15 minutes up when the last sun ray left Provo Peak. Peeking over the ridge of the long sloping ridge leading up from the divide to first Conifer on Provo ridge. Got fire and supper, as well, settle down and then to bed. Shut tent completely up as with previous note and by pinning wool sweater + shirt on top of 4-lb wool sleeping bag was able to sleep until morning without much interference. The wind reacted as last note and could follow its progress up to pine on high east ridge. One particular spasm blew an aspen tree over which crashed in full force on ridge west of camp. The wind died down during the early part of the morning only to commence again about an hour before daybreak. Up canyon winds.

9/27/26 (Continuation)

Up with the first appearance of light above east ridge. Broke 1/4 inches of ice for water. The entire surface of pond was frozen except small bordering portion where spring water entered. Unusual but three water skaters were still alive and active ^{on the ice} near a log partly emergent. Spring 50' east of pond flowing normal capacity. Had breakfast + broke camp with morning lights still subdued and weak. Took to trail + arrived at the divide. Followed from here along horizontal trail to Camel Pass at the south end of Provo Peak ridge. Trail extremely cold + windy + sunless as yet. Numerous deer tracks on trail also many smaller birds. Upon reaching divide (Camel Pass) received for the first time the warmer rays of the sun but not in great enough intensity for comfort in shorts. The course down through Pale Haven to Hubble Creek was exceptionally interesting but beastly cold. 12 deer were encountered along route from Camel Pass down. Porcupine tracks were frequently encountered running in road for several hundred feet at a stretch. The quills of the legs were found to make a characteristic mark in the dirt. The tail quills also made nice marks. A nice sking country for those who enjoy beautiful country as well as sking. Snow reached left hand fork of Hubble Creek and finally the junction of the right + left forks at 10 o'clock. Set up tent + got fire going, had a cup of tea + waited for the arrival of folks. They arrive on time. Dinner out,

hunting was going on around in adjacent country these deer were remaining in these aspen as if nothing ever happen outside their confines. They had 100% confidence in man and would allow one to walk slowly within 50 feet or less of them to be shot. Just why these old deer allowed one to approach them so closely I am at lost to say unless it is these breeding grounds and they are not acting normal. They are exceptionally large deer and are masters of the country, their horns of unusual large size but not in number of points. The spread is tremendous and they shoot straight up, but still the ramification is simple and mainly 4 or 5 points per side. These deer look like fat cows with large and thick necks. Their movements indicate their age and weight. This isolated open flat and adjoining aspen slopes are extensive but there is a quick get away to the open west country of oak & maple trees below. The picture no.

(1-10-26-36) shows in the background this aspen park with tree generally distributed but not thickly crowded as is generally the case with aspen groves. Thicker aspen cover however surrounds this park. The floor as can be seen is free of undergrowth and supports a carpet of aspen leaves. It is among such a setting that one finds these large fearless bucks at home. If one walks slowly and without abrupt movements of any kind he can approach a buck within 30'. They remain motionless and generally stand with their head behind an aspen tree with their eyes peering around trunk while the entire body except the head is in plain view.

1-10-26-36

I suppose they are like the ostrich which hides its head and ^{does} not realize that it is in full view. They remain here until too closely approach when they run off a hundred feet or so and stop again to watch you pass along. They are loathe to leave the area and travel in circles. Even when shot at they run a way and then stop to be approached again. Come up to one deer unexpectedly and stared it in the eye at exactly 18'. It remained motionless as long as I remain absolutely frozen but when I made a slight motion with hand, it went pouncing along its way. I could hear it stop. This deer was the largest one I have ever seen. Its horns were angled and extended high and wide. They passed ^{at} horns or antler prongs. The upshot from the angle is noticeable. The antlers were not excessively thick for the size. If I had had a bow & arrow I could have shot several bucks in this park like area. If a group



of does are present ^{36102/10-29} one of the deer in the group (♂ or ♀?) gives a quick snort that sends them running on their way. On three instances I have approached bucks lying down when they are most inconspicuous. We got our deer in this area but now proclaim it almost sacred to trespass and anyone who realizes the adjustment that is represented in this particular area and then shoots a deer in the area is indeed a poor sportsman. Why these old deer should react as ^{they} do, I am at lost to say right now. It is realized at least that the way in which these deer conducted themselves is indeed unusual and a thing I have never witnessed before in and under similar situations & conditions.

11/22/36

Collected the following in bear canyon in Provo Canyon.

- 163 Badger 11-22-36
- 164 Coyote ♀ 11-22-36.

11/27/36

Trip to John's Cabin in Rock Canyon via Pole Canyon. Left 8:30 A.M. and arrived at pass leading down into Rock Canyon at 2:30 P.M. Gophers active in lower cultivated fields. Numerous junco in foothills. Few L.C. Jays. At divide at north end of Pole Canyon ridge found the gophers digging in rocky soil in same area as of previous years. Time 10:17 A.M. Coyote tracks from here on numerous. Near divide found snow covering 90% of ground & 1 foot deep. All deer tracks trending toward divide. ^{and mammals} Birds observed:

- | | | |
|---------------|------------------------|-----------------|
| 1 Junco | R. S. Woodpecker, | deer |
| Woodhouse Jay | Pine siskin | Eagle |
| L. C. Jay | L. T. Chickadee | snowshoe rabbit |
| Jack Rabbit | Porcupine | R. B. Nuthatch |
| Cotton tail | Boothelder Woodpecker, | G. R. Grouse, |

12/8/36

Collected Goshawk on foothills east of Provo, Utah. It measured:

length 22 inches	Tarsus 3 3/8 inches
Wing 13 1/2 inches	Bill 1 1/4 inches
Toe 1 7/8 inches	Tail 9 7/8 inches.

12/13/36

made trip up Rock Canyon to the first left hand fork of Rock, then gained south terminal of the secondary ridge between 1st & 2nd left hand fork, hence north along this ridge to high peak, hence down east to divide of Pole Canyon & 2nd left hand fork of rock, hence down pole Canyon. While on the terminal of this medial ridge took picture no. 4-12-13-36 showing the area where John Gessford's Cabin is situated. Provo Peak in background. These pictures were taken on 18 stop - 27 speed, clear day about noon. Most of them are duplicates but are good pictorial record of the upper limits of Rock Canyon for

birthday cake and home with memories and inspiration to last for another year. The following is a list of birds observed.

1. L. Cr. Jay maple flat 9-24-36
2. L.T. Chickadee. " " " "
3. R.T. Hawk. " " " "
4. Turkey Vulture " " " "
5. R.S. Flicker " " " "
6. H.N. Junco " " " "
7. Townsend Solitaire Sheep flats 9-25-36
8. Am. Robin " " " "
9. R. B. Nuthatch " " " "
10. Hairy Woodpecker medial ridge east of Sheep flats 9-25-36
11. Williamson Sapsucker " " " " " "
12. Audubon Warbler " " " " " "
13. Junco (Shufeldt?) " " " " " "
14. Thrush. (Aud N.?) Durde at Cold Springs " "
15. Ruby Cr. Kinglet " " " " " "
16. W. Cr. Sparrow " " " " " "
17. Swanson Hawk head of Slate Canyon " "
18. Clark Crow " " " " " "
19. Magpie Top Buckley mt. 9-26-36
20. G. R. Grouse " " " " " "
21. mt. Bluebird " " " " " "
22. mt. Chickadee " " " " " "
23. Rocky mt. Nuthatch " " " " " "
24. W. House Wren " " " " " "
25. Blue Grouse Cornet Pass " 9-27-36

The above list is check list and does not represent all birds in numbers. that is many birds of each species were observed at different places. Started with 6 choc squares, 1/4 lb cheese, 12 fignutes, 10 figs, 1/2 lbs manna, can of spaghetti, 2 cans veg soup, 1 can venena sauce, sugar, tea (lbs of emergency food (raisin, peanuts, candy etc). Came thru with 14 ounces of emergency food, 2 choc squares, 1 m sq of cheese, hand full of manna, 4 figs, 3 fignutes, sugar tea. There was a ^{general} robin migration but mainly around seeps & springs. The juncos were cold & found at base of aspens.

10-10-36

Trip to Bear River Refuge disclosed a bird list of:

mallard	marsh hawk	English Sparrow	y. W. blackbirds.
magpie	Savanna Sp.	Canada Goose	
B. Cr. N. Heron	Am. Coot	B. W. Teal	all birds on
B. Egret	mt. Bluebird	Am. Teal	refuge.

10-25-36

collected Coyote skull no 162 at bear Canyon in Cross Canyon.

10/26/36

Deer hunting trip to Indian Springs at head of Indian Canyon in S.W. Strawberry Country. Got deer in timbered country N.W. of Indian Springs in aspen flats just west of large west draining Canyon which goes into low country to the west. This area appears to be a special breeding and resting grounds for the larger buck deer & their does, while

361213-30
geographical record and to record the vegetation of this ridge and the condition of the snow at this time of year. Picture no 2-12-13-36

1-12-13-36

shows the contrast between the natural deer trails and the man made "bear paw trails". This picture was taken farther up the ridge near the divide. There is considerable activity of deer along this ridge. Near here found 2 areas where deer had been fighting & the ground was completely covered stirred up for several square yards. The picture no 3-12-13-36 is the only shot taken for pictorial purposes. The bear paws winding into picture. This study has the head of Rock Canyon with the majestic Pinos Quak & Cedars for a background, a maple and mahogany frames the picture. Taken near base of last high peak on ridge. no 4-12-13-36 was taken from south terminal of medial ridge near picture no 1-12-13-36. Picture 5-12-13-36 looking south along ridge toward head of rock canyon. These mahogonyp are used by deer as antler rubbing trees. Maples in foreground. Taken 1/2 way up last peak to north on ridge. no. 6-12-13-36 and 7-12-13-36 are panoramic showing Pinos Quak, Cold Spring Canyon of Rock Canyon, part of Cascades. Shooting about S. S. east, and first right hand fork

2-12-13-36

~~NO RECORD of~~

3-12-13-36
(see p. 31.1)
for enlargement.

4-12-13-36

5-12-13-36
(see p. 31.2 for enlargement)

6-12-13-36

7-12-13-36

of rock. no (8-12-13-36) taken on divide of Pole Canyon looking north across the upper open meadows of Pole Canyon. This same picture 2 hours later would make ideal shot. One find considerable mice activity on snow surface in these fields. These open fields also made ideal skiing slopes in winter time but vary with conditions of temperature and wind movements. It is also hard to gain in winter time.

8-12-13-36.

12/31/36

Scouts of 51 took 3 day winter trip to Pfoots cabin in Canyon Canyon. no (1-12-31-36) where do we go from here. at brink of precipitous canyon wall on return trip. John Guesford, Harry Chandler, Ray Snow, Harry Thomas, Lowell Miller, Marcus Hitebeck, Buckley Taylor, Blaine Carlson and myself made the trip. Snowing and sunless. $\frac{1}{10}$ - 6.4 opening. Picture no (2-12-31-36) shows stopping for refreshment and rations. In bottom of gulch of upper Berdeye route. Somewhat discouraged and lost. We finally came on to main canyon where we enjoyed the openness of the road as compared to bushy Canyon trail of Berdeye trail. Snowing and dull. $\frac{1}{10}$ x 6.4 opening.

1-12-31-36

2-12-31-36

361231-3.1.1



3-12-13-36 JWB



361231-31.2



5-12-13-36 JW B

