

JOURNAL 1982

JAMES W. BEE

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402 Yorkshire Dr., Lawrence, Kansas
Feb. 8, 1982

on chart
Color discernible at 7:00 A.M. Colors are recognized in order of first discernible: white, yellow, green, orange, blue, red. Blue and green have same intensity. First tree sparrows (6). up to 120 pine siskin, 40 goldfinch, both at one time, white-crowned sparrows prior Feb. 8, no Harris sparrows but have been seen elsewhere, last Feb. freeze reduced English sparrows 80%, 5 dead in backyard.

402 Yorkshire Dr., Lawrence, Kansas
Feb. 14, 1982

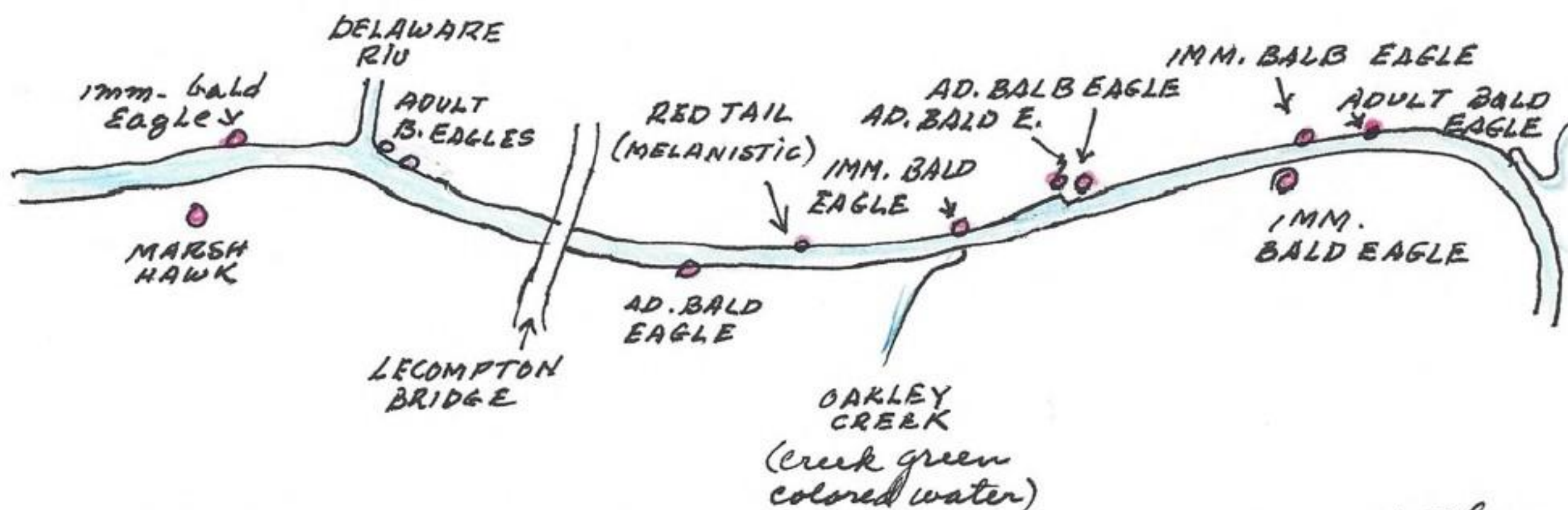
51 goldfinch and 19 pine siskin at front feeder this AM (at one time). also one evening grosbeak and 3 cedar waxwings.

Feb. 15, 1982

120 goldfinch, 12 pine siskin, 1 evening grosbeak at feeder at one time. This is the largest aggregate of goldfinch at feeder this year. Snow melting as well as ice and there is considerable runoff. First warm trend in several weeks (at least 3). Has been consistently cold.

Kansas River, W mouth Delaware River to Lake View, Kansas
Feb. 24, 1982,

Enroute to river passed over causeway at Lake View where entire lake is in ice except 10' of open water extending W from bridge. 75♂ redwings at N side of lake.



River high and open water. Rare snow or ice exposures and these on S side river on banks. Foam on water every 3 feet and from small segments to 2' diameter pieces. Animals were: 4 fox squirrels, 3 Am. mink, 12 mallards, raccoon tracks common, grasshopper out.

Up river from LeCompton, W of Mouth Delaware River, an ice jam on S side river. In this area were 110 American mergansers, 98 crows (along calling) at home in Lawrence. March 15, 1982. First large flock grackles + redwings, 2000.

Lawrence, Kansas

March 19, 1982

Finished trailer and preparing for trip to Seattle. Final preparations:

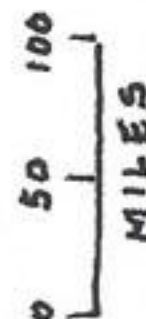
- + stabilizers for 2 chairs
- + fit drawer under bed.
- x secure bottom blind
- start refrigerator
- x paint butane bottles
- x " front end & bumper
- x cut bolt on mirror
- x replace screws on hardware
- file door
- ✓ secure chandelier to hanger
- x finish chandelier
- x make reflection board for monitor
- x have furnace checked
- ferret part of Olympics or originals
- test water lines
- x wire 12 volt
- x check lines to battery
- + ✓ new battery.
- x check lights on trailer
- x new antenna
- x check brake on trailer
- ✓ remove chains in trunk
- + coffee to Don
- registrations
- + gun shells
- ✓ section on petroglyphs
- ✓ drain pond
- ✓ clean drainage in house
- ✓ repair paint on car
- ✓ field kit, dry box, traps ^{wormmeal} oats.
- net, sawd, jar, pins
- ✓ camera equipment tripod, film
- ✓ telescope, binoculars, car adapt.
- + journal, paper, pen, ink-
- ✓ Clethrionomys research
- ✓ books.
- antlers.
- ✓ recorders (2), cassettes, note
- books, pencils.
- ✓ razor, shears.
- ✓ 12 volt to 110
- ✓ organize tool box
- ✓ sink, fan, wire,
- ✓ rubic cube
- ✓ HBO, Blood pressure kit.
- + First aid kit.
- + night hat, boots,
- ✓ heater (electric).
- + Car & trailer tags
- ✓ snow boots
- x plastic & tape
- ✓ stamp catalogue
- ✓ toilet chains

Lawrence, Kansas

March 21, 1982

Left for Seattle at 11:39 A.M. at mileage 40574.4 on mercury (marque). Computer unit set at 00.0 and will correlate from time to time for accuracy. Computer changes to 00.0 after each 1,000 miles. The computer mileage will be basis for recording mileage on this trip. Temp. 40°F, wind from N and blowing smoke from chimney horizontally. Only bird between Lawrence and LeCompton Bridge a meadowlark, no bald eagles at bridge vantage point. 17.4 on highway W

6694.6 mi.

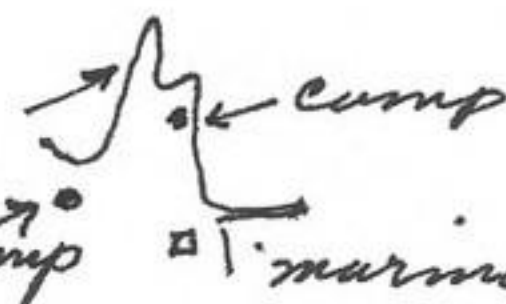


of Perry, a redtail hawk. Between Lawrence and Tapoka,
 2 striped skunk road kills, 2 opossums & 1 fox squirrel road
 kills. 47.9 redtail on fence post along right-of-way. 52.4
 Wabunsee Co. line at 2:55 P.M. 53.7 sparrow hawk on telephone
 post. Grasses just starting to turn green and growth just
 beginning. 55.0 redtail, circling. Winter wheat greenish
 yellow. 57.6 redtail in tree. 58.0 redtail circling.
 Flint Hills brown. 76.8 redtail on fence post. 82.4 Geary Co.
 line. 84.3. now N on 177. at 3:35 P.M. Birds scarce except
 hawks. 85.3 striped skunk road kill and marsh hawk
 flew across road. 85.2 Riley Co. (when so indicated in notes
 it refers to the county line. 87.2 American roughleg,
 striped skunk road kill. many junipers at the headwater
 drainages along Kaw River. striped skunk road kill.
 at 90.4. 90.9 striped skunk road kill. 92.6 Kaw
 River Bridge, river full. 99.5 sparrow hawk in tree &
 opossum road kill. 100.1 sparrow hawk flying.
 101.3 striped skunk road kill. 101.9 sparrow hawk on
 telephone line. 104.0 redtail. 106.0 sparrow hawk in
 tree. Small birdlife rare along route. 108.7 junction
~~77-24, now on 24.~~ 109.9 sparrow hawk on telephone pole
 115.4 redtail in tree. 116.2 first flock of grackles.
 meadowlarks 1 per 2 miles in this area, no mourning doves
 and occasional crow (census so far is selective except
 hawks which are always recorded). 120.5 sparrow hawk
 on telephone line. 121.2 sparrow hawk on telephone
 line. 122.4 first pheasant, pond with 60 ducks. 129.0
 second large flock of blackbirds (including grackles,
 cow birds etc). 131.3 striped skunk road kill. 136.6
 Republican River, full. 141.6 redtail in air. no male
 redwing blackbirds on territories since Lawrence.
 144.2 striped skunk road kill. many ponds without
 ducks. 146.7 Cloud Co. line and marsh hawk. 147.5
 marsh hawk, feeding 8' off road on right-of-way. 150.5
 redtail on top tree. 154.6 redtail in tree. 159.5
 sparrow hawk flying also 2 marsh hawks. 161.5
 sparrow hawk in flight. 163.0 junct. 81-24 highways.
 165.4 redtail-top fence post along road. most ponds
 are full. 169.0 marsh hawk. All marsh hawks have
 been on right-of-ways. Occasional redwing on telephone
 lines and presumably on territories. 172.4 marsh hawk

in flight. 176.1 2 mourning dove. 178.3² Mitchell Co. line, opossum road kill. 179.5 3rd flock of grackles (15.00), meadowlarks increasing as sun approaches horizon and are 5 per mile. Now in Solomon River Valley. 183.2 big cattle feed lot on hill to N, pheasant feeding on edge of road, 3 redwings on Territories, few meadowlarks. Considerable standing water in fields and along road. 185.4 redtail in tree. meadowlarks increasing at least 1/2 hr before sunset. Even though there are favorable redwing nesting areas, there are only an occasional male redwing observed. Beloit, cattail road kill. Also killdeer along side of road. 193.0 redtail in tree. 196.8 300 Franklin gulls in corn stubble fields east of lake, another groups 150 flying and other singles and small groups. These are the first ones observed since Lawrence. 201.0 Glen Elder town turnoff. 202.6 Glen Elder State Park. Camp grounds at 6:25 P.M. Mileage 202.6 (car mileage 40774.7) indicating that there is a 2.3 mile difference between car mileage and computer or monitor reading with greater reading of computer reading or approx. 1 per cent (.98) increase in monitor.

Glen Elder State Park, Wacanda Lake, Kansas.

March 22, 1982

Sun up 6:37 A.M. min temp. (6° F, temp sunrise 18° F. (moved w last night)
2 Robm, grackles, mallards in area. no wind last night or this A.M. Lake like mirror. Frost on ground. Made short trip to end of peninsular (S trailer camp)
Lake high. 2 pairs killdeer, peninsula 
24 Canada geese on water (left 7:30 A.M. the geese), 12 common mergansers
200 mallards, 5 gulls. Sparrow hawk. 5 meadowlarks singing, 5 robins, cottontail tracks at end of peninsula. Even though frost on grass it was not wet to shoes. On ends of bay a thicker covering of frost than elsewhere. Left 7:45 A.M. 203.5 on main highway now and will keep complete census. meadowlark. 204.3 redtail. Ranger at camp (in retrospect) said that prairie dogs have reached the point where they are invading farm land and must be exterminated on the farmlands. 204.6 (milepost 128). meadowlark. 204.9 meadowlark. 205.1 2 redwings ♂ + a cowbird.

205.6 meadowlark. 206.5 gull. 206.6 Granite Cr. Bridge,
 all inundated trees to N are dead. 208.0 redtail top telephone
 pole. 208.4 ring-necked pheasant. 209.9 Cawker. did not
 record birds (census in Cawker) but included grackles, robins,
 starling and English sparrows. 211.2 meadowlark. 211.7
 redwing ♂, 211.9 Oak Creek and 3 gulls. 212.8
 4000 grackles (maybe including redwings) flying N.
 213.5 yellow-shafted flicker. 213.9 sparrow hawk on
 top telephone pole, 8 grackles. (In retrospect, The ranger
 at Glen Elder reported 4 bald eagles feeding on ducks that
 kept open hole in lake this past winter. 3 sandhill
 cranes remained in area last year but not sure that they
 bred) 215.8 Downs junction at 8:27 A.M. 216.6 cottontail
 road kill. 218.5 sparrow hawk on post. 218.8 Salomon
 River. 219.3 sparrow hawk on telephone wire. 219.9
 sparrow hawk on telephone wire. 222.8 redtail. 223.9
 now on 281 & to N. meadowlarks 2 per mile and redwings
 1 per 2 miles. 60 grackles in flock 226.9 N Salomon
 River. 227.9 Smith Co. line. 229.6 redtail in tree &
 group 15 meadowlarks, striped skunk road kill. 235.8
 now on 9 and in good Cretaceous rocks 237.0 sparrow
 hawk. 237.3 redtail 240.0 first mourning dove this A.M.
 240.2 sparrow hawk, 3 bobwhite quail. 243.5 shrike
 244.3 sparrow hawk. 245.7 first yucca, less green in prairie
 than in Lawrence. 246.5 marsh hawk. 247.5 male
 marsh hawk. 249.5 sparrow hawk. 251.1 redtail.
 251.3² Philip's Co line. 253.9 Kerwin. 255.1 30 Canada
 geese and a² marsh hawk. As was true with Waconda
 Lake area will make complete census along this lake (Kerwin).
 meadowlarks increased as we travel W today. 259.5
 redtail in tree. 260.9 2 magpies (first observed on
 trip), 2 meadowlarks. 262.2 coyote road kill. 264.4
 Glade, now N. on 183. There are more birds along Waconda
 Lake than along Kerwin Lake. Kerwin has cultivated fields
 on both sides of road whereas Waconda is nearer a natural
 grasslands. End of census. 267.5 bluejay at farm house.
 274.4 horned lark. Up until now have seen approx. 12 crows
 since Lawrence and none in reservoir areas. 279.8 sparrow
 hawk. 280.9 area drier and not as productive as far
 as vegetation than along highway 24. meadowlarks 1
 per mile 286.1 small pond with 19 ducks, some scaups,

winter wheat just starting + 40 per cent ground graded soils, on uplands. 289.1 Nebraska State line at 11:17 A.M. 295.0 Harlan Co. Lake at bridge. 45 pelicans E of causeway in two small groups, one of the groups more widely dispersed. Water high and forming bay where channels are ordinarily found. American mergansers, cottontail road kill on causeway, redwings, and coot. Few ducks on E side. 300.7 striped skunk road kill. 305.3 pond low and 20 ducks, at least one a mallard and one a scaup. This part of country has more badger diggings than Kansas. 308.2 hillsides suggests former use by prairie dogs or ground squirrels, Horned Lark occasionally thru here. 310.5 sparrow hawk. 312.8 14 crows in one group, 313.2 Phelps Co. 313.6 pond without ducks. 318.6 approx. 80 crows at city land full at Holdrege, pintails and other kinds in pond. Sky cloudless and very cold and no wind. Fewer birds than S in Kansas. Seems drier here. Group 12 crows 324.4. 326.1 sparrow hawk. 328.5 70 crows more crows along here than we have seen so far, some gopher diggings. 331.6 field that could have been a former prairie dog town. 18 crows, mostly on tops of these old mounds. One field heavily populated with gophers and their diggings (diggings practically cover fields. Soils more sandy here. 333.9 good sandhune area. 335.4 Buffalo Co., striped skunk and cottontail road kill. 336.4 Platte River, half full, sandbars wet. 337.0 Overpass of Interstate 80 and Hwy W. 12:39 P.M. 339.0 white-tailed deer road kill. 339.1 Dawson Co. will keep complete check of crows for a while. Flack approx. 40 crow 340.1, barrow pit here without ducks. 346.4 Prairie dog community, no live animals, 120 or so mounds. 351.5 barrow pit w/ 9 gulls. 354.3 ferruginous roughleg hawk. 372.6 meadows occasional eads. Bird rare along the Interstate. 378.0 N Platte River Channel. Groups of dead cottonwood leaves on outer branches could be tent caterpillar aggregates left over from last fall. 384.7 redtail on fence post. 386.1 Lincoln Co. line. 388.3 striped skunk road kill. 392.0 approx. 100 Franklin gulls on pond. 392.9 18 Franklin gulls in barrow pit pond. 395.7 mourning dove, 2 buffle heads and approx 80 ducks. 396.8 120 Franklin gulls + 8 ruddy ducks

400.8 striped skunk road kill, birds rare and have seen only those recorded. 404.0 meadowlark. 407.1 inordinate number of junipers along river to the S including many young ones just coming up. 407.7 shrike. 410.7 white jackrabbit with blackish ears road kill, far removed from any habitation. 415.9 barrow pit with more ducks than we have seen so far (in barrow pits and ponds), 400 ducks. 416.8 Turnoff 177 to ^{183 to} N. Platte, end of census from Elm Creek (Buffalo Co.). 417.5 N Platte Bridge in N. Platte. 418.8 now onto Interstate 80 in N. Platte. Have been recording all gulls thru this area. Lake with 150 ducks at 431.3. 432.4 barrow pit with 400 ducks including golden eye. 440.5 redtail on fence post. [reel malfunctioned to Lake Mc Conaughy to N side dam] N side dam with extensive sandy beaches to W. This area with present level of lake is (4:00 P.M.) very photogenic and has unusual lighting effects at this time of day. Recorder starting at 500.3 sparrow hawk. 502.5 Garden Co. Herds of cattle confined to small areas and straw on ground for calving. 503.7 appearance of sandhill cranes abrupt. From here 92 to Lewellen and thence W on 26 counted the sandhill cranes (larger numbers are estimates), 32-20-4-5-3-21 5 of road and flying N. 100 to S, 100 to N, 50 to S, 100 crossing road to W, 100 to W, 50 to S, 100 to N, 40 to S, 80 to N, 60 to N, 100 to W, 200 to S, 3 to S (not calling). Reference is to S is birds observed to S not flying to S, birds to N: either in fields or flying to N. At 505.0 the birds were absent ^(4:15 P.M.) and as abruptly as they began at 503.7. In this distance of 1.3 miles there were 1248 sandhill cranes in remarkably uniform groups of approx. 50 or 100 in groups. They were definitely flying from river valley N into fields. At 505.8 60 sandhills flew N across road. 510.5 5 ♂ redwings on territories. 511.5 1500 sandhill in 1 main diffuse group flying E (instead of N). 516.9 redtail on top telephone post 40' from road. 522.1 sparrow hawk. 536.0 Morrill Co at 6:00 P.M. at sundown (sun just touching horizon. 6:06 P.M. ray of sun disappeared. The final count of sandhills in 7.8 miles (503.7 to 511.5) in Garden Co. is 2748, or 351.3 sandhill cranes per mile. Their occurrence here may be associated with sandhill lakes to N. There are more pheasants 85% ♀ 15% ♂ in Nebraska than we have ever observed on previous trips. Arrived

at Bridgeport State Park at 566.4 at 6:46 P.M.

Bridgeport State Park, Morrill Co., Nebraska
March 23, 1982

min. temp last night 12°F . Sun up (first of upper edge) 6:54 A.M.
muskrat active at 6:45 A.M. This camp is a series of
gravel lakes; reclaimed. No wind until sunrise and then
a chilly breeze from the W. 2 mallard ducks, 4 juncos and
2 grackles in area. Left at 7:40 A.M. Few clouds on horizon to
NW but not many. First 2 days have been windless but
today strong winds from W. Ponds covered with fresh ice,
1/3 covered. 576.0 passing thru alkaline flat area.
Some lake beds pure white with alkali. 578.2 striped
skunk road kill, also an opossum rd. kill. 581.1
killed deer. 581.7 Scottsbluff Co. line. 2 pheasants
so far. meadowlarks and redwing blackbirds in
area travelled this A.M. Cottonwood trees deformed
and more scraggly than to E. Have seen a few Franklin
6 gulls at 589.3 591.7 striped skunk road kill. Beyond
Cottonwoods are a small tree, ^{bushlike} as an ecotone between
^{riparian} river and fields. 608.5 first willows with yellow-
ish bark and branches. 624.2 striped skunk road kill.
Bird life rare. 625.6 Wyoming State line. Jackrabbit
road kill at 9:15 A.M. 637.9 striped skunk road kill.
639.9 striped skunk road kill. 661.7 Platte Co. line.
668.4 Antelope road kill and first observed since
Lawrence (just beyond Guernsey. 671.7 sparrow hawk.
673.7 meadowlark. Will keep complete census to Interstate
25. 679.3 horned lark. Contact of coniferous forest of mts
and grassland is abrupt but can be at various elevations.
681.9 Interstate 25. 10:29 A.M. Will continue complete census
to Casper. 704.0 second spot of snow ^{along road} on trip. now into
conifer area. no ice or snow on Glendo Reservoir. 703.0
meadowlark. Birds rare + meadowlark observed above
first bird observed on I-25. Glendo reservoir with approx.
20 deficiency of water. 705.4 excellent stratification in
road cut, especially at W end. 709.7 extensive area of
old prairie dog community for at least 2 miles along rd.
710.0 Converse Co. and area of above community. 714.7
N Platte River. Slight increase of snow on ground.
especially in shady areas. 722.0 Patches of snow increasing.

724.4 turn into Douglas at 11:25.

734.2 Ad. bald eagle.

Casper mt received considerably more snow than mts to east of us. 745.5 6 mule deer feeding in exposed situation. Cloudy, cold. 748.4 2 antelope and first live ones seen this trip. 749.9 adult bald eagle flying E with wind 300' high. at Glenrock snow remains along side of road from snow plow. 765.0 Natrona Co 767.8 9 antelope. 779.7 7 antelope. 778.8 Mary's place in Casper at 1:07 P.M. End census at outer city limits to E. Computer mileage 778.8, car reading 41345 or 8.1 miles more on computer. Visited with Mary and Doug Stern. In afternoon to top Casper mt. and visited cabin where Doug will be staying this spring and summer. Oldest one in area. Stayed at Mary's for the night.

Casper, Wyoming

March 24, 1982

min temp 24°F and snow started 7:30 AM and lasted until 10:30 A.M., 2 inches accumulation, ^{we} left at 809.7 at 10:30 AM and still snowing a little. Last evening on Casper mt, no antelope, 17 and 7 and 14 and 8 and 10 individual mule deer in loop road at base of mt just west of main road. These deer were feeding in yards of residents without residential complaint, rather than beyond human habitation. 828.4 golden eagle flying 20' above ground and hunting. 831.9 N Platte River Bridge on W side. 40 Canada geese in field, no small birds so far. 832.2 3 horn larks. 832.7 ² horned larks. 832.8 3 horned larks. 847.8 2 horned larks. 854.0 2 horned larks, horned lark. 854.4 Horse Creek. 858.3 horned lark. 859.0 2 horned larks 100' apart, 2 and 2. 860.2 horned lark. 861.2 horned lark, no road kills of any kind. 862.0 horned lark, horned lark. 863.7 Independence Rock 864.3 Sweetwater River. Road now steaming and all snow off the road. Snow beyond road. 880.2 lakes, 2 short necked geese sp.?, one group 20 horned larks. 882.7 Muddy Gap Junction. 886.8 Crow. Road now practically dry. 889.7 antelope road kill. 889.8 rabbit road kill. 891.8 old pl lake bed with small patches of sagebrush growing on sterile surface, also first live antelope which is unusual for lack of these animals

here and Casper. just beyond 2 groups of antelope near each other, one with 60 and one with 40. 893.2 20 antelope, all lying down. 894.0 Lamont. 895.4 pond with 20 ducks, horned lark. 896.0 2 horned larks, arroyo with water and ice. 897.3 horned lark. 897.7 20 antelope. 898.0 10 antelope. 899.5 antelope, no prairie dog towns so far. 904.5 rabbit road kill. 906.2 white jackrabbit road kill. 907.7 2 golden eagles circling in high winds. 908.1 jackrabbit road kill. 909.5 jackrabbit road kill. 910.2 jackrabbit road kill. 915.1 jackrabbit road kill. 919.1 raven. 928.2 W end Kawilins at 1:34 P.M. 933.6 18 horned larks (counted all horned larks since Casper and except the 2 eagles & raven there have not been any other kinds of bird counts. will keep complete census for indeterminate length of time. 934.4 horned lark. 934.7 7 antelope, starting to snow again as has been from Casper. 941.2 Sweetwater Co. line. 944.7 2 horned larks. 956.4 horned lark. 958.9 8 horned larks. 959.6 horned lark. 960.5 coyote loped across road about 1/10 mile ahead and was grey in color, 8 horned larks. 959.8 9 horned larks. 960.8 horned lark, other than horned larks there are no other birds. 963.3 horned lark. 977.6 sagebrush in island to N.; 2 horned larks. 964.0 ferruginous roughleg. 989.4 2 ferruginous roughleg hawks hovering. 993.4 2 horned larks. 994.0 2 horned larks. 995.8 horned lark. 996.9 12 horned larks. 998.5 Bittercreek overpass road. 999.9 now switching over to next thousand miles so all subsequent reading will be in the second thousand range. * now 1000 or 00.0 18.1 redtail hawk, 23.3 large lake bed in grass but not shrubs, no water, definite shoreline. Ridge W of Rock Springs have a continuous cornice of snow. 54.3 Green River ^(proper) see along river. 71.5 Little America. Crest of Uinta Mountains has a scalloped edge ^{with the} part of sharp angle on the W  W occurs on part of range with some interruption. no Brewer blackbirds. 83.9 Uinta Co., horned lark. 92.7 now on 80 loop thru Lyman. 95.6 14 antelope. 95.9 8 antelope Sun set approx. 6:38, no Brewer blackbirds or magpies. 106.2 Fort Bridge Mon (camping field N of Fort. at 6:55 P.M.

Fort Bridger Historical Monument, Uinta Co., Wyoming
March 25, 1982

Left Fort Bridger at 8: A.M. mileage 1106.2 min temp 8°F, 8000' elev. Canada geese called all morning and 7 flew by. (1-3-1-2) Robin only other bird observed. no wind, sky clear. 106.8 Black Fork River, water normal 108.8 5 magpies feeding on freshly killed jackrabbit in middle of road. ^{on approach to 80.} now on 80 and going west. 116.7 2 magpies. 119.3 freshly killed mule deer 120.5 now in juniper pinyons will keep complete census 125.1 robin. 126.6 now some aspens in canyon at floor level. 7900 ft. 126.6 magpie. Snow shows erosion of winds coming down canyon from SW to N.E. Occasional deer track in snow. 128.5 nest in aspen and looks like a redtail nest in size and position. 137.3 Bear River Bridge. 143.2 Utah State line. at 9:09 A.M. Large rabbit tracks in snow. 145.1 3 crows. white-tail rabbit tracks most common tracks. Coyote tracks cross snow fields on slopes in straight lines and most frequently paralleling snow cornices. not much evidence of deer trails. water and ice in creeks and ponds. 153.4 roven (2). Ponds 1/2 ice. There are more tracks in snow now we are in the canyon than on slopes of open country we have passed thru and there is an increase in deer tracks. 162.1 mule deer road kill and 2 magpies. (average 50' apart) 164.5 3 magpies. Deer tracks in every situation in canyon and are increasing as we travel down grade. 166.2 road kill mule deer. 170.5 rest stop by high red cliffs. 176.1 yellow barked willow. Have passed beyond junction to Ogden. 176.5 exit to 115 to Henefer. now on 84 W. 178.2 magpie. 1826.1 mule deer road kill. 188.9 overpass at main street of Morgan. 194.1 magpie. Noticeable lack of blackbirds. At beginning of Ogden Canyon, deer tracks 1/30 of those at rest stop area in canyon of the red cliffs (see 170.5). 207.0 magpie. First startling at mouth Weber Canyon. 209.9 magpies 210.3 exit 91. striped skunk road kill. now on 84-15 going N. 212.1 striped skunk road kill, 2 magpie. 214.0 first Calif gull 223.5 pheasant. 225.9 magpie 228.6 Perry Turnoff. Golden eagle in canyon directly E., circling above at same elevation as 10 Calif gulls

which are circling also and probably using same air currents. First red-wing blackbird ♂, striped skunk road kill. Frogs calling. 232.6 ♂ redwing. 234.6 200 gulls (Colf) 241.1 ♂ red wing blackbird calling. 251.8 Tremonton. now W to 84. 261.5 magpie. 266.8 immature golden eagle, black terminal $\frac{1}{3}$ white tail, soaring at 400 ft, also mule deer road kill. 270.2 exit 24 to Valley. 274.6 Blue Springs ^{Creek} exit overpass, which is just W of where we pass thru Bonneville terrace. To S 80% snow in foreground to mountain, then mainly snow above. 276.4 roven. 276.7 passing Bonneville terrace. 278.9 roven, flew into cliff 280.5 meadowlark. 287.5 exit 6 to Snowville. 287.7 overpass to Snowville. 291.7 horned lark. 294.8 Idaho State line, 2:25 P.M., first juniper trees. 297.3 jackrabbit road kill. 299.1 roven, terraces covered with snow, between bare of snow. This is the best time of year to differentiate terraces. Bonneville to first terrace as one unit is $\frac{1}{2}$ the distance to the next terrace below. 302.4 ♂ marsh hawk. 303.9 roven. 304.2 red-tail hawk. 305.8 ferruginous rough-leg hawk. 306.7 ferruginous roughleg hawk. 309.6 Cassia Co. line. 5800' by our altimeter. 302.9 Cassia Co. line? . elev. 5300'. (altimeter found to be off 6.8 hundred feet). 320.0 cottontail road kill. 328.9 jackrabbit road kill. now crossing a long ^{wide} flat valley. 330.1 jackrabbit road kill (2). 333.0 jack rabbit road kill. 334.1 jackrabbit road kill. 334.9 jackrabbit road kill (rabbits have a reddish-brown pelage. 335.8 Raft River, dry. 336.0 redtail. 336.5 jack rabbit road kill. 336.7 jack rabbit road kill. 337.6 extensive ground squirrel activity but no live ground squirrels. 338.8 jackrabbit road kill. 340.3 jackrabbit road kill. 340.7 jackrabbit road kill. 341.0 jackrabbit road kill. 341.1 2 jackrabbit road kill on a divide. 342.4 exit 228 to Declo. 349.5 now on 84. 3:39 P.M. 354.5 Minidoka Co and Snake River Bridge. pheasant road kill on N side bridge. 361.9 3 gulls (Franklin?). 363.4 4 and 200 Franklin gulls. 370.1 Jerome Co. line. 271.6 20 Franklin gulls following plow. Exit 188 to Eden 373.9 2 Franklin gulls. 374.6 2 crows. 391.2 2 jackrabbit road kills, 3 magpies. 397.7 magpie.

397.7 meadowlark. 200 Franklin gulls w Jerome. 423.9 Crow. 426.6 Malad River. 427.3 magpie. 427.7 Crow. 429.1 Calif. gull. 431.6 approx 100 Franklin gulls following plow. 440.3 Elmore Co. 444.5 middle Snake River. 450.8 middle Snake River Bridge. Vegetation greener here than in Lawrence, Kansas. 463.6 now leaving interstate 84 for Hammett. 469.8 Owyhee Co. 482.9 at 7:30 P.M. at Bruneau Dunes State Park.

Bruneau Dunes State Park, Owyhee Co., Idaho.
~~Bruneau Dunes State Park, Owyhee Co., Idaho.~~
 March 26, 1982

Birds in area: 8 meadowlarks on lawn at camp and more common here than elsewhere, magpie and killedeer ^{sparrow hawk}, at lake NE of dunes; 20 mergansers (American), ¹ buffle head duck, common goldeneye duck, ¹ marsh hawk, 1 magpie, approx. 1000 coot, ² killedeer, 2 great blue heron, 2 mallards, 15 godwits, and some ^(highway 78) other kinds of ducks not identifiable. Mileage at gates ¹ leading Bruneau Dunes 488.7 2 magpies, 3 killedeer, meadowlark. Statements made by ranger at Bruneau Dunes this A.M. are: Observed coyote this morning (we did not hear coyotes last night). His name is Polish and ended with 'nek' with c's & z's mixed throughout name. A great horned owl started to nest at visitors center but was discouraged because possible unfavorable interaction with visitors so it left and rebuilt nest in E side of park. Prairie dogs have never been in area. Coyotes common in winter and call continuously. Dunes considered to be 30,000 years old but others believe they are very young. Grazing of cattle permitted this year to cut down hazards of fire. The vegetation shows the influence of cattle grazing, and all the high grasses have disappeared. Recent acquisitions including range to W to erect and they are arranging with BLM for more property to E. Great blue heron arrived 2 weeks ago and there is one extra large heron that is identified from all the rest. They make 2 trips daily from lakes at dunes to river and these trips are made on a regular basis. Are measuring sagheens to return to the area. New laws favor use of cyanide to kill coyotes. Some sheep herders claim coyotes will kill 200-300 sheep per night.

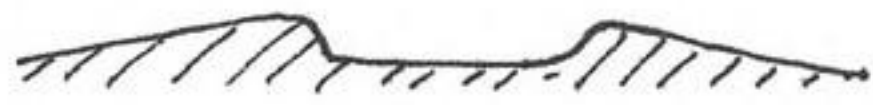
Residents in area (40-50 years period) have never seen a bear with sheep in its mouth. The ranger spends much of his vacation time and week ends observing bear ^{which keep hole in ice all winter.} in Idaho. 7 golden & 2 bald eagles in Gruneau Slimes feeding on ducks.

5 end of Snake River dam at Elmore Co. line. Ducks in river. Also Canada geese and marsh hawk ^{or along} on banks. Some gulls. Keeledeer, raven molesting a magpie and actually made body contact. [in retrospect on rangers statement. Dipodomys population same as last year. Spermophilus townsendi squirrel in area, Coldest winter in 40 years and most birds went to river, golden eagles reduced jackrabbit populations last winter which are the principle prey of raptures in this area. Badger is at low population. Burrowing owls more numerous last year than they have ever been and the decrease in badgers and increase in these owls is complementary. Spermophilus common throughout area as well as beyond the Snake River and slopes of valley ^{apex - may be time for wild flowers.} In travelling to Mt. Home and to at least 497.9 the fields on upland are continuously inhabited by ground squirrels (*S. townsendii*) Digging coverage 1 per 15'. In this same area we have seen 5 live squirrels. 499.6 meadowlark and marsh hawk flying 20' over sagebrush flats. Townsend ground squirrel activity at least this far, horned lark. The interesting thing about this flats is that there are no road kills. 502.1 horned lark. 505.7 junction 51-30 in Mt. Home. now N on 5. now left at 10:14. 508.8 sparrow hawk. 510.8 now on 84. Even along 84 there are many diggings of ground squirrels and I cannot remember of seeing this kind of activity on previous trips thru here, horned lark. Diggings of ground squirrel come to within 8' of highway, horned lark. while squirrels are on each side of interstate, they are not in median strip (40' wide). 527.9 Ada Co. line, 530.5 large lake with ducks, one ferruginous roughleg and one prairie falcon. Land on N side road burned as far as one can see but not on S side. This burnt area bypasses the ground squirrel diggings and gopher mounds. Would be a good time for aerial photographs for census work. Exit 64 to ^{Black} Creek 537.0. Exit 54 to Boise, redwing, redwing, 2 redwings. There are more redwings on territories here

in Kansas or Nebraska. Cumulus clouds low.

[in retrospect about Bruneau Dunes; cattle trails formed by dirt kicked over side of trail to form levees.

Trail depth 3-4 inches. where



Trails cross macadamized road

the dirt and sand is carried

onto road for 5' and 3' wide being wider at edge of road indicating kicked dirt. However where gravel is on shoulders the dirt + sand must be carried onto road by the hooves of the cattle and not kicked forward.

This may have application of formation of other kinds of large mammals like bison, antelope, moose, elk, deer etc.]

558.5 5 Franklin gulls. 560.5 Canyon Co. 562.5

striped skunk road kill. 570.3 2 magpies. 573.8

Boise River almost flood stage. 579.2 sparrow hawk.

Gophers and ground squirrels (*Citellus Townsendii*) still along side of roads wherever favorable areas permit. 583.3

Payette Co. line. most of the diggings in this area are gophers.

602.6 Oregon. at E end ridge on E side Snake River, on local road. 605.9 Malheur River. 607.9 2 magpies 608.4

4 crows. 618.0 2 raven. at farewell Bend State Park, 2

golden eagles circling ridge to E. on E side river. while watching these 2 eagles observed 2 long-billed curlews at same elevation as eagles glided down to river, flew along for 2/10 mile and then alighted on edge of river directly E of us. Two pairs of Canada geese, one group 15, 2

groups Calif gulls (40 each), buffle head duck, good sand dunes on E side river, 2 robins, gophers in isolated spots and occupying an indeterminate amount of gopher space. 640.0 area around Lime has a white

rock outcrop over ^{like new fallen snow.} many exposures. 640.7 Burnt River.

willows along river have a orange-yellowish case on an overall ashy base. 646.1 5 crows * 66.5 hawk

677.0 Baker, near. 694.2 20[♂] redwing blackbirds on territories in 1/2 mile along road. 668.5 3 Canada

geese, few ducks and 5 redwing blackbirds. 686.4

Baldock Slough bridge, ⁽²⁾ few ducks and ⁽¹⁰⁾ gulls. Cotton-tail road kill. 692.7 gull 692.7 5 redwings in 200'

694.8 10 ducks, 2 redwing. 695.5 45th parallel, 2

raven. 697.0 Union Co., just passed over Powder River.

698.5 3 crows. 398.8 2 crows, gull. 700.4 5 ducks and

2 redwings. All redwings so far on entire trip have been males. 702.0 gull. 703.6 4 raven. 703.9 male marsh hawk. 704.1 male marsh hawk. 704.3 exit to 278. 706.2 ridge across a flat valley as if slid off a mountain, now raining over pass. 713.7 out of steep graded canyon and onto flat valley as if a former lake bed. 715.5 crow. 716.2 duck, crow. now up a narrow canyon with ponderosa on right and other type of conifer on left side, nice river present ^{and} at flood stage. 728.4 2 crows, brilliant reddish-orange streaks in formations. exit 248 at 734.1 to Kamela. Cinder like material on snow to assist in melting. 739.2 Umatilla Co. line. 741.9 summit Blue Mountains. 4193' elev. Slight rain across mountain. Snow covers 95% ground across this mountain. Exit 228 to Deadman Pass 754.3. Cultivated valleys below are green. Green wheat field to infinity. 767.8 horned lark. 772.0 Pendleton at 4:21 P.M. 2 mourning doves at Pendleton. 774.8 Umatilla River. 777.5 marsh hawk. Grain higher than elsewhere. 796.8 2 redwings ♂. 798.9 redwing and killdeer, also 2 pintail ducks in flight. 800.2 5 ♂ redwings. 806.2 meadowlark. 806.5 Morrow Co. line. Farmers are irrigating wheat field with sprinkling systems. 805.8 duck. more and more irrigation as we approach the river. 816.5 2 magpies, meadowlark. 819.8 Boardman. 819.9 2 crows, 4 gulls. 821.4 crow. 2 crows 822.7 Crow, duck, 10 gulls. 823.2 7 gulls 832.4 gull. 832.6 at 6:12 P.M. end ^{complete} census. May add noteworthy selected observations. 834.6 Gilliam Co. line. 881.3 at 7:28 P.M. at Maryhill State Park for the night. Just E of Maryhill Bridge.

Maryhill State Park, N side Columbia River, Washington.

March 27 1982

min temp 31°F at daybreak gulls moved up river at about 1 per minute. Slight increase in gulls up to 7:30 A.M. Strong winds from NW. later. At daybreak hardly a breeze. Left camp 881.3 at 7:30 A.M. Grass to 5" and most trees ^{and beginning of leaves} in bud. Hillside just turning green. Ring-billed gull, robin, sheppard persimmon in flower & 1' high. Fruit trees in blossom. 883.8 crow, 2 crows. 884.0 now on highway 97

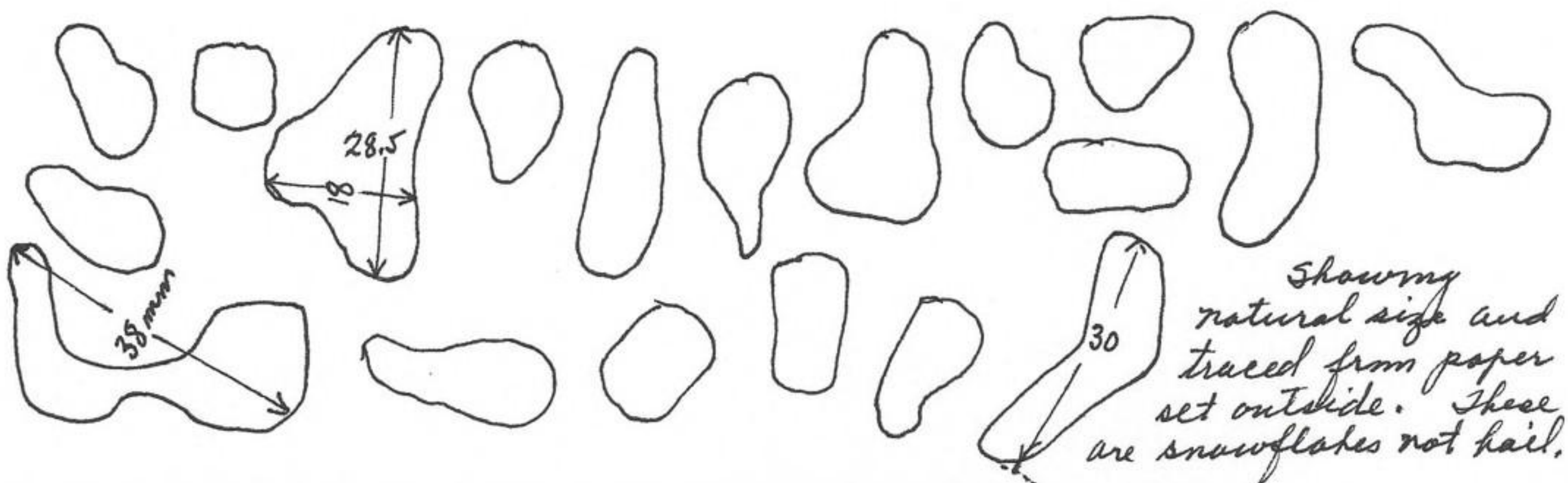
and continuing down Columbia River. Junction 14 & 97.
 at 884.4. 885.3 killdeer, 888.5 meadowlark. 889.8
 quail, Calif. 891.7 meadowlark. Forsythia in full
 blossom. First Brewer blackbirds seen on entire trip.
 893.1 Wishram, sparrow hawk. Columbia River mirrorlike
 at this point. 896.7 meadowlark. N exposure of big rocks
 are green. 899.0 mallard. 900.7 12 Brewer blackbird.
 902.7 2 Brewers blackbird. 907.2 15 Crows in road.
 907.6 Crow. 908.7 2 Brewers blackbirds. 909.6 Kluckitlat
 River. Ducks in river. 913.9 buffle head, Canada
 goose, 4 buffle heads, Crow 915.7 2 crows. 918.3
 Crow. Entering Bingen. 920.6 big tree beginning as we
 move down Columbia Gorge. 920.8 porcupine. 921.9
 Shanania Co. line. 928.2 2 scarp, 2 coot, 2 gulls and
 18 coot. 930.5 2 crows, robin, crow. 936.2 Wind River
 Bridge. 937.5 crow. 944.1 18 ducks 949.6 Steller jay.
 957.0 Plants & trees are in fuller leaf & blossom than
 at the Dalles. 964.0 Clark Co. 969.4 crow, Wasburgal.
 985.2 Highway 5 to N. 999.6 approx 2000 gulls in field.
2044.0 Lewis County. Rain to here. 46.0 Cowlitz River
 greenish in color. 72.7 Thurston Co. 90.5 6 Crows.
 102.1 Nesqually River. 104.6 Great Blue Heron. 107.7 crow.
 109.0 crow. 116.8 2 crows. 27.3 King Co, crow - 136.0
 crow. 137.7 5 crows 140.1 crow. 2154.5 arrived at
 Annette Christine Bee at 4:47 P.M. Crows were about the
 only birds observed along Interstate 5 from Vancouver. Miles
 from Lawrence = 2154.5 miles. Will stay at Chris & Steve's
 place until after wedding (April 10, 1982) Their address is
 11012 56 Ave. So., Seattle, Washington.

Seattle, Washington (11012 56 Ave So.)

at 8:45 A.M.

March 29, 1982

1/2 inch snow. min. temp last night 29°F



Seattle, Washington (11012 56 Ave. S).

March 30, 1982

min. temp 31°F, snow.

March 31, 1982

min. temp. 32°F, rain

April 1, 1982

min temp. 34°F

April 3, 1982

min temp. 34°F, in bed last 5 days with virus.

April 4, 1982

min. temp 32°F, 180/88

April 5, 1982

min. temp. 33°F 160/80

April 6, 1982

min. temp 32°F, 150/80

April 7, 1982

min temp 28°F, 140/78. To Ivano party this P.M.

April 8, 1982

min. temp 32°F, 130/72. This afternoon drove to Seattle on 5. Observed 18 crows in a 12' high tree, 15' from edge of Interstate 5 along a ten lane highway with hundreds of cars and trucks passing by. Just beyond 2 crows feeding 5' from edge of outer lane with continuous stream of cars passing by. Temp 33°F.

April 10, 1982

Day of Chris' and Steve's wedding.

Seattle, Washington (11012 56 Ave S)

April 15, 1982

118/55, p 46. Crows passed by every 20 minutes, generally in pairs.

April 16, 1982

Helped develop garden at Chris'

April 17, 1982

male entered garden that was plowed from lawn.

April 18, 1982

male still active.

April 19, 1982

male active.

April 20, 1982

Prepared to leave Seattle.

April 21, 1982

43448.0 odometer
904.5 mileage

145 x 75 p. 48. Left for Port Townsend at 11:00 A.M. Interstate 5 to Tacoma. Stopped Gig Harbor, ^{Shoreline restaurant.} more development than last year. Cormorant, Western gull, western grebe, ^{coot} barn swallow, nw crow, starling. Lunch at restaurant at W end Harbor. at car odometer 43545.0 at 3000 miles on mileage monitor. In 3000 miles monitor reads 29.4 miles more than odometer. 940.9 Gig Harbor. 950.4 Kitsap Co. 967.5 Mason Co. 973.3 Bald eagle. 974.6 Trailland turnoff 1 Coot per 1/10 mile and same number of gulls along Hood Canal, nw crow, greater scaup duck, kingfisher (S end Hood Canal where river enters canal 989.2 Shokomush River. 996.3 Fitch Creek, ♂ & ♀ goldeneye (common) at Lilliwaup, no wind on Hood Canal. 3000.0 at 43545.0 odometer. 01.0 Eagle Creek. 05.6 Hamma Hamma River. Good subject for photo to W, water crystal clear. 4 common goldeneye ducks, 2 buffle heads. 12.6 Jefferson Co. 17.0 Duckabush River. 31.2 Quillene River 44.9 salim. 58.8 Port Townsend at Max's at 5:22 P.M. Stayed at Max & Phyllis place until 28th at 737 Van Buren St, 98368, 206-385-3039

Port Townsend, Washington

April 22, 1982

Max and I put Dickinson marine fireplace in Trailer. Stove and accessories approx \$400.00. Goldfinch and pine siskin in yard during several times during the day.

Port Townsend, Washington

April 23, 1982

128/60 p. 48. Finished stove in trailer.

Port Townsend, Washington

April 24, 1982

check peninsula and other points of interest, tried to locate sail boat of a friend of Douglas Sterns of Seattle, 5th year of construction and ready for world cruise.

April 25, 1982

at a restaurant along Puget Sound at Port Townsend (below high cliffs in city) observed the following along the shore area. Black brant, buffle head, cormorant, barn swallow, glaucous-winged gull, greater scaup, Harlequin duck, Tern, common crow, NW crow, horned grebe, common loon, surf scoter, white-crowned sparrow, starling.

April 27, 1982

148/65 p. 48. made preparations to leave of the Olympics.

Port Townsend, Washington

April 28, 1982

158/78 42

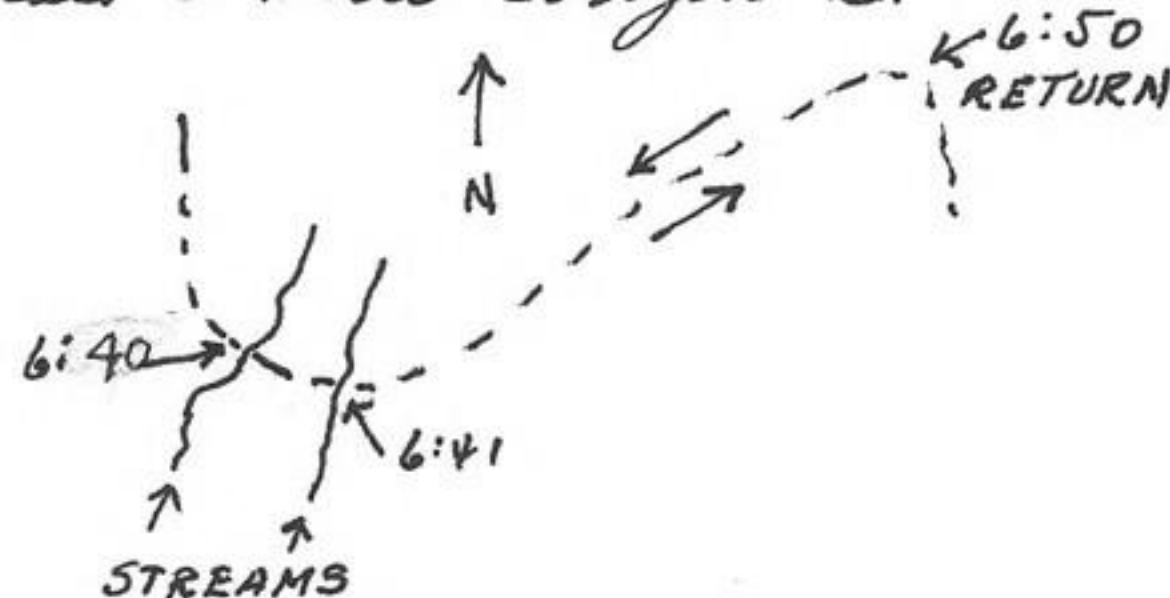
Left Port Townsend at 12:56. mileage 80.4. This A.M. rainy skies and wind to 30 MPH. Temp. cool. more leaves on trees than when we first arrived. Flowers just beginning and some out but nothing like they will be a week or so from now.

91.9 Creek at Discovery Bay (S end) at 2:44. Bay with 1/2 mile tidal flats and gulls about every 40' apart as one reaches the outer limits of the bay. Some trees are in inflorescences. 99.9 Callam Co. Occasional Crow but birdlife rare thru this area. 109.9 Sequim. Have never seen so many dandelions as are in the fields. 131.7 to Heart of the Hills in Olympic N. Park. 132.9 Camp Grounds at Heart of the Hills. Birds at Camp: Canada jays (4), robin 2, 2 ♂ ♀ mallards, roven. This evening made trip up trail toward Lake Angeles starting at trail head at 5:33 P.M. p. 68 at 6:00 P.M. a short distance along trail. 6:03 P.M. first minor switch back (snowing). 6:09 snow patches in main Canyon below, p. 68. 6:17 big rocks. 6:24 first snow patch in trail. no wildlife, no dead shrews.



first deer pellets, tracks of deer rare. 6:25 large patch of trail in snow. 6:35 continuous snow patches (winter snow) in trail. 6:38 30' above main creek on W side and major stream over trail. 6:40 log bridge across stream. 6:41 log bridge over main creek. 6:50 P.M. on trail E side canyon at point where it turns S at 100 pulse.

Back at streams p. 68. 1/2 way down 62. 7:20 P.M. greaselike excrement 3/4" x 4" flowers rare along entire trail. Birds rare. Salal and Oregon grape larger at lower elevations



Pulse at trail head at 7:34 P.M. 64.

Camp 7:50 P.M. p. at 8:15

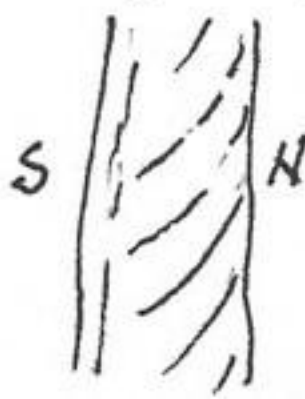
62. 8:35 p. 58. 10:20 52p.

Winter snows continuous on

slopes to Klahhane Ridge and although snow supported my weight it would have been too late in evening to continue beyond 6:50 P.M. miles of trail covered 1.3 mi. from trail head.

Heart of the Hills, Olympic Natl Park, Washington
April 29, 1982

118/50 p. 50. min. temp 28°F. At camp made first photo of trip number 820429-1 of patch of skunk cabbage which is one of the first plants to flower. Most of the skunk flowers are associated with damp to wet places. a ♂ & ♀ mallard inhabited this body of water for the last 2 days. male occasionally left for several hours at a time. One could pass by at 8 feet and these two ducks would either swim to other side of picture or if in a channel of running water would fly 20 or so feet to more protective places. Annette and I walked up main road towards Hurricane Ridge. Road not open to car traffic because of snow on upper part of road. Left at 9:37 A.M. Orange bellied salamander in road. yesterday picked up one on trail alive but barely able to move because of cold weather. Oregon junco 1, 3 robins, robin, mountain beaver diggings, 2 robins, red shafted flicker, robin, Canada jay, Stellers jay, roven (these birds recorded as observed). 10:01 first snow patch in road, robin, 15 Oregon juncos, 10:10 first right turn, roven. Moss on trees perpendicular of S side of trees and at an angle on N. side. No flowers. 10:20 second right turn. 10:25 pileated woodpecker holes



at base of Douglas fir tree. Purple knoblike plant 2"-3" pushing up thru packed soils along side of road. 10:30 3rd right hand bend, robin, 3 Oregon juncoas. 10:34 large creek. 10:40 new right. Salal with blight on leaves, knoglet. 11:07 mt goat tracks along side of road for approx 350'. Two sizes of tracks are: 68 and 57 mm. 11:37 end of hike (1 mi from camp and 1.7 mi. to bend of road that trends SW along Klakhan Ridge, p. 58. Return to trailer 1:00 P.M. (2 hr up & 1 hr 23 min. return).

Talked to a young man associated with a wildlife farm in area (Schael ?) from Minn. He reported on a trip up road to Hurricane Rd. In lower 1/3 of road that traverses 5 slough exposure of Morse Creek. Mt. lion within 50' of a blood stained spot in road. It remained on sidehill for approx. 3 min. and then leisurely walked away out of sight. Mt. goat on sidehill near first tunnel over road. 4 deer. Observed one bobcat. This informant lives in a town named for his family where he raised mink and fox. Currently he works for wild animal farm for use by movie companies. Is now going to the Alaskan Range to build log cabins for a guide camp.

Left camp in Heart of the Hills and travelled toward Rialto beach - Mora State Park along the coast. Left at 3:00 P.M. 152.6 two wood ducks. At Lake Crescent only a few ducks. 3 horned grebes. no gulls or other kinds of birds except robins and crows. 175.9 Sleduck River, water low. 176.8 Sleduck River. Roads after rain steaming and like in a fog bank. 182.3 Bear Creek. 184.6 Sappho. 192.8 roven 193.8 roven. 193.9 2 red-shafted woodpeckers. Mora Camp after having visited Rialto Beach 215.2 at 8:15 P.M.

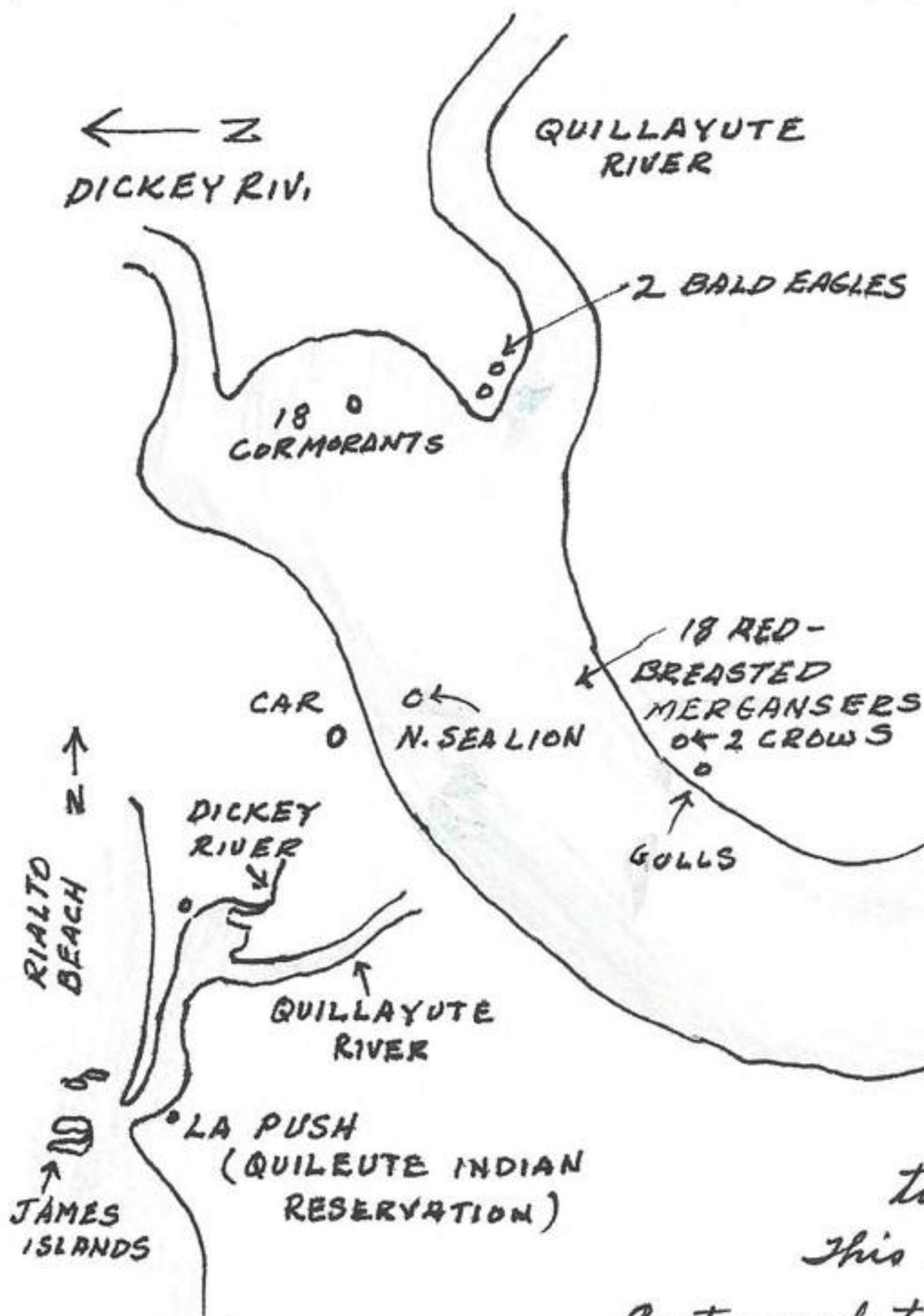
Watched sea lions and harbor seals at convergence of Quiloyute and Dickey rivers in wide river baylike section of river which in turn is associated with bay at mouth of river. There were 10 sea lions (northern Sea Lion) and 4 harbor seals separated on basis of depth and current of water, harbor seals in more shallow water than sea lions. Harbor seals with top of head & eyes above water. Sea lions dive and move like whales. The harbor seal make more of a disturbance of surface of water than do fish. Head of harbor seals lighter than are the sea lions. Two or three sea lions hunt together but sometimes are seen as singles. When sea lions capture salmon or steelheads they surface and created considerable surface action with

fish held above water with attempt to kill or segment fish. One sea lion attempted to swallow entire fish headfirst. Common mergansers not interested in commotion made by sea lions. The western and glaucous gulls were in general area as were 15 common mergansers & 4 cormorants. Some salmon could be seen swimming at edge of water below.

Mora State Park, Washington

April 30, 1982

At sunrise made trip on all camp circuits (2 camps only) from A to E and observed 12 robins, 3 varied Thrush, 4 crows, 6 common mergansers in river. Trillium white to purple and in full blossom. Thimbleberry & wood sorrel in flowers. The 6 mergansers in river remained feeding until 10:00 A.M. The 3 ♀ and 3 ♂ formed a close group and ♂'s continually in competition for females. Bald eagle (imm.) flew up river at 8:00 A.M. 9:00 A.M. along road on N side in Haylake



river (1/2 mi. up stream from mouth of Quillayute River observed 18 cormorant, 8 ♂ 10 ♀ red-breasted mergansers, 2 bald imm. eagle, 2 common crows, 1 northern sea lion, 5 herring gulls. Bald eagle no. 1 alighted on sand bar coming up river from the W. It left up river. Another eagle no 2 flew up river past area and 5 minutes later both no 1 & 2 returned and alighted on sand bar and rested (5' apart).

Timed period of submergence of northern sea lions as 2 min 56 sec at one time and 4 min 45 sec another time and 4 min at another time.

This observation made at 11:00 A.M.

Continued to Rialto Beach but before we left car area took photo 820430-1 down river (SW) showing river, (Quillayute), La Push on left bank river and James Rocks or Islands.

820430-2 Annette by conifer log. The limbs have eroded down to basal attachment with fibers separated and extending beyond base of limb or branch. Fragmentation of limbs occurs in all stages from extensive to completely eroded knobbed. One might look for these features in fossil trees which then could be identified as ocean beach environment.

Photo 820430-3 a different conifer showing more extensive fraying of branch than above. All photo on Realto Beach near where small river enters. To the north across beach.

Photo 820430-4 Annette on eroded rocks on beach and surf breaking around her. First ^{Cape} to north of Realto Beach.

Photo 820430-5 of eroded log on beach between sand & gravel zone. Annette on beach but placed as if on one of the eroded branches (base) of the log. Rocks on beach to upper left is site of photo 820430-4. Cape to N.

Photo 820430-6 Eroded tree stump, in fact second horn a separate tree beyond, both forming the image of an animal with horns. Cape N of Realto Beach in distant background.

Photo 820430-7 white foam on beach. At small stream noted imm. bald eagle flying above trees on ridge to E (bordering ocean). whale spout in ocean directly W. Return to Mora Camp and in afternoon (6:15 P.M.) returned to viewing area at convergence of Sucky & Quilayute rivers. Northern sea lion, 8 ruddy ducks and 1 harbor seal. At 6:34 a sea lion submerged for 4 minutes. Also the double-crested cormorant here. At 7:30 P.M. photo of foam on beach from surf action and Gomes Islands to S. This photo is 820430-8

Photo 820430-9 to 820430-11 of surf capped with sunlight. Continued S to end of dike. near S end considerable wave damage to dike, in places almost segmented. In the past waves have overriden the dike with logs perched at angles on the E side. At one time before the dike a peninsula of sand extended W to one of the islands. At the end of the dike the gulls rested between foraging for food. This evening there were 34 gulls including herring and glaucous-winged gulls. A single second year glaucous gull was in contrast (white) in contrast to the other gulls. This may be an important record. Also near point were 4 white-winged scoters and accompanied by a greater scaup duck, all on bay side of dike. A single white-fronted goose stood on edge of dike at water level. An immature bald eagle arrive from E down river and alighted in tree at parking area.

From dike took on way back took 3 photos of sunlight beach with shimmering water, nos 820430-12, 820430-13, 820430-14. On W side of dike at about point where dike constricts found a fishing net on beach with nylon and rope structure. The mass would be approx. 2 bushels. There were 24^{all} black feathered birds, heads gone with tail feathers and size of a cormorant. The tail feathers were too short for seaters. There was no attempt by fishermen to cut the nylon threads to release the birds. Another such mass of dead trapped birds were reported at Cape N of Rialto Beach. The (1) sea lion was feeding at S end of dike. Returned to convergence Dickey & Quilayute rivers and observed 4 harbor seals, 1 sea lion, 8:00 P.M.

Mora State Park, Washington
May 1, 1982

10/20 p.50. This morning drove down to observation point at convergence Dickey & Quilayute rivers and at Dickey Bridge noted 9 cormorants fishing up river, then under bridge and beyond. A bay below convergence noted 22 cormorant, 8 common mergansers, 12 redbreasted mergansers together and another group of 18 redbreasted merganser on S side of bay. 2 harbor seals, 3 Herring gulls and 2 NW crows also there. Continued to dike and made ⁸²⁰⁵⁰¹⁻¹ photograph of fish net with the ⁸²⁰⁵⁰¹⁻² Annette & Jones Islands. 24 cormorants trapped as noted yesterday evening. Met a beach comber who related the following. High surf action occurs in winter and he has witnessed same. Observed 3 adult and 2 imm. bald eagles near 'hole in the rock' in the Cape area N of Rialto Beach yesterday. Indian at La Push kill sea lions at night in river and dispose carcasses at mouth of river. Cottontail observed along road near beach this A.M. Has seen 3 adult bald eagles and 4 imm (at one time) in area for the last 3 years. Mr. Tag Gannell (285-0515) knowledgeable about marine mammals in this area.

On return to camp (Mora) noted 3 harbor seals at 12:00 P.M. in bay area at convergence Dickey & Quilayute rivers. Prepared to break camp and leave for Kalaloch State Park. Left at mileage 227.7 at 12:15 P.M. 248.7 Jefferson Co. 256.7 Hoh River. river bed has large numbers of trees from floods, 257.1 roven, and first bird observed since we left Mora camp. 275.1 15 common seaters riding surf on ocean. Arrived Kalaloch State Park and camped by big tree with bridge of roots at edge of cliff.

At 7:05 P.M. 3 Caspian terns flew by to S.

Kalalack State Park, Jefferson Co., Washington
May 2, 1982

Surf 10-15 segments and covered with a white foam. Cormorants 1 per 5 min flying S at outer ocean side of surf. 2-10 common & surf scoters feeding inward from first outer breaker. They dive at approaching wave or ride over wave if considered rideable. Occasionally or reflexes a second before wave comes in. Occasionally one is caught as wave breaks and the scoter is pushed with the wave either bodily ^{in swimming position} or completely out of central, turning over several times before gaining central. Gulls fly past about every 5 min. (1 to 4 gulls). Robins most common bird at camp and other than crows are about the only ^{land} birds present. Drove down to lodge restaurant to S which is along a river and bordering N.P. to N. and observed, robin, robin, robin, robin, robin, robin, crow, robin, crow. At lodge group 2 oyster catchers and 1 single bird. Gulls to lawn outside restaurant window. Picked up hat that was left there by Chris on her honey-moon trip to Quinalt Lake. Returned to camp at Kalalack and made several pictures of Annette & tree at camp; 820502-1 Annette and large conifer at camp, 820502-2 ibid. 820502-3 ibid. to S, 820502-4 camp from beach. 820502-5 surf from camp.

May 3, 1982

Hummingbird, yellow warbler, song sparrow and Steller jay along with robins and crows. A white-fronted goose walked along edge of water (it had a broken wing) and when near us left beach and swam out thru surf, riding all waves rather than diving. Many times the crest of a wave would carry the goose backwards or sideways for 5-15 ft, most of the time in a toppling uncontrolled movement. Forward progress was slow but steady and I could imagine painful. Collected perfectly round basaltic rocks and shipped to Laurence.

May 4, 1982

Left Kalalack 10:45 at mileage 276.4 (43817.8) 3 mi. S Nat'l Park headquarters visited Mrs. Joe Burke who had a home share house. Before and during severe winter storms the logs are piled high on beach. 286.5 Jefferson County 290.1 Gray-

Harbor Co. 290.6 roven. 301.2 roven by big log company.
 315.8 roven 345.6 Little Hogue River. 368.8 Elk River.
 371.5 Westport. Some flowers in full blossom whereas to N
 they are not. 377.1 Pacific Co. 392.3 N. River. 402.9
 Willapa River, gulls. 420.0 2 sparrow hawks. 430.0
 roven. 435.9 draw bridge, gulls, great-blue heron, 449.9
 City limits Ilwaco at 7:20 P.M. 457.0 at 8:25 entering
 Fort Canby State Park.

Fort Canby State Park, Pacific Co., Washington.
~~May 5, 1982~~
 May 5, 1982

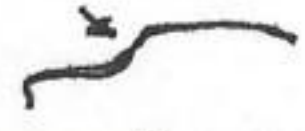
128/65 p.46. Birds in area (N end park near cliffs and cove)
 white-crowned sparrow, yellow warbler, robin, crow, barn
 swallow, N.V. swallow, 2500 sandpiper in one group on
 mudflats (S of Ilwaco), also at Port of Ilwaco noted
 Caspian terns, Herring and glaucous-winged gulls, horned
 grebe, greater scaup. Left Fort Canby State Park at 2:41 P.M.
 at 484.5. Check visitor center on top hill and picked up
 a dead warbler on floor. It measured 105 mm. Total length, ♂ ad.
 484.2 Chinook? River. 488.2 great blue heron ^{2 ducks} in bay. Purchased
 zoom binoculars in Astoria 541.9 Nehalem Bay State Park
 at 7:56 P.M.

Nehalem Bay State Park, Tillamook Co., Oregon.
~~May 6, 1982~~
 May 6, 1982

at camp 2 starling, 4 crows, 1 starling. This area of sand
 dunes sealed on E side but W side active. also white crowned
 sparrow. Left at 541.9 at 10:32 A.M. In retrospect noted
 dead opossum in road in Washington after leaving Fort Canby.
 577.2 goldfinch ~~at~~ of Tillamook, also first butterfly observed
 on entire trip from Lawrence. 585.9 2 roven, crow is
 dominant bird along way. 586.6 second white butterfly so
 far. at ^{593.5} Claverdale ^{just beyond}, there is a gracklelike bird occurring
 along coast for first time. 596.7 Little Nestucca River,
 turkey vulture and first one seen. 600.1 Towhee. 607.7
 Lincoln Co. 609.5 Salmon River. 613.9 Surf Tide. Lunch
 here. and noted several groups (10-30) Bonaparte gulls fly N.
 and flocks of sandpipers (up to 400) moving N. One gull per
 3 minutes flew by. Crows on beach at Lincoln City.
 Best shoreline at Depoe so far. Temp - 60°F. 646.4 opossum
 road kill. 648.3 cottontail road kill. 652.0 at
 4:35 P.M. Seal Rocks, named because of their resemblance to seals.

At Seal Rocks took the following photos: 820506-1 secondary reef to north. Two pigeon guillemots favored this area. Photo 820506-2 rock shaped like a seal, to N. Photo 820506-3 Annette on edge abrupt drop with a seal shaped rock in background. Photo 820506-4 same rock & reef as above to N. Calif. sea lion and harbor seal on some of these rocks. Photo 820506-5 general view with some spray action. Continued S on 101. 671.4 just S of Cape Perpetua. 677.9 in area of short-needle pine, thick and heavily wind blown and does not seem to be represented farther N. 680.4 Sea Lion Cove. Visited the cove. ^{5:30 PM to 7:00 PM} On rock shelf on W side photo 820506-6 of sea lions and Bards cormorant. Photo 820506-7 ibid. Photo 820506-8 to N showing bay and light house. Scottish broom in blossom. At cove there were both the Calif. sea lion and northern sea lion. This area supports approx 300 northern sea lions and they are holding and increasing. Calif sea lion more active than northern sea lion when in resting position. High waves (seasonal) displace marine animals from cove and some waves reach observation point in cove. This occurred in winter of 1964. In the cove there is a light band on wall of ash layered in basalt. ♂ northern sea lion inspect posterior of ♀ and then they have mouth to mouth contact. main calls are barks from Calif sea lions whereas N sea lions roars and then only occasionally. The call of the Calif sea lion can be heard from far away (2/10 - 3/10 mile). When northern sea lions return from fishing or feeding they sit high with head thrust back and they continue this behaviorism for 2 or 3 hours before lying down ^{and immobile} prone for resting and sleeping. This behaviorism may be associated with digestion. To distinguish the two sea lions (Northern & Calif), are:

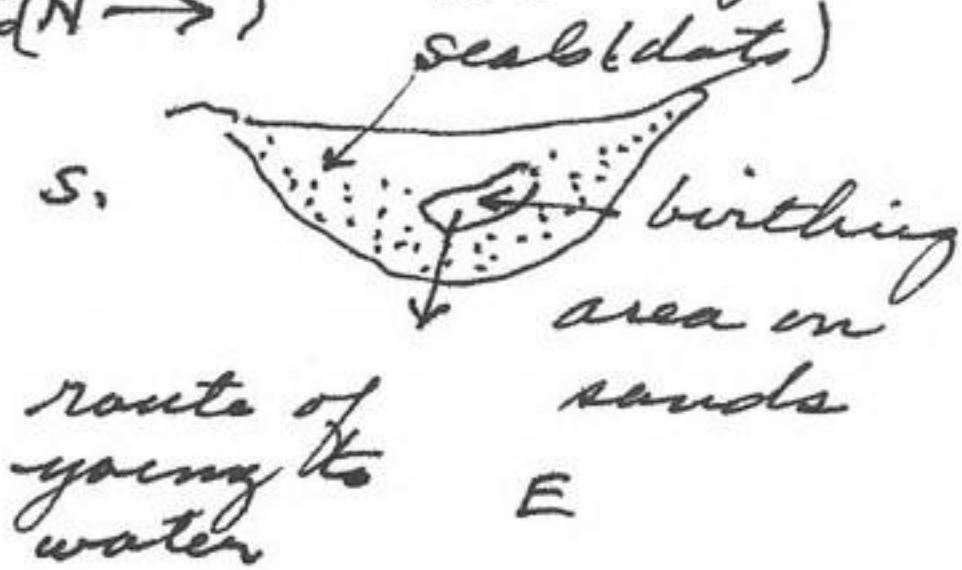
1. Northern sea lion larger in males, females in both species are smaller by 2 feet. Small ♀ northern is as large as a male Calif sea lion.
2. Calif has black pelage in and out of water. Northern sea lion is tan, except old individuals which turn whitish and when on their backs (northern) when dark bellies give the animal the appearance of being dark like the Calif. sea lion.
3. Rostrum of northern is longer except in old animals, and the forehead has gentle slope rather than abrupt and higher as in

the Calif sea lion. (northern  , Calif ) 4. the around ~~nuzzle~~ ^{to eyebrows and} face, onto the crown or forehead is one of the most characteristic differences being light colored, almost whitish in the Calif. sea lion when it contracts with the dark brownish-blackish pelage of the rest of the head and the lack of this lighter face in the northern sea lion. 5. pelage brownish (black when wet in the Calif. and yellowish brown to light in the northern. 6. Calif ~~honking~~ ^{deep, loud} back at all time, northern quiet except occasional ^{deep, loud} roar. 7. Breeding σ^7 of northern sea lions spend their times in the Behring Straits and return to sea lion cove area to breed in May to June. males of Calif sea lions spend their winter at sea lion coves and general area and return to Calif. to breed. Breeding seasons of northern sea lions and territories of the sea lions are just been formed. A territory can be in juxtaposition with male sea lions practically contacting but respecting the areas of both territories beyond. when the large northern sea lions leave the coves it indicates the beginning of the breeding season which takes place outside the coves. They know of no hybridization between the Calif. and northern sea lion and this is due to the differences between the breeding period of the two species. Highway 101 was at one time at top of ridge but because of the interests of the sea lion cove the road was moved down to the cove area. In early days when there was a bounty on sea lions, men would shoot the animals and the ~~owner~~ ^{owner} themselves by rope to collect the right ear for bounty evidence. At one time they allowed pets on the trail but now are prohibited because of harassment cause by pets to sea lions and specially to the breeding colonies of Bairds Cormorants. It is interesting that sea lions & cormorants breed on land slopes directly below observation stations and trails with hundreds of people walking by whereas elsewhere both these breeding forms are confined to island or outlier away or beyond mainland. The double-crested, pelagic and Baird cormorants all breed at sea lion coves and may be the only such place on the Pacific coast. meadows on hillside are cropped and maintained as meadows because of harvest of the vegetation by cormorants for nesting material used in the nests below the meadows. Photo 820506-9 of ^{yellow} broom plant

that locally is spreading and successfully competing with native plants and elsewhere along coast is covering dunes and extending eastward from ocean into forests. It is of great concern to botanists & foresters in the Pacific Coast area in Washington to Calif. Left Sea Lion Coves and Continued to Honeywell Memorial State Park at 700.3. 8:00 P.M.

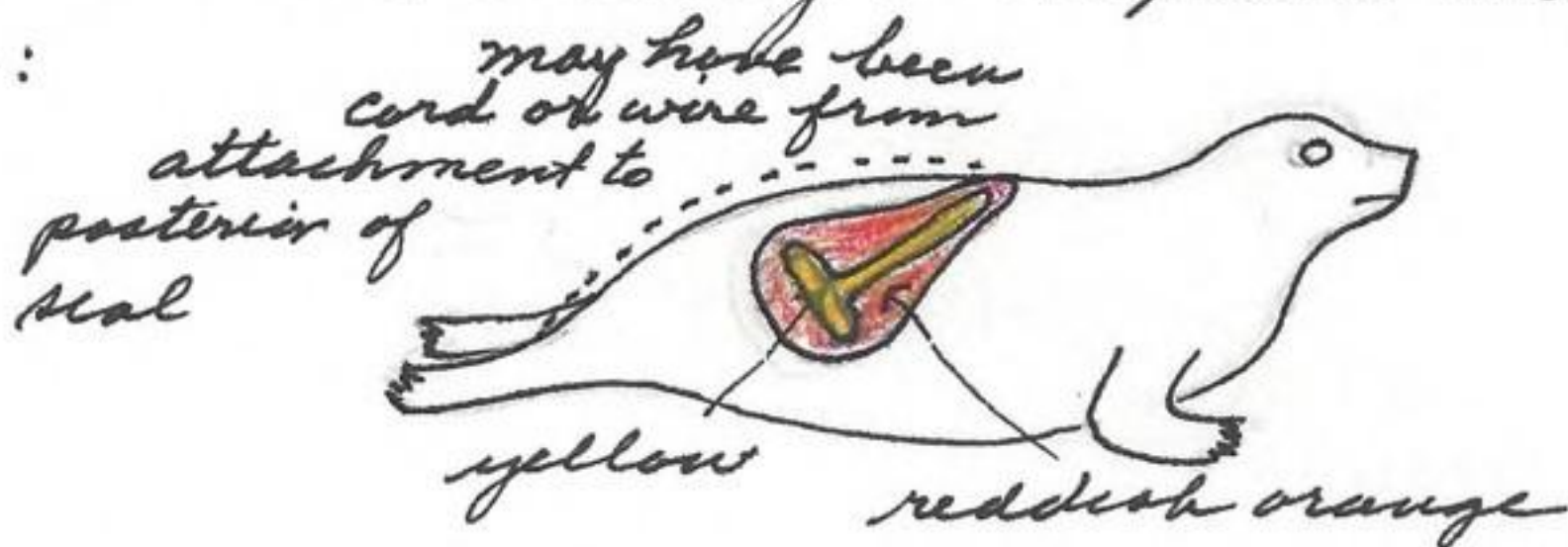
Jessie M. Honeyman Memorial State Park, Lane Co., Oregon.
May 7, 1982

Left at 700.3 at 10:20 A.M. Rained last night, clouds clearing and clear sky to west. 706.5 Douglas Co. line. 710.1 roven. 719.0 middle bridge Smpqua River. at N end lake N of Coos Bay, 740.2 Coos Bay, horned grebe, great blue heron, cormorant. at Simpson (759.2) Reef. noted approx. 700 harbor seal, (one group of approx. 500 on sand of lee of major outcrop directly W of Simpson Point. of the 500, 1/30% were young of various ages, some newly born. watched parturition of 3 harbor seal. ^{Western} Gulls (12) cleaned up afterbirth in approx 8 min each birth. The gulls were not interested in the newly born young. The first birth noted was recorded and after 8-10 minutes after birth the young was led by the mother thru 7-8 adults (N →) ^W seabirds to the open water on the beach where the young toppled several times in the wave action for about 1 minute then returned with mother to the beach. The second and third birth followed the same procedure but remained longer on sands before taken to open water. The female in this initial period defended the afterbirth and young by driving the gulls away whenever the gulls come to close to the afterbirth. The female shared her concern between the afterbirth and young. When the young (which are remarkable large when born) had considerable trouble with the secondary wave action at the edge of the beach. The third birth was characterized by the female sitting on the afterbirth the full time (20 min) before ^{which} she took the young to water. Crows (2) participated in the cleanup of the afterbirth and both the crows & gull worked to get afterbirth within 2-3 feet or just beyond reach of harbor seals. The other 200 harbor seal were generally distributed on other rocks and outliers beyond or adjacent the breeding (birthing) colony and most of these were resting.



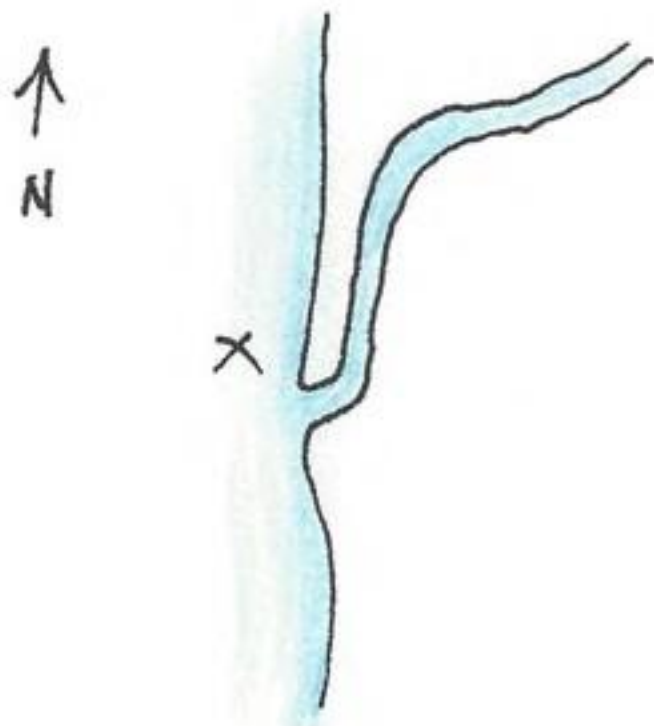
Female harbor seals preparatory to giving birth were characterized by twisting and turning with abrupt movements and showed considerable more activity than the rest of the seals who were passive, except of course, the females which were defending afterbirth and their young. Another group¹⁰⁰ of Calif. sea lions 300' from birthing area on racks to N. They called continuously. Of the harbor seals the pelage varied from almost white, to yellow, to black to light to heavy spotting to blacked from one part of the body to another as if hybrid in nature. As far as I could ascertain only females and their young were on the sands of the birthing area. Both ♂ + ♀ Calif. sea lions shared the same resting areas. Did not see northern sea lions. Birds petrel, 12 red-throated loons, 13 gulls, 15 northern phalarope, ^{8 acoters,} 2 pigeon guillemot, ^{6 black brant} and other kinds of small birds passing N. This vantage point would make a good spot to check migrating birds. There is an unusual number of them here. One large California sea lions come to edge of beach where harbor seals were birthing and after approaching within 10 feet of harbor seals turned around and left. There was one harbor seal on sands where birthing took place which was marked thus:

There appeared to be a cord or wire running posterior from attachment of the marker to posterior end.



At Shore Acres at botanical garden took photo of surf action no 820507-1. There is an interesting tilted bed with surf of stratification of bomblike concretions. At Cape Arago observed a wandering tattler. 769.9 Turkey vulture on shortcut road to Bandon which is the farthest west incorporated city in the U.S. Bandon is where I made my first contact with the Pacific Ocean as a young boy travelling with mil and Cully Culbertson. Residential areas now black off approach to the Bandon Point and other houses are commanding the area up to the edge of the cliffs. It should have been made into a national monument long ago. It is now permanently defaced. Southern part of Oregon more advanced than northern

part of Oregon, especially between broom and rhododendron plants. On outer rocks south of main rocks W of Bandon were approx. 90 large ♂ harbor seals, all males as male at least as far as I could determine. Broom taking over on all slopes. Took several photos of area (between W rocks of Bandon point and rocks S of Bandon rocks at side of bay), all from top of cliffs. 820507- SW toward south rocks, broom dominant plant. 820507-3 ibid. 820507-4 ibid. 820507-5 same area above but NW looking at main rocks W of Bandon Point. 820507-6 ibid but directly W showing rocks & surf. 805.9 Curry Co. Arrived Humbug State Park at 827.5 at 7:21 P.M. Later in the evening we walked down creek to ocean and at W end of sandbar and observed the following birds: 15 robm on lawns and more open fields of camp.



- 1 spotted sandpiper on creek.
 - 8 harbor seals in surf.
 - 3 red-throated loons
 - 12 western gulls
 - 3 cormorant
 - 1 Bonaparte gull
 - 40 northern phalarope
 - 2 common murre.
- } seen on ocean.

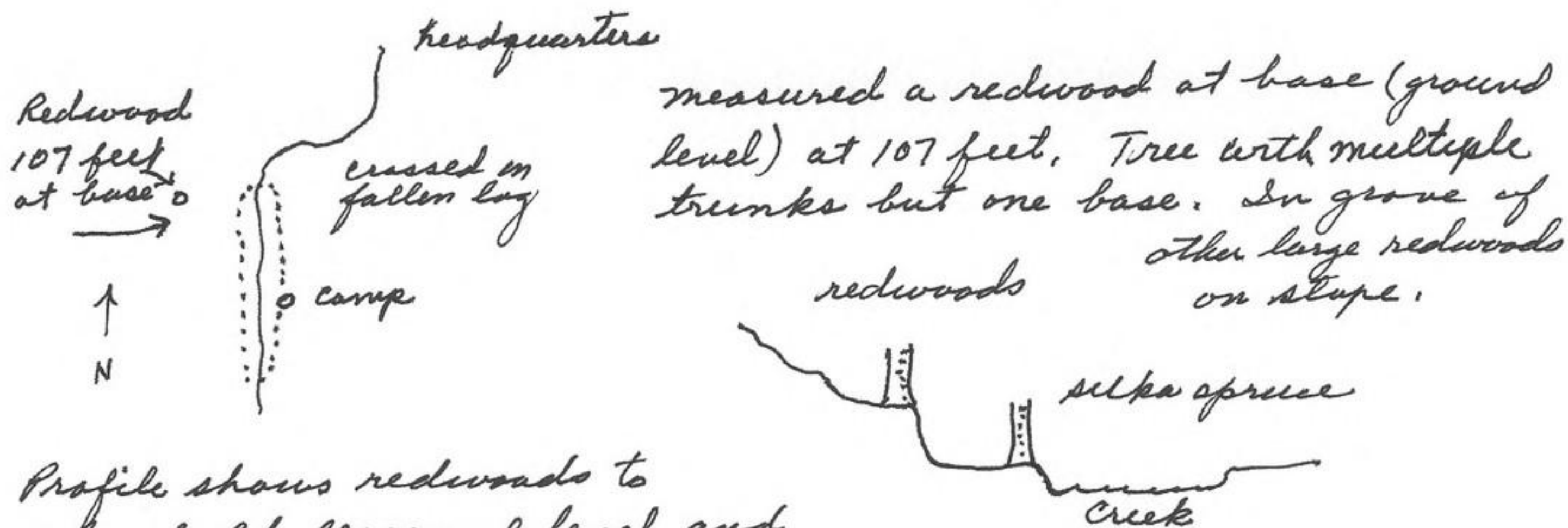
Humbug National Park, Curry Co., Oregon
May 8, 1982

142/68 p.44. Steeler jay common (8) at camp and always in view. Robins common in fields. Left 827.5 at 10:12 P.M. 831.7 bald eagle along side of slope leading to ocean, 835.1 redtail hawk ^{circling} with mole in talons. 838.5 redwing. 842.7 now back on main road 101 after deviation to Ophir for gas, 855.4 Hunter Creek. 861.5 series of rocks in ocean support 15 Calif. sea lions and 25 harbor seals. wherever there are platforms on rocks above the ocean level one generally finds seals. 2 pigeon guillemots just before Meyers Creek. 862.7 redtail hawk, another one just beyond. Most of the gulls are the western. 864.0 Pistol River. 870.4 at Arch Rock Point. 876 took the following photos at the point. 820508-1 of surf breaking on sand and running up onto beach. white foam diminishes rapidly after momentum advance. This photo from S side of peninsula from cliffs at top looking down onto beach.

Photo 820508-2 from W end of peninsula directed SW on rocks and ocean with spray action on outer rock. note foam or white water action around each rock which creates a increase acceleration of rocks for marine animals associated with rocks. Photo 820508-3 at NW end peninsula showing ^{or arch} gap in rock and wave action. Photo 820508-4 is same setting as 820508-1 showing variation of wave action on beach. 820508-5 same area as above. Photo 820508-6 to S from peninsula showing sea cliffs and wave action. This view is just a higher angle of the wave action ^{on sands} above. It is interesting that if the shots on wave action on sand are turned sideways they appear either as mts or stalagmites depending on whether they are upright or down or. Photo 820508-7 from N side of peninsula showing wave action on rocks. A second or two after water reaches highest point is more dramatic than when water is in full power. Again if photo is turned upside down the action becomes even more interesting. Photo 820508-8 N side peninsula and towards E end bay. Wave action from two direction on lee of large rock, meeting and forming a sand spit directed towards the rock, (W). Photo 820508-9 from S side peninsula showing sea monsterlike island of rock & trees. At the Arch Rock Point parking area were 5 *Citellus beecheyi*, begging for food at car stop and under feet all the time. Used drain-pipes when protection was required. One large conifer hit by lightning and split to base. Another large conifer blown over by winds from the SW. 873.5 Thomas Creek bridge (highest bridge in Oregon). 883.0 Brackney and (Calif.) had meal at Cliff House Restaurant. 933.4 Middle Klamath River Bridge. 937.8 Humboldt Co. 944.8 Big Tree Cathedral Grove (Prairie Creek Redwood area). 946.4 Prairie Creek State Park Campgrounds.

Prairie Creek State Park, Humboldt Co., California.
May 9, 1982

Temp at 8:43 AM = 45°F. Barn swallows inspected under overhang of trailer and entrance to exhaust hole above stove. checked several times for elk in main field but only 8 and these on E side of valley in orchardlike slope leading to big trees. Deer tracks measured 54 mm, 56 mm, 64 mm, 70 mm, 90 mm, 102 mm. The latter 3 of elk. Hiked a trail on W side of creek W of camp



Profile shows redwoods to edge of old erosional level and those on edge are vulnerable to falling. Erosion level of present creek are lined with sitha spruce and 8 of the large trees have eroded away from their bases and have fallen into the creek. No birds observed along this trail.

Left Prairie Creek State Park (campgrounds) at 946.8 at 10:48 mileage. 8 goldfinch at camp as we left. 953.3 trailer parking for Lady Bird Johnson Redwood Grove at 11:44 A.M. 955.1 3rd butterfly since on vacation from Lawrence. 956.1 Parking lot at Lady Bird Grove. 956.1 at 1:20 P.M. now starting on trail. Heard occasional kinglet and only bird seen or heard in forest. At the N end at the dedication site photo 820509-1 of large redwood tree with Annette at base. Returned to parking lot. 2 Steller jays at lot as well as 3 robins. Left Lady Bird area and drove up main road for a mile or two and then returned to trailer parking area, picked up trailer and at 963.1 on Davidson Road to Fern Canyon. and at 963.1 along beach of ocean. *Citellus beecheyi* ran across road. (Davidson Rd is a dirt road and single track). 969.3 ravens. 970.8 Temporary parking lot at 3:26. Recent flooding of Fern Canyon destroyed picnic area at mouth of canyon. A group of 25-35 elk are now N of canyon but 5 sets tracks as far as 3/10 mi. S of canyon. ^{some of} These tracks measured 120 and 180 mm. Hiked up canyon for 3/10 mile which is a narrow 30' floor and perpendicular walls up for 100-150 or so feet. Ferns covering all slopes from creek bed to top of canyon and some are still brown from winter season. One should not go up canyon if heavy rain is expected. Creek must be crossed continually. No birds. Red-shafted flicker at mouth of canyon. Returned to car. 971.6 3 raven. These birds are at picnic grounds. Barn swallows common. Quail not too common and confined to beach. Robins present.

This high conglomerate, sand and clay cliff that faces the ocean has been deposited as an outwash plain in Pleistocene times and has eroded back by the ocean to its present profile. 972.3 *Citellus beecheyi*, 972.5 turkey vulture. 976.4 Steller jay. Now in canyon the leads to 101. Highway 101 at 978.1 at 4:05.

981.9 4 turkey vultures or Oriskany. 990.7 raven 995.1 ^{big} ^{farthest palm to n.} lagoon to S with 8 elk feeding in grassy meadows ^{in this general vicinity at a state park headquarters photo 820509-2 of palm} 44529.7 is now 4600 on Computer or monitor. Arrived Patricks Point State Park and at Wedding Rock took several photographs: no. 820509-3 rocks to north. A Calif sea lion passed by between the outer rocks and the 2 nearer rocks. The body is clearly defined from our high vantage point. Before we left, another one, ^{northern sea lion} pass by in same channel. Photo 820509-4 to E showing eroded back of cliff and bay beyond. There were times when the ocean came to the beach without surf formation which is unusual for the perpetual surf action along the coast. Photo 820509-5 wave action directly below vantage point. Photo 820509-6 Annette returning to trailer from wedding rock. 12 pigeon guillemot fishing below point, single line formation common alignment in fishing maneuvers. Herring gulls, Brant cormorant, double crested cormorant, robin, northern sea lion, 10 Calif sea lions, distant rocks with sea lions but could not identify. Was impressed with lack of surf. Water breaks on rocks but to either side uninterrupted smooth water until hitting shore and then motion is aftereffect of contact and not a wave breaking as such. This would be an excellent spot to study at close range the seals & whale and marine birds & other mammals.

→ Patricks Point State Park, Humboldt Co., Calif. May 10, 1982
~~*Sciurus griseus*~~ at rocks. 105.5 back to highway 101. 15.8 ←

Little River. 30.6 Exit Blue Lake, 12:23. 37.6 turkey vulture now on 299 E. 38.6 turkey vulture. 38.9 2 turkey vultures. 53.0 Photo 820509-6 of delicious trees on sidehill with ridge and clouds in background. 56.9 turkey vulture. 59.6 Steller's jay. no other birds across mts except those recorded. 69.6 Trinity Co. at bridge (middle). 80.8 raven, birds scarce. 83.4 Trinity River, now n side river, water greenish. *Citellus lateralis*. Three butterflies today 2 white and 1 dark. Last 30 miles there is a light ^{green} colored conifer and stands out against the darker conifers. Leaves or needles 8-10 inches long. bark is blackish with reddish between furrows, mainly on S exposure.

95.7 raven, hummingbird. This river would be a good one for rafting. 106.5 Hellena and N Fork Trinity River on 299. ^{still} now on N side. Hillsides covered with a fine chetgrasslike grass, green. Steel-headed salmon are in this river. 111.0 2 Steller jays. Have been recorded complete census. Now up & over the first range. Some broom at this elevation. 114.8 first Cottonwoods. River bed dry. 115.8 elev. 2000 ft. 118.0 top divide (Oregon Mt Pass, 2888 ft, 129.9 Weaverton, intense red soils: There is sameness thru Trinity Valley. 141.2 3000 ft. 142.0 Shasta Co. 146.3 more trees but more sparsely placed. Long needle pine still present. All birds observed have been recorded. N side Whiskey Reservoir. Rocks telling and darker, ^{brown, yellow:} greenish & reds. higher fragmented. 160.5 Shasta. 165.9 Redding at Rail-road overpass. Large 2 1/2' palm trees in city. 167.4 middle bridge Sacramento River, at 7:07 P.M. Just east of Redding is an oak, 30' high with light green leaves. oak bark and dominating forest. 173.8 maple. 175.3 Cow Creek, can see part of Lassen Mt, ^{and maybe Shasta Mt,} opossum road kill. occasional ponderosa pine on ridges. Occasional barn swallow and about the only birds in Redding Valley. 179.1 first redwing. Have seen what appears like Brewers blackbirds. Delicate light colored needle pine still in area. 183.2 2000 ft 199.1 2-3 miles E Shingleton at rest stop arriving at 8:03 P.M. Plan to go back to Shingleton to have tapets checked tomorrow.

3 miles E Shingleton, Shasta Co., California

May 11, 1982

125/65. Drove back to Shingleton to have tapets adjusted but could not be accommodated so drove to Redding and arranged to have them worked on tomorrow morning. Camped in parking lot associated with garage where work was to be performed.

Redding, Shasta Co., California

May 12, 1982

Work done at 3:00 P.M. Left 3:05 ^{P.M.} at 250.8. 252.5 middle Sacramento River bridge now going S. 260.8 redtail being chased by small birds. 265.8 turkey vulture. 268.3 Tehama Co. line. 269.8 2 turkey vultures. 290.0

now on 36 E. just beyond and across the first valley were 31 rediving blackbirds on territories. Hillside to edge of valley with oaks giving the impression of pygmy forests. Oaks with space around each tree and many savannas. 2 turkey vultures and western kingbird, ground covered with volcanic boulders up to 2 feet in diameter, few larger. more boulders in drainage systems than on slopes above. 296.0 meadowlark. not many birds there here. 296.3 3 meadowlarks and a turkey vulture. Have been keeping complete census across these valleys. 296.6 meadowlark. can see Shasta from here which is 100 miles away. 300.6 Oakes. first large swallowtail butterfly of trip. 301.8² turkey vulture. 303.6 Paynes Creek, goldfinch. 307.8 turkey vulture, beginning of ponderosa pine, white pine at lower elevations, both occur here now, as well as oak. Difference between these oaks and pygmy forests is grass under and between oaks. 316.2 5 Brewer blackbirds, 2 cowbird. 326.0 Lassen national Forest. 326.7 Battle Creek a flat valley beyond to E. 328.5 Photo 820512-1 of Sasquatch + gw bee at mineral? + logging with mammals. Mineral. 329.8 5000 ft and some snow before this elevation. 330.5 red-shafted flicker. 332.8 Nat'l Park turnoff to left. 5750 ft, 333.1 at summit. Under-story trees not in blossom. 342.9 Guernsey Cr. 343.8 a long tailed squirrel (probably *Sciurus griseus*). 345.1 turnoff to Chico. most meadows are flooded. 349.2 Plumas Co. line. 357.1 Chester at railroad crossing. Temp 57°F. where road contacts Lake Almanor approx 100 Canada geese in meadows surrounding the lake at this point, 30 gulls and 9 redivings and 8 Brewer blacks and 2 common egret. Crossed causeway and camp in private campgrounds to right of road + railroad as we contacted the mainland beyond the causeway.

North Shore Camp, Lake Almanor, Plumas Co., California

May 13, 1982
1/2 mi shore 3/10 mi

Birds in area of lake + forests of ponderosa pine + white + sugar pines + Canada geese, 12 spotted sandpipers, 7 western grebes, 3 horned grebes, 140 Brewer blackbirds, 12 robins, 1 barn swallow, 1 double crested cormorant, 4 Forster tern, 1 red-shafted flicker, 1 common egret, 12 chipping sparrows, 4 white-crowned

sparrows, 1 osprey (circled bay on n side causeway), 6 Steller jays, 1 red-breasted nuthatch, 1 western tanager. Collected pine cones of Jeffrey pine (like ponderosa with spines on scales and scales pulled out at top but about twice as large. The ponderosa is most common pine and Jeffrey say one in 15 and characterized by unusually large cones at base on ground. The white pine or more likely the sugar pine produced the long thin cone and unbelievably long. Photo 820513-1 of Annette and trailer at camp site between two conifers and lake only 10' beyond. Left at 362.1 at 10:28 A.M. ^{from} Almanor Lake Camp on lake (North Shore Camp), *Citellus lateralis* common at above camp. 370.1 Lassen Co. line at 10:55. 371.0 *Citellus lateralis* 372.2 Cooper hawk. 373.8 Westwood. 382.0 ^{Friedmeyer?} Pass at 5735 ft, 412.1 rest stop S of Susanville. 18 ringbill gulls feeding on lawn and approaching people to within 3 feet. Large lake nearby. 430.7 melanistic redtail hawk. 434.5 magpie. 441.5 redtail on telephone post, 451.7 *Citellus beecheyi* road kill. 464.9 Nevada State line at border town, 1:35 P.M. From Susanville S not many different kinds of birds, Brewer blackbirds generally distributed and occasional crow & raven, 1 horned lark and occasional duck. Arrived ^{Reno} at 483.0 at 2:06 made quick check of town and after lunch continued E. 522.4 magpie just beyond Fernly at power lines. moving sands to N in Hozen Valley, and just beginning to creep up mts, along full length of range but sand has not gone over the top of range. 524.1 sand is created by a playa lake to the south. 527.2 Churchhill co. 527.8 *Citellus tridecemlineatus*. Brewer blackbird most common bird along way. 534.4 area of lakes and 4 ducks overhead and 15 on water. Redwing blackbirds, snowy egret, owlets, coot and other kinds of ducks. also 1 raven. Some ponds dry. 540.4 5 W. Kingbirds. fighting for position or nesting site on telephone post. 543.1 magpie, W Kingbird. 544 Fallon. Drove out to Ray Alcorns residence W on telephone road. Ray not home but toured area. He has accumulated a tremendous amount of early pioneer antiques and has them housed in buildings, on outside walls of building and all over his property. Natural objects of

unusual interest and beauty have been worked in the yard landscape. He has gathered great quantities of wood for firewood which I presume he cuts and sells. Also heavy items (construction or building materials). I do not see how one man could have the energy & strength to accumulate so much. Left note on door and left. 569.8 roven, 574.0 middle playa lake. no water except road ^{side} drainage. Lake bed looks like a snow field. no trees on hills, 581.5 now in a playa lake valley with beautiful sand dunes to the north. Rather restricted in E-W movement and playa lake is damp and may have some water at S end. Shoreline on E hills show black desert varnish rocks above highest level and lighter (non desert varnish) below highest level as if the rocks below the highest level have not had time (10,000 ^{years}) to develop this desert covering of black. There is some very shallow restricted layers of water near road. Two photos from here on road 820513-2 of sand dunes to N showing unusual curvature along N-S crest. Photo 820513-3 of difference in distribution of desert varnish below & above the Pleistocene (uppermost) shorelines. First forests on top of range to E. midgate at 605.3 7:59 P.M. Heard ^{no} Coyote calls

midgate, Nevada

May 14, 1982

120/60

Camped short distance off road. Left 605.3 7:17 A.M. Sky cloudy all over. will keep complete census of birds across Nevada, at least to Utah border. 605.9 3 roven 609.9 old ^{of mounds only} Citeellus townsendi colony and extensive. 607.3 male & female Brewer blackbird, Brewer blackbird. Cottonwood not yet with leaves. Desert is green wherever it grows. ♂ & ♀ Brewer blackbirds. Some streaks of snow on mts to E. 625.8 horned lark. 630.6 horn lark. Playa lake at N end this valley. 631.1 roven. 641.3 Chukar partridge. 643.1 first pygmy ^{sparrow} forests. 644.6 Lander Co. Pass 6348 ft. 645.0 more snow on ranges as we travel E. Big playa lake to S in this broad valley. 645.9 roven. 649.9 face on ascending ridge to left on pass. Summit 6679 ft. Snow coverage half way down mt. ^{to E} some cornices on ridges down to 3/4 from top. Snow may be new. now crossing Reese River

Valley. 660.9 Crossing Reese River, just barely flowing valley greenish yellow and sand bluish and piñon forests black. Austin 668.4. Slopes to divide burned and eroding ant hills at about 1 every 20 feet. These are impressive and indicate importance of ants in the ^{Austin} ecology. Summit 7484 ft 671.8, 2 roven. Soils beneath piñon forests bare, especially around peaks and may be controlled by wind. 672.7 Steller jay. 674.2 magpie. 674.6 redtail captured microtine on road shoulder. We are now in juniper piñon forests, Scotts Summit 7267 at 675.6. 678.3 Steller jay. 860.0 horned lark. 6546 693.0 696.2 2 hovens chasing each other for at least a quarter of a mile. 701.3 horned lark. 709.5 end valley looks like ocean with whitecaps as result of overcast conditions. 714.8 4 Brewers blackbirds within 100' separation, another 1/10 mile beyond. Alkali in shallow drainage canals. 716.6 Brewer blackbird. 721.0 first butterfly in Nevada. 721.7 Brewer blackbird. 724.3 small sparrowlike bird. 726.3 ♂ ♀ Brewer blackbird. 727.3 5 Brewer blackbirds associated with cattle. 727.8 3 Brewers associated with cattle. 728.1 2 roven. 730.4 canyon with ideal nesting cliffs for eagles, roven, prairie falcon. 732.5 roven. 738.4 Eureka. 5 Brewer blackbirds thru city 740.3 Eutamias and a ground squirrel probably Citellus townsendi. Pinto Summit 7376 ft. 743.5 miles. 744.3 sparrow hawk. 745.7 Cottonwood not yet in leaves. Remarkably few road kills. 754.7 golden eagle on top of telephone crossbars and feeding on prey, ^{it} circled twice then left area. This is in middle of valley of sagebrush, greasewood and usual desert vegetation. first valley that had wherlwind. 1/3 of tail (base) white and slightly mottled underneath. Low grade valley to n with high mt. ranges on both sides and one on w snow covered. upper 1/3. 761.2 divide. Bare places across valley like old roads are coming back in greenish shrubs 2 inches high and are closely spaced. 772.2 golden eagle circling high to n. now we are going up canyon with good nesting cliffs. Deciduous trees and shrubs are late in growing leaves. May be normal for this time of year. Looks almost like early spring. 743.3 ft at Antelope Summit 774.3. 774.6 sage thrasher. 779.2 Brewer blackbird. 784.3 6 Brewer blackbirds associated with farm area. 787.0 Cotton-tail road kill. Rabbit road kills rare. 789.1 horned lark. and jackrabbit road kill. 791.1 jack rabbit road kill.

This increase in rabbit road kills is not associated with differences of other valleys we have passed thru. 793.2 rabbit road kill. 797.8 rabbit road kill. 798.3 sage thrasher. Robinson ^{Summit} 7607 ft at 798.9. First domestic sheep seen since in Nevada and they are just north of Ely. 807.1 2 small sparrow-like birds. Jackrabbit road kill. 807.8 raven. 816.3 Ely. now E. at 1:35 P.M. Snow on highest peak is 1/2 way down mountain. 821.1 3 Brewers blackbirds. 822.0 jack rabbit road kill. 823.1 6 Brewers blackbirds. 823.6 marsh hawk 824.1 at reservoir, 6 Brewers blackbirds and 80 loat, and generally distributed in lake, 3 Brewer blackbirds. 825.1 striped skunk road kill. 838.6 5 mourning doves feeding edge road. 7723 ft at Connor Pass at 839.0. 845.6 raven. 855.7 second butterfly in Nevada. West face Snake Range just before turning up canyon to E. is a good profile of ^{nesting} cliffs for eagles, raven, prairie falcon etc at 863.3 mileage. 866.5 old camp grounds at spring at bottom of canyon. 869.8 magpie. 872.2 jackrabbit road kill. 873.4 junction to Lemmon Caves and Baker. 876.7 horned lark. 877.4 jackrabbit road kill. 878.1 3 horned larks. 880.4 Utah State line. at 3:06 P.M. 881.2 horned lark, will continue complete census to Provo, Utah. 883.9 jackrabbit road kill. 885.2 ³ horned lark. 897.1 just before mile post 15. 899.0 2 mourning doves. 903.3 past first range into Utah. 905.1 horned lark. 911.4 jackrabbit road kill. 91.5 horned lark. 915.0 ^{Photo} Bonneville level on knoll separated from mts no 820514-1 showing how little the change since the Bonneville lake stood at that height. no evidence of gully erosion over the terrace, edge of terrace with original boulders still in place, mt wave action little changed. It is hard to believe that this landscape has not been altered in the last 10,000 years. 920.0 redtail hawk on telephone post. 923.8 horned lark. 925.2 horned lark, Sevier Lake only water in center and alkali surface elsewhere at N end. There does not seem to be a channel out of the mouth Sevier River to the open water. Alkali not as pure white as it would be if it were not moisture saturated. Could not see ^{any} petroglyphs on rocks from road. Sandy beach 2 1/10 mile ^{eastward} beyond alkali. 927.9 horned lark. 928.2 horned lark. 932.9 3 horned larks. 933.1 horned lark. 933.3 horned lark. 933.4 horned lark. 934.1 horned lark. 936.6 horned lark. 939.1

2 horned larks. 947.9 horned lark. Sevier valley is widest
 by several times
 crossed so far in Nevada or Utah. 949.6 horned lark. 951.0
 jackrabbit road kill. 952.3 3 horned larks. 953.7 horned
 lark. 954.0 2 horned larks, jackrabbit road kill. 955.0
 jackrabbit road kill. 955.6 4 horned larks. 956.9
 2 horned larks. 957.7 jackrabbit road kill. 958.8
 horned lark. 960.8 jackrabbit road kill. 961.8 western
 kingbird. Cottonwoods in leaf whereas in Nevada they are
 leafless. End of complete census as we approach cultivated
 areas versus desert areas. Hinkley 963.5 10 western king-
 birds on W outskirts of city, along fence line. Brewer black,
 red wing blackbird, Western kingbirds, mourning dove are all
 very common now. 966.1 Sevier River, 8 feet wide and $1\frac{1}{2}$ to
 foot deep. There is an extreme difference in bird life
 between the cultivated areas and the deserts to W. 966.7
 marsh hawk. 5000 at 7:00 P.M. at mileage in Utah ←
 approaching Nephi. Summation of birds from Hinkley
 to Nephi. jackrabbit road kills average 1 per $1\frac{1}{2}$ mile but
 varied according to vegetation and land profile, some places
 1 every 300 ft. decided increase in Brewers blackbirds
 from Hinkley E. Occasional magpie (3). many W. kingbirds
 probably 1 per $1\frac{1}{2}$ to 1 mile, 3 great blue herons, gulls (Calif),
 Beyond Nephi N on 15 getting to dark to observe and end
 of census. Arrived Provo at 64.6 at 10:00 P.M. ^{at} Mary
 and Don Jensens at 1593 N, 1450 E 84601. They are expected to
 318. return in a day or two.

Provo, Utah Co., Utah.

May 15, 1982

140-72. Camped in ^{new} cul-de-sac $1\frac{1}{10}$ mi. S of Mary's home.
 #50,000 view of Provo City below with a million & one lights of
 all colors. From Mary's home took several photographs of
 mt. Timpanogos in morning lights. Photo 820515-1 S
 end Timp showing upper slopes and either an elevated
 former Utah valley erosional level or resistant rock. Photo
 820515-2 To N showing more of the former valley level.
 Highest point on Timp on left side. Photo 820515-3 general
 view of Timp. Photo 820515-4 ibid as those above showing
 even better the former valley remnant. Photo 820515-5
 later in day and from Orem at 30 mi. Clouds had started to
 form. This evening camped in State Park at mouth of Provo
 River.

Mouth Provo River, Utah Lake, Utah Co., Utah

May 16, 1982

130/70 Lake high with water on parking area in SW corner and when waves high onto parking lot surrounding visitors center. Some campers on W road between lake and harbor with rear wheels in standing water. Provo River at top of banks and in some places onto lawn beyond river. If the river were to rise and flood E one would have difficulty returning to Provo or if 6-9 foot waves came in from lake the whole area would be in a disastrous state. No one was warned of this possibility. Birds in area. 4 eared grebes, 5 Calif. gulls, 6 coot, 6 robins, 1 killdeer, barn swallow, northern violet green swallow. No pelicans but some were observed about a month ago. No terns, western grebes or ducks. Heard great blue heron last night. Water stands above compromise level. Took several photos this A.M. Photo no. 820516-1 N side river W of harbor showing inundated black willow. Eared grebe just visible on left side. Photo 820516-2 Boat harbor from visitor center to N. Campers can be seen on W side harbor almost standing in water. 820516-3 of black willow and 2 eared grebes, same area as 820516-1. 820516-4 2 eared grebes at mouth ^{Provo} of river. They used the river up as far as 150' from lake. 820516-5 black willow on N side of N dike. The dike is above water except in a few places where it is inundated a inch. The dike on S side is impassible and inundated in segments. Photo 820516-6 black willow N dike on mainland. Carp were breeding along edge of water. Photo 820516-7 black willow N side park showing Provo Canyon in background.

Returned to Mary's in Provo. This A.M. took photo 820516-8 of new garage being built at S end of Mary's & Ann's home. Cement forms were removed and dirt is being leveled. Provo City, mainly BYU University in valley background. Ann weeding lawn in photo 820516-9 Photo 820516-10 Mary at S end of upper deck looking down into area where new garage will be built.

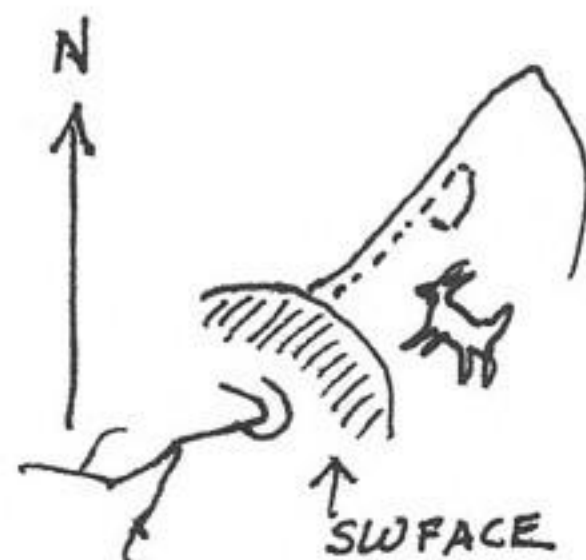
On way up to Mary & Ann's cabin at Sundance, checked petroglyphs at Canyon Glen, but rained out at about the time I arrived at site. Left railroad bridge at Canyon Glen 1:00 P.M. white cabbage butterfly. Bp 62 after first 200'. Scrub oak with leaves 1" to 4", yellow to orange, chokecherry just beginning to bud, blossom

1:10 P.M. first grasshopper. 1:11 yellow warbler, towhee. 1:17 pipe flume. Between bridge and pipeline, on trail, 7 sets of deer droppings, one track measured 78 mm. 1:25 golden eagle with no white in tail circled above petroglyph site. Calif. gulls in small group of 5-12 flying high to E up Canyon. Check land management marker at site (NE corner Springdell property. ^{SC} TSS | R 3E made some orientation checks

S 32 | S 33
1971



(670815-1) of
the snake on this
large boulder.



petroglyph
(670815-6)

16 Calif gulls flew W over site 75' above ground. mule deer make and maintain trails thru site and on slopes to river below. Droppings common.



arrows on SW face of Timp show where wind gathers snow on W side Timp and flows over ridge into Stewart Cirque on E side Timp.

Cornices form all along ridge on east side. Second arrow (R) contributed mainly to Bee Glacier.

Little Chalet, Sundance, Mt. Timpanogos, Utah Co., Utah.
May 17, 1982

First day at Mary + Son's Chalet at Stewart's Flat at Sundance. Skiing Resort. Maple leaves just beginning, oaks (scrub) not yet started. Golden eagle nest (lower right) with green conifer branches, upper left as of last year. Put food stations out.

May 18, 1982

checked environs locally.

May 19, 1982

Put food out on 17th but not visited by birds or mammals.

which from previous years ^{at other seasons} performance, the wildlife immediately visited the stations. Swallowtail butterfly, angelfish and small whites in area.

Little Chalet, Sundance, MT, Timpunogee, Utah.
May 20, 1982

First blue jay at feeder. *Citellus variegatus*, *Citellus armatus* both come to feeder. Previous spelling of Chalet has been Chaleau

May 21, 1982

First chipmunk at feeder.

May 22, 1982

First gray-headed junco at feeder. Western tanager, robin and pine siskin in area. From Moraine Chalet found dead chipmunk that measured 243 mm total length (*Eutamias* ^{say chipmunk} *quadricinctus umbrinus*) *Eutamias* ^{Least chipmunk} *minimus consobrinus* most common chipmunk at Chaleau. Mule deer tracks at Little 55mm, 63, 64, 66, 66, 67, 69, 70, 70, 70, 74, 77, 77, 78, 78 79, 80. These tracks represent 4 or 5 different size deer. Willow catkins in full inflorescence. Photo 820522-1 of Stewart's cirque from the Moraine Chalet.

May 23, 1982

Eutamias ^{minimus} *consobrinus* active at 7:00 A.M. this morning and to dusk or twilight last night plus periods throughout the day. Left 8:10 A.M. for top of Evergreen mountain to photograph Timp. The top is where the chairlift ends. Will follow road from where cabin road enters onto sky slope, thence to E, thence W along road to trail that leads to top on E. side of peak. Temp. 50°F, no clouds BP 60. 8:13 main road below Little Chalet. 10 snow banks on S side of road. *Tamiasciurus* calling on S. side Conger in trees. Robin. 8:14 robin. 8:16 2 *Citellus armatus*. 8:21 point where road opens onto ski slope. On clearing to N on W side chairlift line in area graded to a ski slope observed 9 *Citellus armatus*. They all ran to W of the runway. 2 mourning doves on open slopes, robin. 8:30 *Citellus armatus*, meadowlark calling. The meadowlark has entered area since slopes made open. 8:33 red-shafted flicker, 2 Steller jay. 8:35 tree squirrel (*Tamiasciurus*)

- 3 *Citellus armatus*, group 4 mourning doves in open area.
- 8:38 *Citellus armatus*. 8:38 *Citellus armatus*. now passing morton's Cabin, life like statue visible in E window.
- 8:39 yellow-bellied or Williamson sapsucker, probably the latter, it made considerable noise and action within 10 feet.
- also 8 *Citellus armatus*, 8:41 road to timber. From here to end of road on E side slope of knoll (left terminal) 9:10 starting traverse up slope 20 *Citellus armatus*, sapsucker, 2 western tanager, deer tracks 96, 83, 70 mm. Top 9:30 A.M. As I approached top James Robert came down trail from top. at first I did not recognize him because he had a new hair cut, closely trimmed that changed his appearance. We continued to top and there made several photos as follows:
- 820523-1 James Robert Bee to W with N end Stewart Cirque and Facet Peak to right.
- 820523-2 James Robert Bee with Stewart Cirque in background. Cheaps Peak to left, Facet Peak to right or N.
- 820523-3 James Robert Bee with Stewart Cirque (N end) to W and Facet Peak to N.
- 820523-4 same as 820523-2.
- 820523-5 James W Bee, Stewart Cirque in background.
- 820523-6 James W Bee with Stewart Cirque to W, Cheaps to S & Facet Peak to N.
- 820523-7 *ibid*.
- 820523-8 *ibid*
- 820523-9 To W with Stewart Cirque, Cheaps to left & Facet Peak to R.
- 820523-10 Cheaps at S end Stewart's Cirque, photo to W.
- 820523-11 Stewart Cirque, Facet Peak to R and terraces below Cirque.
- 820523-12 Facet Peak to left, Elk Peak to right. These two peaks are good sources of avalanches.
- 820523-13 N end Stewart's Cirque, Facet Peak to right.
- 820523-14 To S showing Scotts Hollow, Overtown Canyon and distance mts of the Cascades, Cirque at head of S. Fork, and peak between head S Fork & Provo Peak.
- 820523-15 Corners of Scotts Hollow & Overtown Canyon with Cirque & peak at head of S Fork and distant peak at head of Rock Canyon.
- 820523-16 *ibid*
- 820523-17 *ibid*.
- 820523-18 *ibid* but more detail of Scotts Hollow headwaters.

820523-19 To S down Scotts Hollow. Provo Canyon middle - ground and head S. Fork Provo Canyon in distance.

820523-20 *ibid.*

820523-21 To N with head N. Fork of Provo Canyon and Granite Range to N.

820523-22 Robert Redford's Chateau & ancillary building at Sundance area.

820523-23 Clearview Point on Clearview moraine, N side Stewart Canyon. Conifer just left of center of photo is vantage point. Open meadow to rear & right.

820523-24 Avalanche canyon to N/SW of photo station, showing path taken by avalanche along course of least resistance. Two other paths are indicated. Greater volumes of snow could send the avalanche out in most any direction on the alluvial fan at mouth of canyon.

820523-25. Avalanche from S out of canyon which in turn is supplied by a canyon off of Ashley Peak (E slope). This avalanche could shift directly into castle built at edge of usual avalanche channel. A more massive avalanche beyond out of Overwhelm Canyon. Cabins at upper reach of Stewart Canyon could be destroyed by avalanches out of these canyons and off of Elk Peak, Facet Peak and Stewart Crag. There has been unusually extensive avalanches into the canyon below Stewart Falls but not massive enough to carry the avalanche E down canyon into area of cabins. These property owners should be advised as to the potential danger of these avalanches.

Left top at 10:25 A.M. 2 goldfinches. One Cooper hawk flew S over top. On W side on extensively cut ski run noted a solitaire, one western tanager, 1 mt. blue-bird and 6 pine siskins. 3 redtail hawks around secondary knoll to N. *Citellus armatus* all the way to top and from the top down. At bend of road at base of hill as road trends N, 5 mule deer tracks crossed road on snow. Continued down road to above Cabin (Little Chalet), thence straight down to road that leaves main road and enters Little Chalet area. Little Chalet at 11:10 A.M. At first Cabin W of Little Chalet, just beyond moraine chalet, a Cooper hawk flew over grass lawn not more than 6" from the surface and at

great speed. I have noticed this at several places where flat lawns provide speed for the hawk to surprise its prey. After a hot shower blood pressure 160/20, p 56.

At Little Chalet took 3 photos of family. no 820523-26 of James Robert Bee, no 820523-27 Annette P. Bee and no. 820523-28 of Mary Bee Jensen. At 4:00 P.M. photo 820523-29 of Stewart Curque from Moraine Chalet and no 820523-30 the same as above. There are water lines on snow from surface water drainage.

This evening drove to Aspen to visit Reed Boddulph but he and family not at cabin. 2 goldfinches at aspen. The caretaker at lodge says there is a goshawk nest in trees on S side of aspen on mt.

Little Chalet, Mt. Timpanogas, Sundance, Utah Co., Utah.
May 24, 1982

maple leaves now from $1\frac{1}{2}$ " to 3" and obscuring vision thru trees. Oaks just beginning to produce leaves. 4 turkey vultures circled above Sundance area and then flew N. Jack Hapkinson, Don & Marip neighbor with big cabin to NE of the Little Chalet and at end of moraine says he has not seen eagles in the last 3 years. Redford gave money to B.H.U. to research eagles and hawks in the area. Student used his second floor porch to observe the birds. Banded some redbills that nested in conifers on S side of canyon. 5 deer come to his yard every 3 days. They have a trail that crosses the moraine between his house and the Little Chalet. In his cabin he has a veritable historical museum. One bear trap (steel jaw) approx. 4 feet long. Others smaller. The furniture antiques come from Mapleton, Ogden, Idaho, southern Utah and Provo.

At 12:05 P.M. left Aspen and followed trail up thru conifer forests to ridge (at water tank) thence on horizontal trail to Stewart's Flat (Little Chalet). 8 robins in open field at aspen.

Took the following photos (Kodachrome) along route.

820524-1 Mary, Annette and James R on trail above aspen grove.

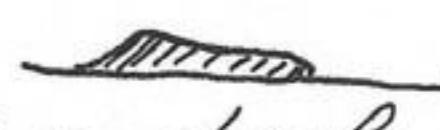
820524-2 Ibid.

- 820524-3 James R, Annette & Mary on trail above aspen on S side of canyon.
- 820524-6 Annette, James R & Mary on trail before slide area.
- 820524-7 Crossing main ovalanche field, from off Elk Peak.
- 820524-8 On main ovalanche field with Fault Valley, Squaw Ridge and Pass in distance. This entire drainage now in ski slopes. Ski lift from Vivian Park will probably end somewhere along Squaw Knife Peak. Avalanche out of center canyon which in turn is fed by canyon off Ashley Peak. This avalanche track could override this gulch and end up in Cabin Areas.
- 820524-9 Annette & Mary just beyond ovalanche field.
- 820524-10. Mary, Annette, James R.
- 820524-11 James R & Mary.
- 820524-12 Annette and toast of champagne.
- 820524-13 Annette, James R & Mary beyond ovalanche field with Fault Valley in distance. The ovalanche in center is main avalanche off Ashley Peak and converges with center canyon or gulch. Cascade Peak beyond Squaw Knife Pass. Hoods now to ^{base} ridge.
- 820524-14 Annette, James R & Mary, just S of ovalanche field.
- 820524-15 Mary & James R.
- 820524-16 Annette.
- 820524-17 Clouds over Stewart Peak from near Avalanche field.
- 820524-20 Mary, James R & Annette along trail with down aspen from ovalanche.
- 820524-21 James R, Annette and Mary crossing ovalanche field near Stewart Falls.
- 820524-22 Annette & James R on above ovalanche field.
- 820524-23 Brink Stewart Falls.
- 820524-24 James R, Annette, Mary with Stewart Falls in background.
- 820524-25 James R, Annette & Mary at Stewart Falls from ledge above base of Falls.
- 820524-26 Mary on ledge.
- 820524-28 Mary, James R, Annette on ledge above base falls on n side.
- 820524-30 Mary with Stewart Falls from ledge on n side.
- 820524-31 James R and Annette at Stewart Falls on ledge n of base of falls.

- 820524-32 Mary from ledge N of Stewart Falls.
 820524-34 Mary " " " " " "
 820524-35 James R climbing cliff on face N of Stewart Falls.
 820524-37 Mary, James R & Annette in open field below Stewart's flat. The lower falls in lower right hand corner is subject of several photos above. Several avalanches on S side of valley off Ashley Peak. Extensive aspen and other trees areas have been effected by avalanches in this field below falls but none reaching cabins. A dead porcupine along side of creek probably killed by avalanche. Along trail between aspen & Stewart Falls noted many *Citellus arnatus*, butterflies uncommon but included angle wing, morning clover and cabbage butterfly. At least 2 tree squirrels, one aspen 1 foot in diameter and yellowish green, hairy woodpecker (at 1:06 P.M.) 5 pine siskin, gray-headed juncos. Did not see eagles or hear ruffed grouse.

Little Chalet, Sundance, Mt. Timpanogas, Utah Co., Utah.
 May 25, 1982

BP 140/72. Checked golden eagles this A.M from moraine chalet. At 8:30 A.M an adult eagle flew^E past nest (see previous notes for location) on lower cliffs of NW side Ashley Peak opposite terraces out of Phelps Cirque. Same height as nest and bird low enough to be below top of conifers. This eagle was large with conspicuous yellowish-gold head. I presume this to be the ♀ of the pair. 8:35 A.M another smaller eagle with some variation of white in tail, presumably the ♂ of the pair and younger than ♀, flew by nest as did the ♀ at 8:30 A.M. and then alighted on nest. At 8:38 the ♂? left nest and glided down to top of a conifer below nesting cliff and nest and after awkwardly adjusting balance remained for a few seconds and then left. 8:45 while watching the eagles a broadtailed hummingbird hit window on W side chalet moraine and dropped to bill for 30 seconds and then flew out into a conifer tree. 5 other broadtailed hummingbirds and 3 black-chinned hummers have been picked up dead from below these large windows. If this number, 8, is timed by say 100 cabins in the area the total number of hummers killed would be 800 which could be the population of hummingbirds in the area. 8:50 A.M no activity of

eagles since 9:38 A.M. 8:53 adult ♀ alighted on nest and moved about for 3 minutes, feeding young and adjusting nest and then settled down, facing S and head toward back of nest . The difference in size when standing upright and when settled down, compared to first figure is



8:58 ♂ flew by nest to W 150 higher than nest. 9:30 no activity since

8:58 ♀ on nest adjusted position

several times. There were 15 tree swallows? at nest, flying into nest area and then out and above nest up to 10-30 feet as if catching insects attracted to the nest which with young eagles, is frequently covered with dead remains of the prey species used for food by the young eagles. Female left nest at 9:55 A.M. to E. 9:58 eagle returned. 10:00 eagle left and end of morning observation. 2 ♂ western tanagers fighting over ♀ tanager among trees.

Goshawk observed sitting on top of dead conifer on top of Ashley Peak above eagle nest. From its position on top of peak it left and flew E across valley at great speed. Audubon warbler, western flycatcher, gray-headed junco, broad-tailed hummingbird, robin in area of Moraine Chalet. measured an aspen below Little Chalet at 48 1/2 inches in circumference. Drove down to Mary's in Provo at 15.8 miles from Little Chalet. On return to Little Chalet noted mule deer by creek at first switchback to left (S) below the chalet.

Moraine Chalet, Sundance, Mt. Timpanogas, Utah
May 26, 1982

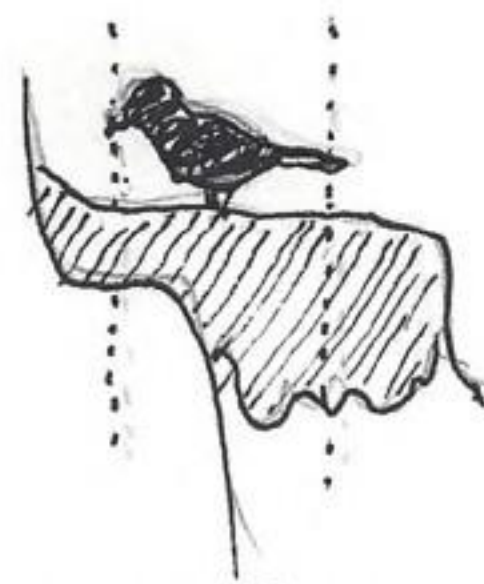
From porch noted golden eagle on nest at 7:50 A.M. Body half exposed. Sun on alternate nest (upper) but not on lower nest. Swallows active at nest site. 7:58 A.M. eagle stood up and backed to outer edge of nest and worked on carcass and fed young. When young eagles outstretched wings they were 1/2 length of adult eagle body and tail. Color of young eagles yellowish white except brownish black primaries and secondaries. Adult eagle left nest at 8:10 A.M. Young do not show while adults are away but when being fed are entirely visible and just short of height of back of crouched adult . This pair of eagles hunt

the area to S. They have been seen circling high and low in cirques and Stewart's valley around falls but I have never seen them go ^N beyond the ^{clear view} moraine ridge on N side of Stewart's Canyon. 8:25 A.M. sun now completely off of upper nest. There are brown stains below lower nest. Snow bank up to main plane of bedding below and right of nest. ^{snow level} maintains level from day to day. 8:37 eagle circling 200' high above ^N moraine at east end of meadow below falls. Approx 15 swallows always present in nest area, mostly flying above nest, some lateral to nest and a few below nest, occasionally landing in crevasses of major bedding planes. These swallows favored the close proximity of the nest and I presume they were feeding on insects attracted to the nest by the nest proper, the eagles and the insects feeding on the dead carcasses on the edge of the nest. Heat waves (three scope) variable. 9:05 ♀ eagle arrived (the large eagle with more golden color in plumage) and fed young and then left to E, thence S. 9:12 ♀ arrived, displaced the male that had alighted on nest, and fed young from her position on the outer edge of the nest. 9:21 ♀ stopped feeding young and now settled down in nest concavity. 9:24 ♂ flew by from W to E just 10' or so from nest. 9:25 ♀ left nest and flew W. Returned to Little Chalet and left for Mary's in Provo at 11:10 A.M.

Little Chalet, Sundance, mt. Timpangogus, Utah.
May 27, 1982

Temp. 50°F at 6:45 A.M. Went over to moraine chalet and took up observation position on deck. 6:50 sunrise in E. Sun on both nests. Green conifer boughs on lower nest conspicuous - ly green in sunlight and green covers all of nest. no visible adult eagles, no swallows at nest which would indicate that they visit the area during ^{the} day and do not nest in cliffs in the eagle site. Slight heat waves three scope. 7:10 A.M. 4 swallows arrived, some alighting on bare rock surfaces. 7:50 sun now off lower nest and 1/2 off upper nest. No eagle activity so far. Have not heard *Tamiasciurus* calling so far. Chipping sparrow, robin in area of chalet. male arrived ^{at nest} 8:15 A.M. worked on prey at nest but did not feed young. Left 8:23 to E. 8:25 western tanager, audubon warbler and mac Gillivray warbler first observed this morning. Service berry started blossoming 3 days ago and now

are coming out in full blossom. male eagle on nest is over $\frac{1}{2}$ times the width of the nest. 8:38 ♀ arrived and stood on front of nest for 2 minutes then walked to back of nest. Left to N at low glide from nest  N. None not seen



young eagles in nest so far. 8:50 first up canyon breeze. 8:54 ♀ circled 200' higher than nest in first canyon to E.

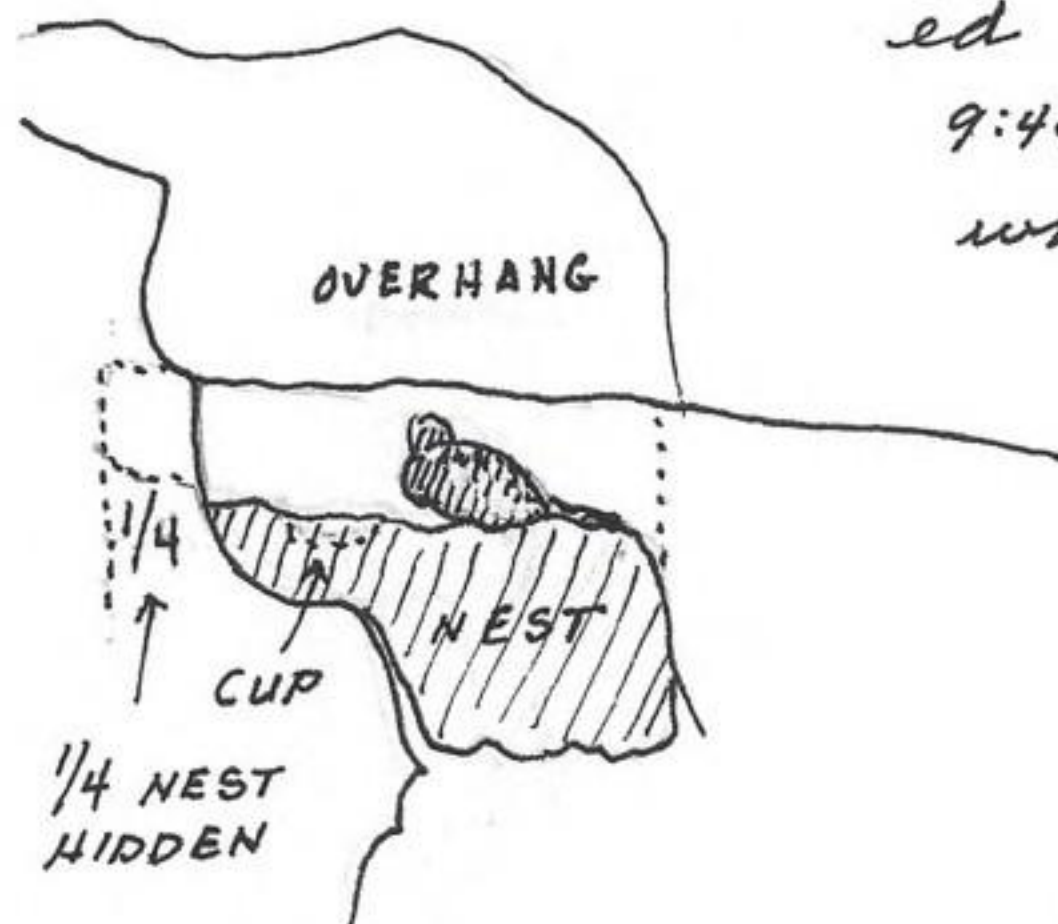
she circled among conifers, then circled 200' higher up slope then returned to same position among conifer as when first observed. 8:59 ♀ arrived, fed young, picked up stick

in center of nest and placed it on outer edge of nest. She left at 9:00 A.M. 9:01 redtail in Douglas fir tree on

conifer Evergreen Mt. near top. male eagle has dark band on tail (distal end). 9:05 ♀ arrived with prey, worked on it for until 9:13 then left to W. 9:18 heard Steller jay near

Chalet for first time this A.M. Only 5 swallows at eagle nest, more heat waves in slope (Celestron 90). 9:27 ♀ arrived

with *Citellus armatus* at same height as nest but aborted her landing and after circling once more made proper landing approach in an upswing. Presented the prey to young then rested on outer edge of nest and faced toward cup area. nest extends left ^{behind and} beyond edge of cliff. The ♀ remain-



ed in the half upright position until 9:44, then in same position preened neck, wing and tail. young just barely visible in cup area of nest. 9:48

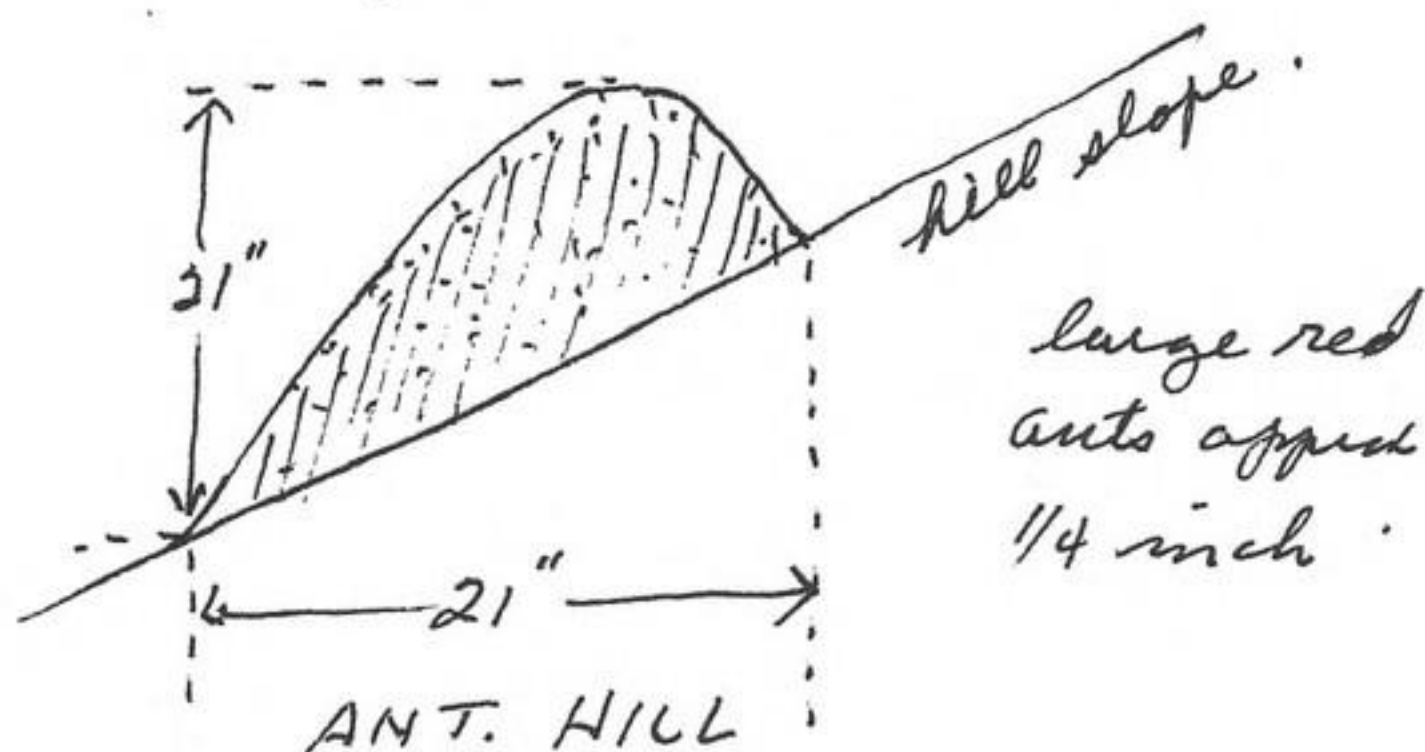
worked on *Citellus armatus* from E side of nest facing toward cup and fed young every 5 seconds until 10:02 then rested until 10:10 and then settled on nest cup, faced S with head out of sight. It adjusted its position

with back raised twice, then finally settled down and was completely out of view

This afternoon made walking trip on ski slopes above sundance. Left 4:30 P.M. from Little Chalet. Entered ski slope from road directly E Little Chalet. An straight run w chain left where 12 were observed on a previous day, there were none today. Only difference is high wind today. From here can see considerable dirt on snow of Stewarts Cirque. Examined fresh digging of

Citellus armatus, both producing approx. $1\frac{1}{2}$ bushels of soil each. 4:45 deer tracks measured 70, 80 mm.

Both gophers and ground squirrels actively digging and pushing excavated dirt in to surface of ground. From first divide of ski slopes just W of Deer Ridge traversed W exposure to Deer Ridge thru aspens and hillside brush. arriving at 5:26, thence down ridge thru conifers. ^{many} deer trails, especially among conifers. At base of Ridge before entering meadow measured a ant hill placed among conifers (Douglas firs). Large red ants were active over entire surface of nest or ant hill. nest made of fir needles and small twigs (needles of both *Pseudotsuga* and *Abies concolor*). 6:05



base hill and will continue down road towards Sundance. Along way noted 2 groups of mourning doves, 1 of 7 and 1 of 2 birds. measured one deer

track 70 mm. 6:25 Sundance ski lodge. no^{up} slopes to starting place. Enroute observed a solitaire (Townsend). Cans and debris, especially candy wrappers all along ^{under} ski lift up slopes. Users should be encouraged to deposit debris at terminals, not just drop from ski slope. 6:50 microtine trails in grasses associated with springs & wet places. noted at least 15 *Citellus* holes that showed new digging or housecleaning, each elevation of about a bushel or more of excavated dirt. On grassy slopes, grass gone around immediate circumference of hole. Hidden secondary escape holes still protected with grass. 2 robins and 4 mourning doves on slope. Arrived Little Chalet 7:15 P.M. High wind all day.

Little Chalet, Sundance, Mt. Timpanogas, Utah.

and peaks May 28, 1982 (see April 6, 1981 for map.)
made trip to ridges E of Sundance ski slopes. 36°F now
and $\frac{3}{4}$ inch snow last night. Took four photos from
moraine chalet showing low clouds in ^{Stewart} Firque area.
Photo 820528-1 Clouds on upper face Stewart Cirque with
Stewart Falls below. Stewart Falls is made up of 4 falls
in Cascade formation. Aspen is the white barked tree.

Photo 820528-2 clouds in Stewart Cirque.

Photo 820528-4 Vail-like clouds in Stewart Cirque with Stewart Falls in lower right.

Photo 820528-5 Clouds on Elk Peak. Clearview moraine on lower right. Note lack of trees on S exposure of this moraine. Could this be a factor of time since the glacier left the Canyon.

Photo 820528-6 of Stewart Cirque from most westerly ski run just W of chair lift run. Jack Wapkinson chalet in foreground. Mary + Ann Little chalet roof to left, chimney near center of roof. Some wisps of clouds still in Cirque area. ^{Eagle cliffs extreme left + center edge.}

Photo 820528-7 Robert Redfords property. Old house in lower left, new home above. Snow of last night still on roof of house on in fields protected by ridge shadow. Snow still on shrubs above the home site.

Photo 820528-9 Stewart Cirque from ski slopes (E side) with some clouds still in area. Part of eagle nesting cliffs can be seen.

Photo 820528-10 Ski slopes. Cleared area. Stewart Cirque in background. It is getting more and more difficult to photograph mt. without getting chair lift lines running across view.

Photo 820528-11 Mt. Timpanogos from same general area as above.

Photo 820528-12. Stewart Cirque from Sundance ski area (E side) with 2 open trees in foreground.

Photo 820528-13 Divide between Scotts Canyon to S and Sundance to N. This divide just west of ridges & peaks E of ski area and W of north fork of Provo Canyon.

Continued E up draw to Sunken Lake on divide. 10:30
This sunken lake bed is from 6' to 8' below outlet and presumably water drains into cavernous rocks of divide. This depression may lead to underground cavern. From E side of depression photo 820528-14 of Stewart's Cirque with maple trees in foreground on right side. Vegetation in Overwhelm Tract still brownish red for winter condition. There is a small secondary peak at E end of Sunken Lake that lies between Broken Rock Peak to the N and Middle Peak to the S. This peak is named Sunken Lake Prominence. On top of this knoll, porcupines have eaten the bark from the small scrub oak trees at about standing height. Continued S up across snow bank from old cornice, thence to top of Middle Peak which runs S as a level ridge, so named. Sceloporus on top of Middle Peak. From top of Middle Peak and

along along Level Ridge that is a continuation of the middle Peak, took several photos of the surrounding area. Photo 820528-17 to S showing Ancient Peak in foreground to left, Scatter Canyon beyond and Overturn Canyon beyond snow patch on ridge. Provo Canyon is between the last mentioned ridge and the Cascade Range beyond. The drainage above below the highest peak, ^{on Cascade Range} is drainage of Bridal Veil Falls in Provo Canyon. Remnant Pass below and this side of Ancient Peak is ^{one of} the original drainages off Timpanogas to W. Since then the intervening area has eroded down to present drainage system to N. ^{to} S. Faulting along E side Timpanogas also may have contributed to the abandonment of ^{one of} the original drainages thru the Remnant Pass.

Photo 820528-18 same as above but with flowers in foreground.

Photo 820528-19 similar to above but photo perpendicular, showing more of W flank of Ancient Peak.

Photo 820528-20 From Level Ridge to WSW showing upper terminal of Squaw Knife Ridge. Beyond to W of this terminal is the perpendicular walls of Cheops Cirque. It is my guess the Redford will some day extend his ski lifts to this upper terminal.

Photo 820528-21 From Level Ridge SW to Cascade Range. Below peak is drainage of Bridal Veil Falls. May they never allow ski slopes in this N + E exposure of Cascade Range.

Photo 820528-22 From Level Ridge to S showing drainages from Cascade Range out of photo to right and in background, Provo Peak, Peak at head of Luck Canyon and Cirque walls 2 of Windy Pass. This Cirque drains into S Fork Provo Canyon. Other 2 peaks in distance into Rock Canyon.

Photo 820528-23 From Level Ridge to W showing upper basin of Stewart Cirque, Cheops, exit of Cheops Cirque and north limb of Ashley Peak to left.

Photo 820528-24 From Level Ridge to NWN showing N end of Stewart Cirque to left and Facet Peak to right. The east end of basal stratum of Stewart Cirque turn up which may be an illusion.

Photo 820528-26 Ibid but photo perpendicular showing more of basal part of Cirque.

Photo 820528-27 Cheops and S end of Stewart Cirque.

Ridge lower left leading to Ashley Peak.
 Photo 820528-28 Same as photo 820528-20 but closer view,
 11:40 P.M.
 Left Middle Peak, and at Sunken Lake on snow patch
 noted snow covered with a red to orange color as if a
 blood stain. I have observed this situation elsewhere
 in Sundance area and believe it to be some sort of algae.
 An olive-sided flycatcher in oak tree on Sunken Lake
 Prominence. Continued up slope to Broken Rock Peak. Casti
 (beaver tail like) near top on W, S, E sides. The top of Broken
 Rock Peak is characterized by a boulder approx. 2 feet wide
 that has fractured into segments, the greater number of which
 are still in position.

There are approx 12
 major components
 and 30 small segments
 in the area of the original
 rock. Search area for
 Indian artefacts but
 found none. Purple
 finch at top. Thomomys
 have completely turned soil and this
 might account for lack of visible surface artefacts such
 as chipped flint etc, also several deer tracks present.
 Porcupine have eaten bark on practically all scrub oak trees
 on top and to the N down ridge. Eleven scrub oak trees
 partially barked in immediate area of top of peak at Broken
 rock. Mt. Mahogany on S exposure of peak, scrub oak on
 N side of peak.



Photo 820528-29 From Broken Rock Peak showing N exposure
 Middle Peak, Scotts Canyon beyond, Overturn Canyon, Provo Canyon
 and Cascade Range in background. Blood stain snow at
 lower right end of snow bank on N side Middle Peak.

Photo 820528-30 From Broken Rock Peak to S showing Middle
 Peak to left, Ancient Peak beyond and S fork drainage off Cascade
 Range.

Photo 820528-31 Same as above but to E showing all of Middle
 Peak and part of Sunken Lake Prominence to extreme left.

Photo 820528-32 same as 820528-30 negative for 32 lost.

Left top Broken Rock Peak and descended Deer Ridge.
 Porcupine have eaten 60-80% of the scrub oak (selected spots on
 the small scrub oak. At a point on ridge beyond upper

curvature of peak are two Abies concolor and 1 Douglas fir. From these trees took photo 820528-35 (no negative) of Stewart Cirque, Stewart Falls and Sundance Ski Slopes below. Photo 820528-36 (no negative) same as above but Douglas fir bordering right.

no 820528-35 a short distance down ridge from 820528-36.

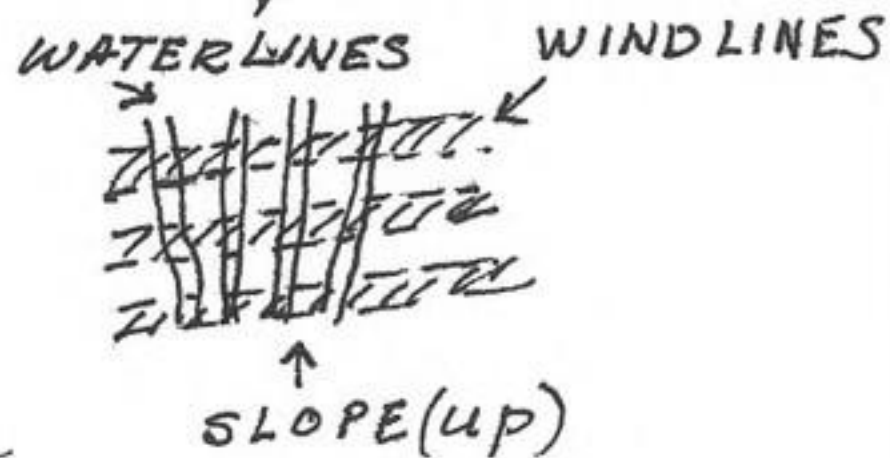
Continued down ridge. Porcupine utilized entire length ridge from top of Broken Rock Peak. Continued down thru conifers, thence across ski slopes to Cabin (Little Chalet), arriving at 2:00 P.M. at cabin noted a golden eagle circling above top of Evergreen mt. to S.

Little Chalet, Sundance, mt. Timpangogus, Utah
May 29, 1982

Wind variable. Temp. 34°F. High Cirrus clouds. Too up observat-
ion post at moraine Chalet at 8:15 A.M. Considerable more
heat waves in Celestron scope that yesterday at this same time.
no visible eagles in air or on nest. Swallows hunting insects
in immediate vicinity of nest, one alighted on old eagle nest and
remained on outer edge of nest for 1 1/2 minutes. Snow bank
below nest receded approx 2 inches. 8:26 A.M. avalanche over
cliffs of Cirque (Stewart's) wall in middle. Cornices all in place.
The parallel water channels on surface of snow on slopes are
lined with dust or blown dirt. 8:41 occasionally the head

of the young eagles rise above nest platform where it can be seen.
8:45 sun completely off upper and lower nests. On the
snow of cirque floor there are primary channels (parallel)
made from surface flow of water rivulets
and secondary lines of wind ripples.

First Tamiasciurus called. 8:50 eagle ♂
arrived and started feeding young, left in
one minute. 9:00 2 redtail hawks circled above



top of Evergreen mt. A western tanager
approached me within 12', then a ♀ western tanager arrived 1 minute
later. The ♂ circled me at 6' distance more curious than afraid.

Highest falls of Stewart Falls is just S of a massive rock exposure.
9:17 a goshawk sailed S at 20° just W and below eagle nest.
upper falls (3) not equal in volume to lower falls as if lower falls
is receiving lateral sources of water. Sky from solid clouds to
wavy cirrus to clear. Tamiasciurus called. 9:50 ♀ golden eagle
arrived from E. 9:53 ♀ eagle left nest, circled upwards then to E.

Left observation post 10:00 A.M. Left Little Chalet at 6:15 P.M. and checked golden eagle nest in cliffs S of entrance of N. Fork Creek into Provo River at Wildwood. 2 young are white and approx. $1/3$ size of adult. Arrived Mary's in Provo at 6:50 P.M. Remained at Mary's tonight and prepared to leave for Kansas.

Provo, Utah

May 30, 1982

Continued preparation to leave Provo for Kansas. This evening drove up to Wasatch State Park with trailer and camped there tonight.

Wasatch State Park, Heber Valley, Utah.

May 31, 1982

Frost on ground. Before leaving Wasatch State Park photos 820531-1 to 5 of Wallburg Ridge and Cascade Range drainage and the area of Windy Pass and Provo Peak. Photo 820531-2 of ^{oaks and} mt. Timpunogas from slope above Deer Creek State Park just E of dam, of Deer Creek Reservoir. Photo 820531-3 of Cascade Range N side of Deer Creek dam. 8 western grebes in reservoir approx 200' E of dam. 3 magpies so far. at Wildwood at mouth of N. Fork Provo River photo 820531-4 of eagle cliffs on mt S of Wildwood. Photo 820531-5 close-up of above showing white golden eagle (white dot) on nest. This nest is $1\frac{2}{3}$ height of larger (right-hand side one) from top of this conifer and $1/3$ east large conifer nest of general N exposure of canyon but nest faces N.E. The 2 young are very conspicuous on nest when viewed thru binoculars. (20x) Continued down

NEST
↓

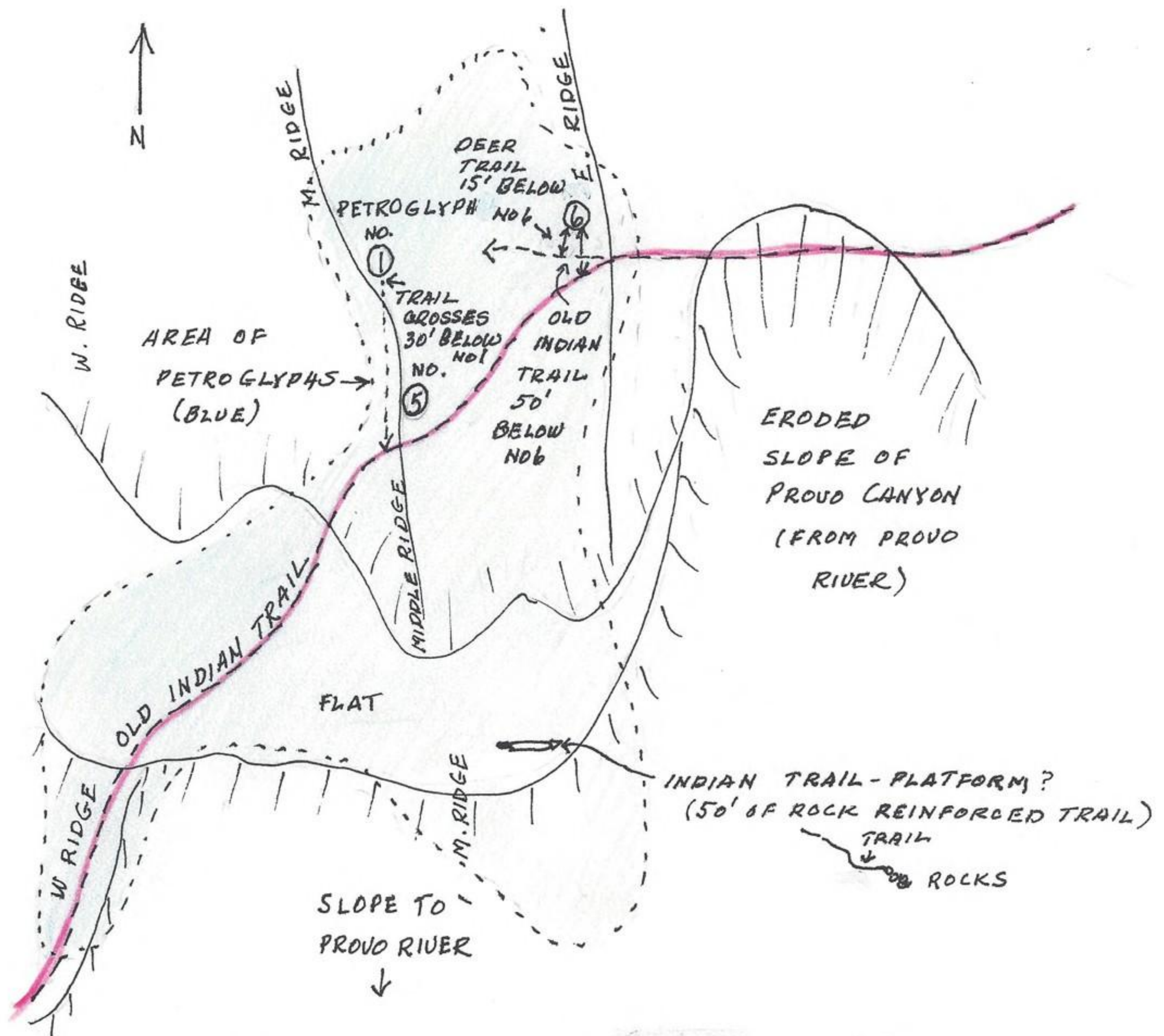
$1\frac{2}{3}$ of conifer
tree below

Provo Canyon to Canyon Glenn Park, parked car and left R.R. bridge that crosses Provo River at 9:05 A.M. Strong and cold down canyon wind. Oaks ^(leaves) now 6" long as compared to 1" to 4" long of these same oak (scrub) trees of May 16, 1982. 9:21 water flume (now a covered solid duct in comparison with the open flume of years ago). California gulls flying up canyon against wind. Continued up trail to petroglyphs and at marker (U.S. Dept. Interior, Bureau Land Management) recorded inscription

SC	
T 55	R 3E
S 32	S 33

(continued S for 69 feet) intercepts the highest point of petroglyph no 1. This line →

There has been several different marker sites (piled rocks and poles) established in the past (by private concerns?) trying to establish the Township - Range interception (intersection). Established course of old Indian Trail petroglyph site, especially as it relates to petroglyph no. 6 which suggests a trail, hunting theme. (no. 6 = 670815-6 JWB).



The trail across upper eroded slope of Provo Canyon is well preserved and shows that trail construction was practiced for convenience of travel. This trail could have by-passed this eroded slope by going up over ridge but Indians preferred to construct trail which connected to easy bench access trail beyond. This trail leads to forested spring area that I predict will support camp sites. A more likely route to the east side of Timpangos would not be by Provo Canyon to Wildwood

and thence N up north fork of Provo Canyon to Stewart Flat and aspen area but traverse across N slope of Provo Canyon up ridges to Squaw Knife Pass. Provo Canyon & north fork probably had more water and flooding than at present and travel by that route would have required many dangerous fordings. This condition would also apply for American Fork Canyon route to the E side of Timpanogas. The alternate route is up face of Timpanogas to major benchland, thence N to a continuation of this major benchland (actually it is an erosional plain that continues E to the divide N of Aspen Grove), and thence E along a practically flat graded trail to Timponeke basin area and even to the E & S to divide N of Aspen Grove. This old trail is the easiest access to the summer hunting ground of the E slope of Mt. Timpanogas. Convenient travel on the N slope of Provo Canyon can be made from ^{Utah} valley all the way to Upper Falls Resort at which point cliffs require contact of trail with Provo River.

at petroglyph site at no. 6 rock observed a brown snake approx. 2 feet long and 1/2 inches wide. 3 major deer trails cross the site from E to W, some from S to N up slope.

Took the following photos (Kodachrome, 35) of as many individual sites as possible, generally a detailed part of the rock and a general view showing relationship with other petroglyphs in the site. All from Stranded Valley Petroglyph Site.

Photo 820531-6 of petroglyph rock no 670815-8 of S exposure of rock. Photo to N. Photo 670818-31 taken 15 years earlier & smaller.

Photo 820531-7 of petroglyph rock no 670815-8. a general photo showing area and Provo Canyon to E. ^{Photo 670818-2, same subject.} Artemisia by rock.

Photo 820531-8 of petroglyph no. 670815-8 to N. Rock in full view, S exposure. Photo to N. This photo (820531-8) is

of the same rock and size as in photo 670818-31 taken 15 years ago.

Photo 820531-9 is of rock no 670815-7. Photo 670818-30 taken 15 years ago is same exposure and size. Photo to E.

Photo 820531-10 general view of rock no 670815-7 with large rock to left or W. It (no 670815-7) is lying flat in ground.

Rock no 670815-8 is in background with Mt. Timpanogas in the distance. Rock no 670815-24 on the large boulder to left (3 feet).

Photo 820531-11 a general view of rock no 670815-8 with anticline on Cascade Range (or Mt.) on S side of Provo Canyon. I have checked shallow core a base of anticline but did not find evidence of

Indian habitation. This anticline may have been the subject of petroglyph forms. I have never found petroglyphs among scrub oak trees and wonder if the trees were in same position as when petroglyphs were first made on the ridge. There are useable rocks among trees.

Photo 820531-12 of a boulder located among petroglyph rocks that has fractured in two directions. Note movement and space between fragments. Edges of fracture shows very little erosion and this rock may have fractured at the same time as increased effacement of petroglyphs in recent years. Photo to W. This rock is approx. 1/2 way between rock no 670815-1 and 670815-11.

Photo 820531-13 view to WSW from petroglyph site showing Gateman's Rocks at mouth of Provo Canyon.

Photo 820531-14 of rock no 670815-9 viewing S. Photo 670818-13 taken 15 years ago is same as above in exposure of rock and subject.

Photo 820531-15 shows rock no 670815-1 and viewing to SE.

Photo 670818-9 is the same subject and direction as above. Anticline in right side of photo.

Photo 820531-16 is E side of rock no 670815-1 showing fairly good preservation of petroglyphs. Not as much desert burnish as other rocks. Photo 670818-12 is the same size and subject as above (820531-16)

Photo 820531-17 of rock no 670818-1 viewing to S? Snake in an old scale surface. The S side of this boulder is badly etched. Photo 670818-11 is identical in size & subject and taken 15 years ago.

Photo 820531-18 is center of rock no 670818-1 on S exposure. Part badly etched and eroded.

Photo 820531-19 of rock no 670818-1 of W exposure. Preservation is good.

Photo 820531-20 of rock no. 670818-25 (SW exposure). This rock is 3' W of no 670818-6

Photo 820531-21 of rock number 670818-6. Photo 670818-28 taken 15 years ago is identical in subject and size as above photo (no 820531-21) Subject on SW corner of rock.

Photo 820531-22 of rocks nos. 670818-6 and 670818-25 viewing E. The old Indian trail passes by these rocks on S or right hand side of rocks. This petroglyph may have reference

to the trail beyond as it is the last petroglyph to be seen in this site as one continues E up Canyon. The trees are scrub oak, the strata are Carboniferous in age. Photo 820531-23 of petroglyph rock no 670818-2 and viewed to the N. The upper surface of this rock shows extreme erosion when compared to conditions 15 years ago.

Photo 670818-5, 670818-18, 670818-21 are similar views of this same rock, taken 15 years ago.

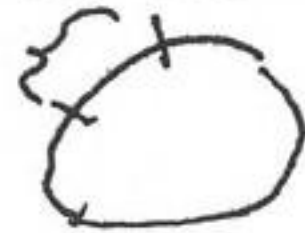


Photo 820531-24 of SW corner of rock no 670818-2. a close-up view to N. Photo 670818-18 is same subject but larger, no. 670818-15 same subject but smaller.

Photo 820531-25 of rock no 670818-2 viewed to N. The area above recognizable petroglyphs is severely eroded. In the photo 670818-15 part of this subject is recorded. The more perpendicular and protected petroglyphs shown are less eroded than the ones on above slope which receives more direct ray from the sun.

Photo 820531-26 of rock no 670818-3 viewing to the N. upper left some erosion, long line crosses ridge with gap. one of the photo of 1967 shows this feature in response to a ledge. In the 1967 photo 670818-23 there is a comparable view and good to demonstrate erosion.

Photo 820531-27 of rock no 670818-1 in left upper and the large rock in foreground no 670818-2. Mt Timpanogas in background.

Photo 820531-28 of rock no 5 viewing to N. of S exposure. In the photo 670818-26 the rock is identical in position and subject.

Photo 820531-29 of rock no 670818-10. Petroglyphs simple and indistinct.

Photo 820531-30 of rock no 670818-4 as viewed to N. 2 figures separated by a ridge.

Photo 820531-31 is rock no 670818-24 and is the only one on the rock.

Photo 820531-32 is S face and part of W face.

Photo 820531-33 from lower W ridge showing main or middle ridge where the larger rocks are located and the E ridge where no 670818-6 rock is located. The old Indian trail traverses the site

from the latter rock (670818-6) to the point where this photo was taken. Photo 820531-34 of clouds above the petroglyph site.

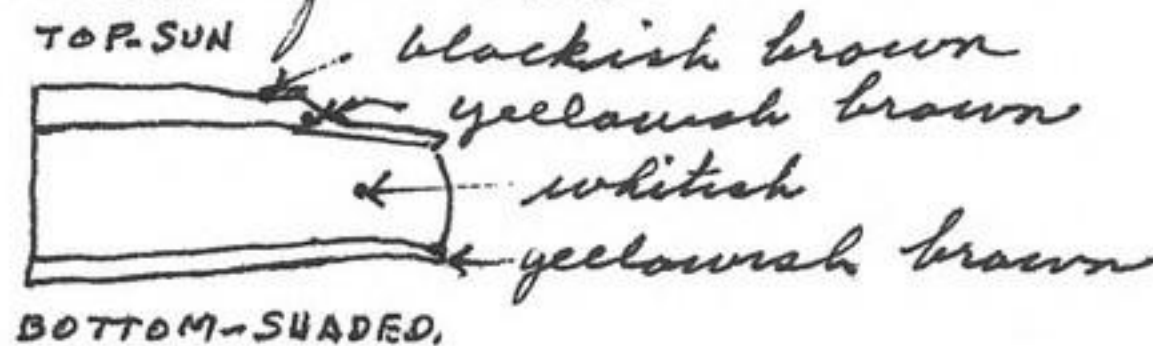
In the interest of publication of petroglyphs the following should be done:

Enlarge nos. 820531-14; 670518-13; 670818-23;
670818-1 (Chris & Pally at rock no 670815-8), 670818-24 (line
discontinuous because pecking instrument too large); and those
comments in photos of 820531 series where comparisons
can be made of photos taken 15 years apart. The rock
with severe erosion should be compared to reproductions
(recordings) of petroglyphs made in 1967. A rock specimen
no. 670815-2 was taken May 31, 1982 this date and given
the same number as rock no 670815-2. It was taken
from the NE corner of rock. Another small specimen is
still fractured but in place from same place as specimen
collected and preserved.

From general observation all petroglyph have some erosion
however small in amount, other areas with noticeable
foliation and general surface erosion.

The greatest amount of erosion is
part of rock receiving the greatest
intensity of sun light

The specimen of rock no 670815-2
is thus:



I could not see evidence of rocks removed from middle
(main) ridge, however, there were several rocks observed in
1967 but not relocated in 1982 but this is a factor of not
having time to ferret them out. In the lower first ridge
there was a high percentage of rocks removed because of the
convenience of the rocks to the new off-road trail (jeep) that
runs thru and along side the petroglyphs. This road was
not instance in 1967.

The more one works with these rocks and petroglyphs the
more one is impressed with the knowledge the Indians had
of selection of this area for a site and the selection of those
rocks that were used for petroglyph transcriptions. I am
sure that position in space is significant. Most petroglyphs
were made from position of convenience, however there were
several petroglyphs that were in a position that made it
difficult to reach or cramped quarters for maneuvering the
pecking tool. There is practically no evidence of work-
manship that suggest trial or inexperience of the craftsman.

the broad-tailed hummingbird in area. The California gulls flew low over petroglyph site as the flew up canyon. Strong down canyon winds caused the gulls fly erratically and forcefully. Wind stopped at 10:00 A.M. It would be interesting to see if gulls adjusted their up-down canyon flights according to cyclic change of winds in a 24 hr. period. Returned to car at Canyon Glen and returned to Wasatch State Park in Heber Valley. From top of knoll memorial photo 820531-35 of Heber Valley & Deer Creek to S.

Wasatch State Park, Heber Valley, Utah

June 1, 1982

This morning a broad-tailed hummingbird ♂, entered trailer thru open door, flew around and inspected several places then left the same way it entered. Was not at all confused. Left for the Stranded Valley Petroglyph site at Springdell in Provo Canyon. Left 8:15 A.M. at mileage 413.0 chipmunk (E. min) and Citellus armatus at camp. 413.9 2 Brewer blackbirds. at lake in state park 2 coast, yellow-headed blackbird, magpie, 10 ducks with white in plumage. 414.8 2 barn swallows, 415.1 3 Brewer blackbirds. 415.3 Brewer blackbird carrying fecal pellet from nest, 3 goldfinch. 416.2 2 Brewer blackbirds. 416.6 midway now S. 416.7 4 Brewer blackbirds, 2 meadow-larks. 417.1 Brewer blackbird 417.6 2 Barn swallows, Brewer blackbird. 417.9 2 Brewer blackbirds. 418.0 2 Brewer blackbirds, 3 robins, robin, 2 Brewer blackbirds, 2 Brewer blackbirds. 418.5 2 Brewer blackbirds, 2 redwings. 418.6 3 redwing blackbirds. 418.9 Provo River bridge, ^(River & bridge flooded to a lake) 419.0 3 barn swallows, Brewer blackbird. 419.4 2 Brewer blackbirds. 419.9 Charleston. 2 Brewer blackbirds. 420.1 magpie. 420.4 now on 189 highway going down canyon. Water to road & beyond into fields just before 189. 2 Calif. gulls and 2 w. grebe, Wind from W and forming white-caps, Stratus over Timpanogas but cumulus elsewhere. 420.8 Western grebe. 421.3 Citellus ^{armatus} road kill. 421.5 Brewer blackbird. 423.9 Brewer blackbird. 425.8 Deer Creek State Lake Rec. Area. magpie 428.2 R.R. overpass just beyond Deer Creek. Redwing blackbird. 428.5 5 cliff swallows. 431.0 Utah Co. line. River down 1/2 foot since few days ago. 434.9 cowbird, robin. 435.7 striped skunk road kill. 435.8 Canyon Glen. Provo River is high and water flooding over into some areas of the park. Left old railroad bridge at 9:40⁵⁰ A.M. 4 robins in park. at cliffs

just W of railroad bridge measured young *Atellus variegatus* at 237.5 mm. total length. arrived water flume or duct at 10:05 A.M. Started to rain ^{at petroglyph site.} with massive black clouds pushing onto Provo Peak to S. Rain clouds & ^{abrupt} weather from W. winds at petroglyph site blowing so hard that one could hardly stand against them and rain painfully beating ones face and hands. Just before it started to rain but during the high winds an adult golden eagle sailed directly over petroglyph site from the upper slopes of Mt. Timpanogas and glided down slope all the way toward cliffs (anticline) on S side of Provo River. It appeared that it was trying to maintain altitude and fly directly S, probably to nest in Rock Canyon but was forced to take refuge in Provo Canyon. The swallows in area disappeared but after strong winds subsided, hundreds of them in continuous flight passed site flying W or down canyon. As the weather closed in it made field work at the petroglyph site unprofitable. ^{Later the weather cleared but left new snow on top Timp.} I was going to complete photography of rest of petroglyphs. Returned to car in Canyon Glen at 12:00 P.M. at park (Canyon Glen) met one group of 8 Western tanager, one towhee and 3 black-headed grosbeaks. Left at mileage 435.8 for Pale Canyon where I expected to record general site (petroglyphs). From the lower reaches of pale canyon, from road took for photos showing petroglyph site (Stranded Valley site):

Photo 820601-1 to 7 E showing site between the upper canal and metal pipeline. The site is E of the two erosion streaks made from canal breaking thru above. Mouth Stranded valley above valley (Stranded) proper. This valley should have some interesting stratigraphy in valley proper, and maybe a natural trap for old animal remains, washed in at a time when valley was part of the Provo Canyon floor. One can see lower W valley with off-road tracks, middle ridge and E ridge.

Photo 820601-2. zoom shot of Stranded Valley Petroglyph Site. showing ridges and some individual rocks with petroglyphs.

Photo 820601-3 Stranded Valley Petroglyph Site in lower left side and extension or continuation of Provo Canyon to E or right. The old Indian trail traversed the slope N of Provo River to first cliff barrier and then the hunting trail probably gained Stewart Flat area via traverse up ridge to N probably

crossing ridge at Squaw Knife Pass or divide.
 Photo 820601-4 of upper reaches of Mt. Timpanogas n above
 the petroglyph site. Snow from storm described earlier
 today from petroglyph site. Good golden eagle nesting
 cliffs and hunting grounds beyond. Nearest nest is in Canyon
 E of Pleasant Grove to NW and Rock Canyon to S. They
 guess would be that it is part of the territory of the
 Pleasant Grove eagle.

Photo 820601-5 showing Stranded Valley Petroglyph Site with
 lower ^(off road tracks) W ridge, middle ridge & E ridge.

Left Pole Canyon and at Vivian Park climbed knoll to
 N of bridge and took several photographs. This is one
 of the places I favored as a vantage point for viewing
 up or down Provo Canyon and Vivian Park & S Fork to S.
 When a child living at Vivian Park during the summers.
 This is a unique area and should be saved from develop-
 ment. Already Robert Redford has designs to run a
 tram from Vivian Park to Stewart's Flat via Squaw Knife
 Ridge and Pass. This area (top of knoll) would be a
 valuable piece of property and one I would like to own.
 Photo 820601-6 of Annette near top of knoll & S Fork beyond.
 She is travelling a trail to my past. Cliff beyond is ^{first saltaire} place I saw
 Photo 820601-7 from top to W down Provo Canyon. The top
 of this knoll may have been one of the remnants of Provo Canyon
 floors.

Photo 820601-8. Ibid. Rock slide low left has evaded re-
 vegetation since it formed years ago (see notes of this slide
 described from year to year from its inception)

Photo 820601-9 from near top to S showing mt above Vivian
 Park Lake and S Fork beyond.

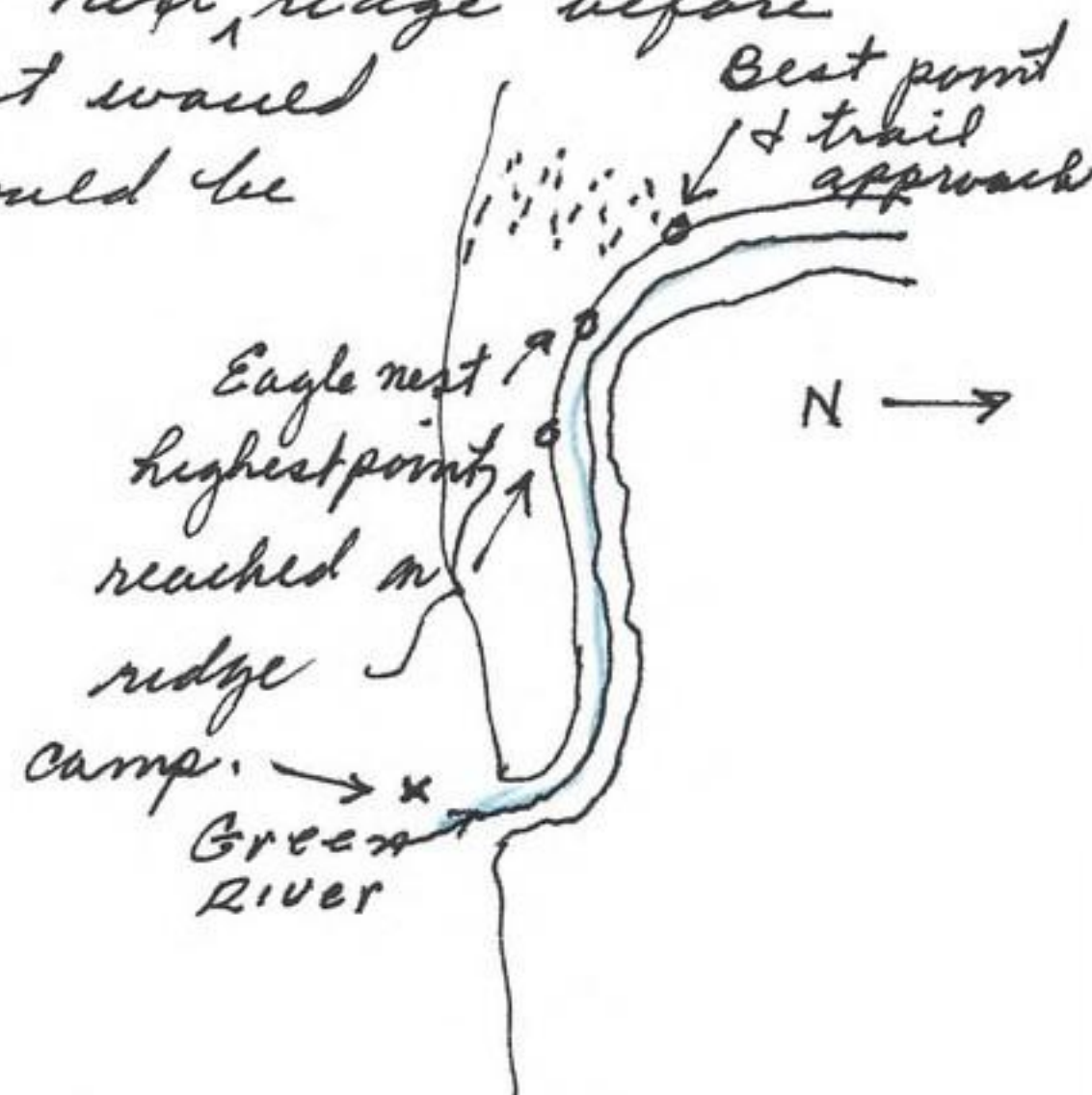
Left Vivian Park and at Deer Creek Reservoir took
 photo 820601-9 of island in lake. Trees (Cottonwoods) have
 grown in since water was put into impoundment. Timpanogas
 in background.

Continued up valley to Wasatch Mt. State Park where we
 hitched trailer and at mileage 467.7 left at 4:49 P.M. for
 Split Mt. Camp in Dinosaur National Monument. Recorder
 malfunction between here and Split Mountain.

Split Mt Camp, mouth Split Canyon, Dinosaur Nat Mon, Utah
 June 2, 1982

Ranger reported 2 golden eagles flying on W side Green River

just below Duglesby Rapids. This is in fact the site of the nest (at bend to E) where they have a nest and the site that I will visit this A.M. Left base of ridge W of mouth of canyon at 8:30 A.M. At base of ridge observed Bullack oriole, 15 violet green swallows, 10 Brewer blackbirds, 1 magpie, 1 Eutamias minimus and a cottontail. Continued up ridge to flat area. a mourning dove left resting area at base of juniper. An ash-throated flycatcher among the juniper of flat. As I left the flat part of ridge I encountered the first white-throated swift. None observed 6 Sceloporus and 3 Crematophorus. The Crematophorus has brown posterior part of body and tail of same color. Rock wren. Violet green swallow common on ridge. Continued to upper peak but could not see eagle nest because of ^{lateral} ridge before nest wall. The best advantage point would be beyond curve and best approach would be up slope from S. From upper part of ridge took photo 820602-1 to E of typical ridge form and kinds of flowers. Green River Canyon to left and rough country E of the mouth of Split Canyon. Photo 820602-2 to W of gold eagle nesting cliff in middle of photo to left beyond next lateral ridge.



Best vantage point on overhanging rock on ridge beyond (dark shadow below). Left top ridge 10:20 A.M. Green River below at bend where river turns E. Duglesby Rapids approx 2/10 mi up river to right. It is in this area of the bend of the river that the ranger observed 2 eagles yesterday. Photo 820602-3 to W from ridge. Mesquite & shrubs in foreground just beyond canyon below. Chukar partridge called from below. Photo 820602-4 of ridge and associated rocks & flowers. To left is abrupt drop of several hundred feet to Green River below. Many beaver trails across sands and side of river to trees & shrubs. House of beaver on N side Canyon. Photo 820602-5 farther down ridge to E. showing Billy Cassidy's cabin? Area developed for garden and some water ditches shown. Only way to cabin is to ford river from S side. This structure should be stabilized. Pinyon jay calling from this level of ridge. also young antelope

squirrel and raven here. On the flat section of ridge are flat water worn rocks indicating river deposit at this level at a not too distant time. Arrive base ridge at river at 11:10 A.M. Between boat landing and camp (approx 1/10 mi S) counted 8 beaver trails up sand bank to vegetation. Left camp and drove S to a point above lower camp. Photos 820602-6 and 820602-7 of a deeply incised canyon just east of the mouth of Split Mt. Canyon. These canyons east of present mouth of canyon are probably former drainage courses of the Green River during earlier stage of uplifting. Photo 820602-8 above lower camp along Green River with Chew Ranch in background. Continued to museum for short stop, ^(enroute before road to up canyon to museum, observed 2 prairie dogs) and then continued W & S toward main highway. At point where Green River turns S took photo 820602-9 to NE. of monument to Escalante designating the point of river where he forded his groups (film E to W). Split Mt in background. This photo from entrance to Dinosaur National monument. At entrance gates mileage 633.8. Continued S to ^{main} highway. 638.8 Green River Bridge, water near flooding at least high. (2:20 P.M). 640.7 horned lark. Will make complete census across desert area. 641.5 sparrow hawk. 641.8 jackrabbit road kill. 643.6 2 mourning doves. 647.7 prairie dog town to N toward overturn mt. One observed only on S side of road, no prairie dog road kills. 648.5 prairie dog road kill and 5 live ones observed so far since prairie dog town first observed. Will measure length (in miles) of this colony. Prairie dog on mound. 649.7 prairie dog town still present. 649.8 highway 45 convergence or turns to the S. 4 Brewer blackbirds and a sage thrasher in area of prairie dog colony. The highway 45 is last of prairie dog town or 2.1 miles long. 12 live prairie dogs observed in above 2.1 miles of prairie dog town, mounds numerous and continuous. 650.6 mourning dove and cliff swallow. At road leading to Blue Mountain can see prairie dog towns among the first seven hills. (1/2 mile or so in extent). Also some to S of road. Prairie dogs are across entire valley. 651.4 another good prairie dog town with live animals on mounds. 652.1 extensive burrow systems (mounds) to S, also to N. (near Small John Wash, road. Entire valley has prairie dog towns. Can see to hogback and there are mounds all the way to the ridge. 654.8 cut thru hogback. There are many more live prairie dogs

than are recorded in census. The valley E of hogback also has extensive prairie dog towns. 655.8 Moffit Co in Colorado. mounds of prairie dogs more numerous at base of hogback than in center of valley. Rabbit road kill. 666.9 3 magpies eating road kill, 2 live ones near by. 668.5 Dinosaur City limits. Prairie dogs at least here. End of census until indicated. 662.5 prairie dogs still along highway, both mounds and live ones. 664.7 prairie dog standing on side of road, mounds still present. 3 magpies since Colorado border. 665.8 live prairie dogs and mounds still present. 667.2 turn off to Blue Mountain. some prairie dogs as we go S down this valley. Will keep complete census. 672.2 collontail road kill. Few prairie dogs in this direction. 674.2 few prairie dog mounds and live ones and increasing in numbers as we continue in this valley. 676.9 4 Brewer blackbirds. 678.0 now on highway 64 693.5 all along white river the willows seem to be dead. White River a good meander river. water flood stage. Unusual that there are not more magpies in this canyon. no prairie dogs in white canyon. mainly because entire canyon floor is cultivated. 697.3 golden mantled ground squirrel. Some robins, no magpies and occasional Brewers blackbirds. From this point on thru Colorado and Wyoming & Nebraska, recorder malfunction, so with few notebook notations and from recollection (To Big Springs) Nebraska make the following entries. As I recall I was to make complete census across Colorado and Wyoming.

Continued on highway 64 to meeker, thence N on 13-189. Between here and Craig observed a golden eagle nest and birds but I cannot remember the exact location. My best guess was between Hamilton ^{Moffat Co.} and the convergence of Williams Fork and the Yampa River. The nesting site was in the canyon where the highway passed thru and the nest being used and the alternate nest could be plainly seen from the road. The canyon was approx 1/10 mi. wide with vegetated slopes (45°) on W side and bald cliffs on E side of canyon. A utility line ^{N-S} ran along mt 20' below nest. On top of W ridge was an extensive surface mine (coal) and big equipment could be heard. Mine not clearly visible from road. I do not remember a creek and certainly not a river in canyon, although the fields were

of wet pasture land. The other like place was a place on map called Nine mile Gap, and as this canyon was of a gap character it is possible that the nesting site could be here. ^{Blanco Co.}

When I saw the nest I stopped and with binoculars could see an adult eagle on the nest. I took camera and started to climb to cliffs just W of nest where ascent over cliffs was possible. At about 80' away from nest the bird left and flew W into valley, then S. It had to maneuver to evade power lines below the nest. In fact this bird has a precarious life with nest visible from road, power lines intercepting its approach to the nest and a fuel scale coal mine on top of ridge on other side (W) of canyon. Just before eagle left nest I made photo 820602-10. which caused the eagle to leave the nest and before I could get nest frame in camera had missed the bird in flight as it left the nest. Continued up cliffs to top of cliffs and then to above nest where I photograph straight down into nest. (No 820602-11). As this nest is placed in a concavity was not able to see, from any position, the full extent of the nest. Note hind quarters & back of jackrabbit in nest. Other prey including ground squirrels in nest, also one *Tamiasciurus*. Note also the lack of green conifer boughs on top of nest. Photo 820602-12 of alternate nest on same level as presently used nest and approx. 40' to the NW. These nests are placed in concavities of the cliff. One concavity is below and to the S side of the nest. The cup of this nest shows matted debris and there is no addition of material to form the upper cup platform for the nest. The four utility lines are in direct way of either approach or leaving these nests. Photo 820602-13 of both nests, the currently used nest in foreground. There are several concavities visible. The nest (in foreground) is constructed of about the same size ^{dry} sticks. Photo 820602-14 *ibid.* more prey carcasses can be seen on nest in foreground.

On top of cliffs and approx 80' to S was a collection of used carcasses (cottontail, jackrabbit, grouse, *Tamiasciurus* and other unidentified bones) on slope just mountain wards from upper edge of cliff where the eagle had either deposited refuse from the nest or had used the site to feed itself independently of nest. debris

Ground (line) squirrels were observed in area. Eagle did not reappear the hour I was at nest site. Inspection toward late afternoon. On top of cliffs there was a well beaten ^{N.S} deer and elk trail, the cliffs acting as a barrier to E-W travel on the slope. One deer caught in a fence at base of hill.

Left nest site and continued N to Craig, thence E ^{on} highway 40 to point where the Yampa River crosses ^{under} the highway where we made camp. (4 mi. W Hayden).

4 mi. W Hayden, Routt Co., Colorado

June 3, 1982

Left camp and continued E to Steamboat Springs, thence S and then E over Rabbit Ears Pass (considerable snow on ground) then E on highway 14 to Walden and thence to Kings Canyon on 230. In The Routt National Forest just before coming to Wyoming State line on highway 230, an elk was chasing a coyote, 20' behind the coyote, thru conifer forest. The chase continued for 80' until coyote came to road in front of us and crossed to other side. The elk stopped at the edge of the road but still in the forest and both the elk and coyote watched each other for about 1 minute, then the coyote left and the elk returned along same route as it was seen giving chase to the coyote. The chase & pursuit was dramatic and high speed. We believe the ♀ elk had just given birth to a young and the coyote was trying to get at the afterbirth or the elk could have simply been protecting its young.

Continued E to Laramie, thence Cheyenne where we had an evening meal. The chandelier is constructed thus:



Continued E on 80, thence 30 on N side of S Platte River where we camped & Big Springs.

Big Springs, Deuel Co., Nebraska

June 4, 1982

This is a series of lakes, made made. Beaver and muskrat in area. One ♂ & 2 ♀ grackles in area but no Brewer black-birds. 5 ♂, 6 ♀ goldfinch in breeding plumage feeding on gravel bar along lake.

Continued E on 80, S on 25. at 2 mi. S Wallace photo 820604-1 to 820604-4 of badgers along side of road. Photo 820604-5 and thence 36 to Phillipsburg, Deuel Co. 9 to 24. (820604-6 of Culbertson Bank and city at Culbertson, Neb.)

Glen Elder Reservoir. Kansas

June 5, 1982

Camped 5 of marina in same place as previous years.
 Observed 1 male boat-tailed grackle (*Cassidix mexicanus*)
 in same area as previous year. Also at camp: 2
 brown thrashers, 1 great blue heron, 4 blue wing teal, 5
 killdeer, ²⁰ common grackles, 18 barn swallows, 5
 meadowlarks, 5 robins, 1 Baltimore oriole, 1 E king-
 bird, 2 mourning doves, 1 red-tailed hawk. As of
 previous day, recorded non functioning (weak batteries). ^{24 To Top}
 Arrived home, ^{via Steel Rd} at 472.69.0 car odometer, computer 394.5
 or 6694.6 miles for total trip.

402 Yorkshire Dr., Lawrence, Kansas

June 7, 1982

a ♂ white cabbage fluttered around a ♀ which was sedentary. The ♂ remained within 10" of ♀ but never made contact. Another ♂ approached and was driven away. In the meantime the ♀ left area. The first male started return and frantically search 3 areas where he & the ♀ had been localized in their activity. This searching for the ♀ last 1/2 hr. Although the ♂ left and moved as far as 30' away, always returned. The ♂ contacted 4 other individuals in area but did not show interest in the individuals. Photos 820607-1, 820607-2 and 820607-3 of bay window at 402 Yorkshire Dr.

June 27, 1982

Same area as above. A common grackle, brown, glossless with blackish head fed in backyard. When light reflected in a specific angle there was a suggestion of purple in black head. This unusually color grackle, picked up 4 moths from grass on lawn. It carried them as if for young but when it found an angleworm it ate the moths, then the angleworm and then picked up 4 more moths & held them in its beak while foraging.

Purchased Barth motor home.

modifications to be made:

- chrome wheel covers.
- ✓ spar tire cover (metal)
- extra gas tank with electric switchover
- microwave and convection oven
- built-in vacuum cleaner
- color T.V
- color T.V antenna
- L.P. - gas - battery leak detectors
- rail and wood floor on roof all over
- lighten interior walls with wallpaper
- ✓ new carpet (red) and padding. Paint wood floor before recarpeting.
- ✓ upholster chairs red.
- screen door
- trunk on back
- undercoat
- paint all metal frame & metal parts underneath
- water purifier
- remote spot light
- storm windows
- ✓ battery box to accommodate 4 batteries
- ✓ monitor
- ✓ dash fans for front seats
- visors (sun)
- remove rear view mirror bars & put on low.
- extend kitchen work table
- ✓ remove couch
- remove swivel chairs & replace with 3 traditional chairs
- ✓ new outlet for hot water pipe
- ✓ recess wires on left wall of living room
- ✓ place water tank in cupboard & on metal reservoir  draining to outside
- ✓ cabinet over heater (water)
- insulate all outside doors

- switch on front ceiling fan
- enclose generator when not in use.
- ✓ lug wrench
- ✓ paint wheels
- new window wipers
- enamel upper outer walls with enamel paint & decorate (feature stripes)
- binocular holders
- telescope base
- recorder placement while driving
- ✓ paint top with aluminum paint (fiber asbestos)
- line edges. also above roof vents.
- ✓ shine aluminum rails & ladder
- table between front seats
- new door handle
- spot light at front door
- ✓ rejoin exhaust pipe
- awning on all windows
- electric power supply cord 30 amps.
- ✓ baffle for battery box. (front, exterior)
- map light
- ✓ drapes all around and privacy drapes on windshield, pull shades on kitchen window and driver compartment divider drape. door & bathrooms.
- replace motor in range hood.
- new window (awning type) rear & right side above toilet.
- ✓ new arranged shelves above water tank.
- weather center monitor
- wind power
- ✓ mattress, (air) for floor.
- table lamps.
- paintings for wall
- insulating system for plates & cups etc.
- above bed spot light (rear end bed)
- above bed spot light for pull down bed (overhead bunk)
- reading light above floor mattress.
- ✓ new motor battery and case
- new plate glass in windows.
- tool case.
- fireplace

Lawrence, Kansas
~~Lawrence, Kansas~~

Sept. 2, 1982

made census on highway 40 W to Peterson Road, thence E to Yorkshire Dr. 10-12 A.M.

bluejay 2-2-2-1-1.

red-headed woodpecker 1-1.

meadowlark 1

cowbirds 480 one flock: 120-40.

barn swallows 18

yellow warbler 1

redwings 80-11

brown thrasher 1

snapping turtle road kill 6" long

opossum road kill.

402 Yorkshire Dr., Lawrence, Kansas
~~Lawrence, Kansas~~

Sept. 16, 1982

approx. 1500 redwing blackbirds passing over house flying N from 7:15 A.M. to 7:30 A.M.

Sept 19, 1982

Last 4 days, flocks of redwing blackbirds passed N over house between 7:15 A.M. to 7:30 A.M. There were no grackles in these flocks. Some of the redwings could have been cowbirds.

Lawrence, Kansas
~~Lawrence, Kansas~~

Sept 20, 1982

Some maples in town are red, sumac has been red for a week or so.

402 Yorkshire Dr., Lawrence, Kansas
~~Lawrence, Kansas~~

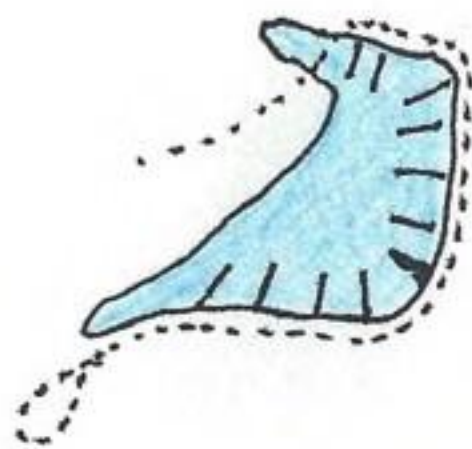
Sept 27, 1982

The hard maple in front yard shows yellow on top of tree. Birches & willow already yellow in many leaves. These changes may be caused by lack of rain for this time of year and regular color change may occur later.

Lawrence, Kansas

Oct. 13, 1982

Annette and I drove the Barth to Linn Valley N of La Cygne where we were given a tour of the development site. Left Lawrence at mileage 18868 and travelled S to Ottawa, thence E on 68 to highway 69, thence S to Linn Valley (in Linn Co.). weather cool, windy. Birds between Lawrence and Ottawa rare, seeing only 2 mourning doves. Birds E to 89 also rare seeing 1 meadowlark, 2 mourning doves, 1 redtail (about 1/2 way across on 68) and 3 small sparrowlike birds. no blackbirds. On 69 S observed 2 redtail, 1 crow, 4 meadowlarks and some small sparrowlike birds. at Linn Valley we were not impressed. This highly developed area of small lots, when finished, will destroy the natural area and produce a slum zone. Diamond pendant worthless and pen spent in lieu of \$25 check for defraying travel costs. These outfits should legally be set straight by law. Left area and drove to Miami State Lake for the night. This lake at one time was characterized by unique shorelines of cattails and partly covered with aquatic plants. Except for the E side of lake, the lake is sterile. It is lined with rock fill, a road



on 3/4 of shoreline and a dozen or so spokes of large rocks project out into the lake. This lake has been made into an artificial lake, which is excellent for fishermen, at the expense of a half way natural lake and surroundings.

This is an example of losing beauty for practicality of fishing. I am wondering if you can have both together. I would think so. I know of many natural lakes that are also good fishing lakes. On our arrival in the evening or better late afternoon there were 2 great blue heron, 1 little blue heron and approx. 2,000 bank swallows at lake. To the NW over mer de Cygne River were 60 turkey vultures circling ^{low} above a restricted area. They remained circling in this area for at least 25 minutes. I was not able to find out if they moved on or settled for the night in the area. The swallows became more active toward twilight and drank water from the surface of the lake. Some rested in tall

dead trees in the NE section of the lake. 4 bank swallows chased and harassed a kingfisher as it flew across the lake. Walked on trail on S side mer de Cygne and to end of road. Upper end of NE arm looks like series of springs. After dark calm, cloud cover disappeared, no wind.

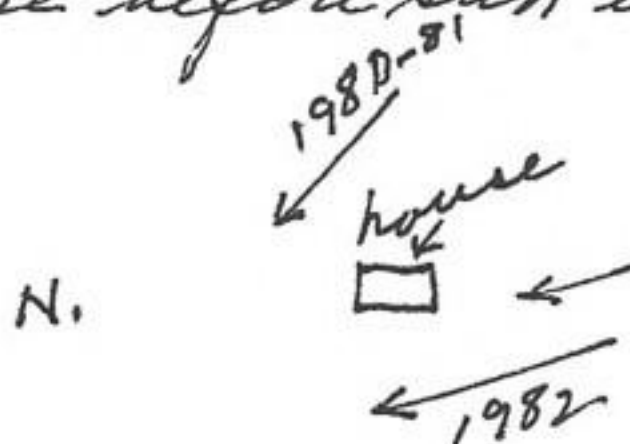
Oct 14, 1982

mist on lake moving gently to NE. Some streamers like tornado, 2 feet wide and 15-25 feet high. These were isolated among surface mist. Sun on W bank first at 8:45 A.M. First group (only ducks arrived about sun on lake and included; 8 gadwalls, 14 baldpate, 2 wood ducks. 5 Coot already on lake. Other birds included, cardinal (2), killdeer (2), bluejay (1), red-headed woodpecker (2). Swallows became active half way between day break and full sun light. They perched on every protruding snag on lake, and as many as the branch or snag would support. Left lake and returned to Lawrence via Osawatimie, 59 highway. There are considerably more birds on uplands than at lake and on way home included mourning doves, meadowlarks, cardinals, tree sparrows?, 5 redtails, 1 sparrow hawk, 8 crows, swallows, 1 cooey bob-whites (25), grackles. Arrived home at mileage 18886 or 200 mile trip.

402 Yorkshire Dr., Lawrence, Kansas

Oct 15

Thousands (4) blackbuds (grackles, redwings, Cowbirds) passing over house before sun up. Their yearly flights vary, this year:



Several flocks of cowbirds have been in area in last week. They have only the one species in flock. They fly closer together, like starlings, more irregular, wing beat and glide much more frequent than redwings, more wheeling than redwings or grackles, and more graceful and lighter in flight as if they were really not Ictinids. Put food out for birds and bluejay to feed in 20 minutes which prompted house sparrows

to come to feeder who previously neglected the new food (sunflower seeds).

402 Yorkshire Dr., Lawrence, Kansas
~~in summer in summer~~

Oct 23, 1982

Large flock of blackbirds, mainly grackles flew N over house from 7:30 - 7:40 A.M. This year birds alight in trees and feed on ground more than they have in previous years.

Lawrence City Airport, Kansas
~~in summer in summer~~

am.

Oct. 23, 1982

Roughleg circled over runway and hovered several times. approx 120 ring-billed gulls circled airport and fed on fish in remnant pools of drainage N of airport.

402 Yorkshire Dr., Lawrence, Kansas
~~in summer in summer~~

Oct 27, 1982

Cold front moving in from the west and winds up to 35 MPH from S. This morning ^{there} was an unusual number of grackles in the area. They wheeled and circled almost continuously, lighting in tree tops or on the ground. Their behavior was rapid flight, dodging and suddenly dropping in elevation. It suggested a bird who recognized a pending weather change and gathering for movement to S in migration. The large number of birds in immediate area this year is atypical. Usually large flocks leave roosting area in city trees and fly in long compact lines to rural areas (in our position) to the N, seldom stopping at our home area. This year the larger flocks seem to be stopping in our area, resting in tree tops and feeding on ground. There is an uncut mile field one tenth mile to N from home which might be encouraging the birds to tarry in the area.

Oct 30, 1982

There are fewer birds (grackles) in area since 27th but there are still small flocks that pass over head between 7:30 and 7:45 A.M.

Oct 31, 1982

went off daylight time to standard time

402 Yorkshire Dr., Lawrence, Kansas

Nov. 1, 1982
(120)

Standard time now. Grackles first arrived 6:47 A.M. and alighted in top cottonwood tree. First large group of approx. 1000 passed by, some alighting in cottonwood tree and others already in tree left with passing flock keeping number in tree about 120 birds. Other small flocks of 30-60 birds totalling 500 passed by and flight ended at 6:52. All total there were approx 1600 birds observed this morning. No birds fed on lawns or used pond in back of house. This pond has been regularly used by 2-3 dozen birds every day for drinking and bathing which is about 90% more than in previous years. Day cloudy, no sun and prospects of rain. Tree from leafless to green and color maximum or slightly beyond

402 yorkshire dr., Lawrence, Douglas Co., Kansas

of occurrence Nov. 5, 1982
Last date, for butterflies and crickets.

Nov 6, 1982

Correlation of grackles in flight from night's roosting site and numbers in back yard of home, either in trees, shrubs or on ground.

6:45 first grackles left roosting site.

6:47 60

6:48 arrivals 40, 80, 3, 3, 1

6:49 0

6:51 1

6:52 3

6:54 6

6:55 6

6:57 8

6:58 1 and also end of flight from roosting site.

Nov. 7, 1982 -

no flight of grackles over house this A.M. but few grackles in yard (approx 160 in small groups).

Nov. 8, 1982

Have not observed grackles today.

Nov. 9, 1982

one grackle observed today (A.M.),

Nov. 12, 1982

2 crows alighted in front yard.

Dec 13, 1982

Dec 14, 1982

8 crows in back yard, 3 of them fed on suet from feeder in tree, crows rarely alight in residential area.

Dec 15, 1982

2 crows feeding on suet in back yard.

at feeder:

{ no grackles.
♂ & ♀ cowbirds, weak.
starling, uncommon this fall.
cardinal
2 bluejays
1 black-capped chickadee.
1 slate-colored junco, first
observed this fall at feeder,
10 Eng. sparrows.

Lawrence, Douglas Co., Kansas
~~Lawrence, Douglas Co., Kansas~~
Dec. 16, 1982

Two bald eagles observed at Lake View.

Dec 30, 1982

3 adult and 2 immature eagles along Kaw River N of
Lake View. where river trends W.