

JOURNAL 1965

JAMES W. BEE

JOURNAL 1965

Univ. Kansas, Douglas Co., Kansas

Jan 10, 1965

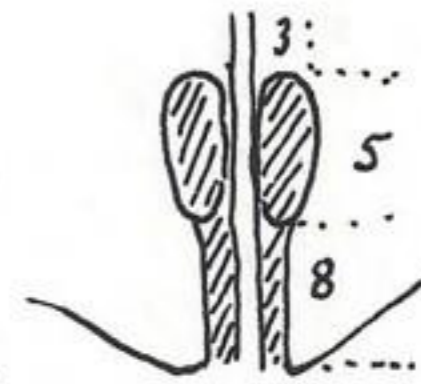
Patterson's Lake refrozen this date. The mild winter has kept water open since first original freeze. Ordinarily the lake remains frozen or partly so, throughout the winter months.

Jan 11, 1965

Robin Prohoad presented me with the following bats from Alabaster Coverans, Wood Co., Oklahoma. These bats were collected Sept 25, 1964,

Number	Species	Measurements	Weight	Sex	Wing Span
650111-1	(Plecotus) townsendi? <i>Corynorhinus rafinesquii</i>	96-50-10-34	10 gms	♂	
650111-2	"	94-46-10-34	10 gms	♂	287 mm wingap.
650111-3	"	93-45-10-33	9 gms	♂	275 wingap.
650111-4	"	97-48-10-34	11 gms	♂	296 w. sp.
650111-5	"	94-44-10-33	9 gms	♂	273 w. sp.
650111-6	<i>Myotis velifer</i>	100-45-12-16	14 gms	♂	310 w. sp.
650111-7	"	100-46-12-15	13 gms	♀	300 w. sp.
650111-8	"	97-43-11-15	12 gms	♀	298 w. sp.
650111-9	"	98-50-12-15	12 gms	♀	292 w. sp.
650111-10	"	102-50-12-15	13 gms	♀	300 w. sp.
650111-11	"	101-48-12-15	12 gms	♀	300 w. sp.
650111-12	"	96-45-11-15	12 gms	♀	298 w. sp.
650111-13	"	103-46-12-15	12 gms	♀	306 w. sp.

These bats were used for laboratory purpose and color, ^{and} weight will not be significant. They were taken from the cave on Sept 25, 1964. no 650111-4 had a wing band no 632-16860 F+W Service. The teeth of this bat were 3 mm wide and 5 mm long and are arranged at base of tail and visible thru membrane.



POSTERIOR

Jan 19, 1965
Annette's mother - Annette Christine Pistor Malsseed died today at Samaritan Lodge, Lawrence, KS. age 82 yrs. Born Aug. 16, 1886.

Trip to Philadelphia, Penn. Jan 21, 1965

Family left today for grandmother Malsseed's funeral at Philadelphia. Left 12:00 noon at mileage 56164. Arrived St. Louis at 8:00 P.M. mileage 56495 or 331 miles at 19 miles per gal. of gas. Motel of East St. Louis, Caseyville for lodging.

East St. Louis, Illinois

Jan 22, 1965

Left motel 7:00 A.M. Rained last night and also this morning.

First snow ^{on ground} just east of St. Louis and continued east with slight increase. Forests of Illinois and Indiana with more junipers than at Lawrence, Kansas. Indiana, on highway 150 reminded me of the Ozarks of western Arkansas. Noticeably more crows east of St. Louis in contrast to area between Kansas and St. Louis. Arrived New Albany 2:15 P.M. mileage 56758. Arrived Huntington, West Virginia at 10:30 P.M. at mileage 57016. 521 miles today. At approx. 10 miles east of Lexington, Kentucky, saw approx. 5,000 crows. These crows were associated with the large estates (horse ranches) in the Lexington area and represented the largest concentration of crows seen so far. Up to this point only a few crows were noted in any one aggregation. Black painted barns are characteristic of this part of the country. Wooden fences replace the wire fences of the west.

Huntington, West Virginia

Jan. 23, 1965

Left motel at Gateway at 8:00 A.M. at St. Albans, W. Va. got 17 gals gas. mileage 57050. 4:30 P.M. Lexington, Virginia at mileage 57260 (13.4 gals gas). Arrived Culpeper 8:20 P.M. at 57377 or 361 miles today. The road across the Appalachians is slow because of steepness & curves and narrow road. I never realized the canyons were so deep and the rivers so large and clear as in this part of the country, especially in the west part of the mountainous region. It is indeed a beautiful area. Fog and rain all the way. Fog a hazard to travel, especially on passes.

Culpeper, Virginia

Jan 24, 1965

Left 8:20 A.M. Laurel, Maryland at 57490. The coastal country has been cleared but must have been heavily forested in the primitive condition. Continued to Washington D.C. and visited ^{Colonial Capitol} Mr. & Mrs. Eric King. Later visited the Lincoln Memorial and drove past the government buildings. Continued north to Philadelphia, arriving in the evening ^{9:00 P.M.}. Stayed at the Adelpia Hotel. mileage 57637 or 260 miles today. Jimmy Malsed already at hotel.

Philadelphia, Penn.

Jan 25, 1965

Breakfast at Horn and Hardart ^{automat.} for breakfast. made several purchases

Wanamakers next door to the hotel. This 8 story building, one block square, houses every conceivable item of all price ranges. Returned to hotel and prepared for funeral services which had been arranged with Alver Bair Co. at 1820 Chestnut Street. Present were: Annette, Mary Pauline, James Robert, Annette Christine, Jimmy, Mrs & Mrs. Robert Smith (Mrs Smith daughter of Mr Stokes), Mrs. James Ledy Moore; Mrs Agnes Robbins^{+ Host Stokes}. Reverend Wetherly of Moorestown Episcopal Church officiated. Interment at West Laurel Hill Cemetery in the family Pistor plot (plot no). Returned to hotel. In afternoon visited Independence Hall and ate at Kuglers

Philadelphia, Penn.

Jan 26, 1965

Left 10:00 A.M for Moorestown to visit friends of Annettes and mother Malseed, including ^{Trinity} Episcopal Church, Misses Agnes and Edith Robbins, Community building; Mrs. Wm Lippincott & Helen Moore; ^{Dr} ~~Dr~~ and Mrs David ^{Bortone} Ulmer. Photos as follows:

- | | | | |
|------------|---|-----------|--------------------------------------|
| 650126-1 | Trinity Church | 650126-6a | Trinity Church |
| 650126-2 | " " | 650126-6b | |
| 650126-3 | " " | 650126-6c | |
| 650126-4 | " " | 650126-6d | |
| 650126-5 | " " | 650126-6e | High School just E of Trinity Church |
| 650126-6 | " " | | |
| 650126-7 | Agnes Robbins home | | |
| 650126-8 | Grandmother Malseed's home (Clara & Randolph) | | |
| 650126-9 | Friends school where mother Malseed attended high school - Annette Christine Pistor | | |
| 650126-9a | " " | | (entrance) |
| 650126-10 | " " | | (date of construction) |
| 650126-11 | " " | | |
| 650126-11a | " " | | |
| 650126-12 | Malseed home where Jimmy & Philip were born | | |
| 650126-13 | " " " " " " " | | |
| 650126-14 | Grandmother ^{Clara} Malseed's home . 1 west main st. | | |
| 650126-15 | Lippincott's home | | |
| 650126-16 | Grandfather's home (Pistor)(Philip) | | |
| 650126-17 | Annettes home (birth place Stanwicks Avenue.) | | |
| 650126-18 | Community House swimming pool | | |
| 650126-19 | Site of grandmothers ^{Clara} house on mainstreet (2nd home) | | |
| 650126-20 | Historical home on mainstreet . | | nut |
| 650126-21 | Grandmother's ^{Clara} Malseed home on main at Chester Ave. | | |
| 650126-22 | " " " " " " " | | |
| 650126-23 | General Store, Chester Ave at main | | |

Left moorestown and continued n to Lehigh Penn arriving at 10:30 P.M. Lodging at Pobo Pocos motel. mileage 57807 or 170 miles today.

Lehigh, Penn.

Jan 27, 1965
 Continued n to Moravia, ^{9:30 A.M. at 57807} entire state of forests and habitation only in valleys. It appeared to be less populated than many areas in the midwest. Passed thru Berghamton, Cortland etc. Arrived Moravia 3:00 P.M. at 58000 mileage. Photo 650127-1 of James Masses home. (James Slack, Jr.)

Moravia, New York

Jan 28, 1965
 Spent the night with Jimmy & family. Left 9:00 A.M. at 58450. Continued n to main highway to west. Fingerlake area in interesting setting. Across northern N.Y. the wind moved snow like sand in the west. The area is characterized by snow flurries. Continued west to Buffalo, thence S to Cincinnati, stopping at Lodi, Ohio. Photo 650128-1 and 2 of snow conditions across northern New York.

Lodi, Ohio

Jan 29, 1965
 Left Lodi 9:30 A.M. at 58450 mileage. Springfield 1:00 P.M. Marshall 7:00 P.M. at 58847 or 397 miles today. Noted congregation of crows at Indianapolis and only such aggregation except the one at Lexington, Kentucky on earlier part of trip.

Marshall, Illinois

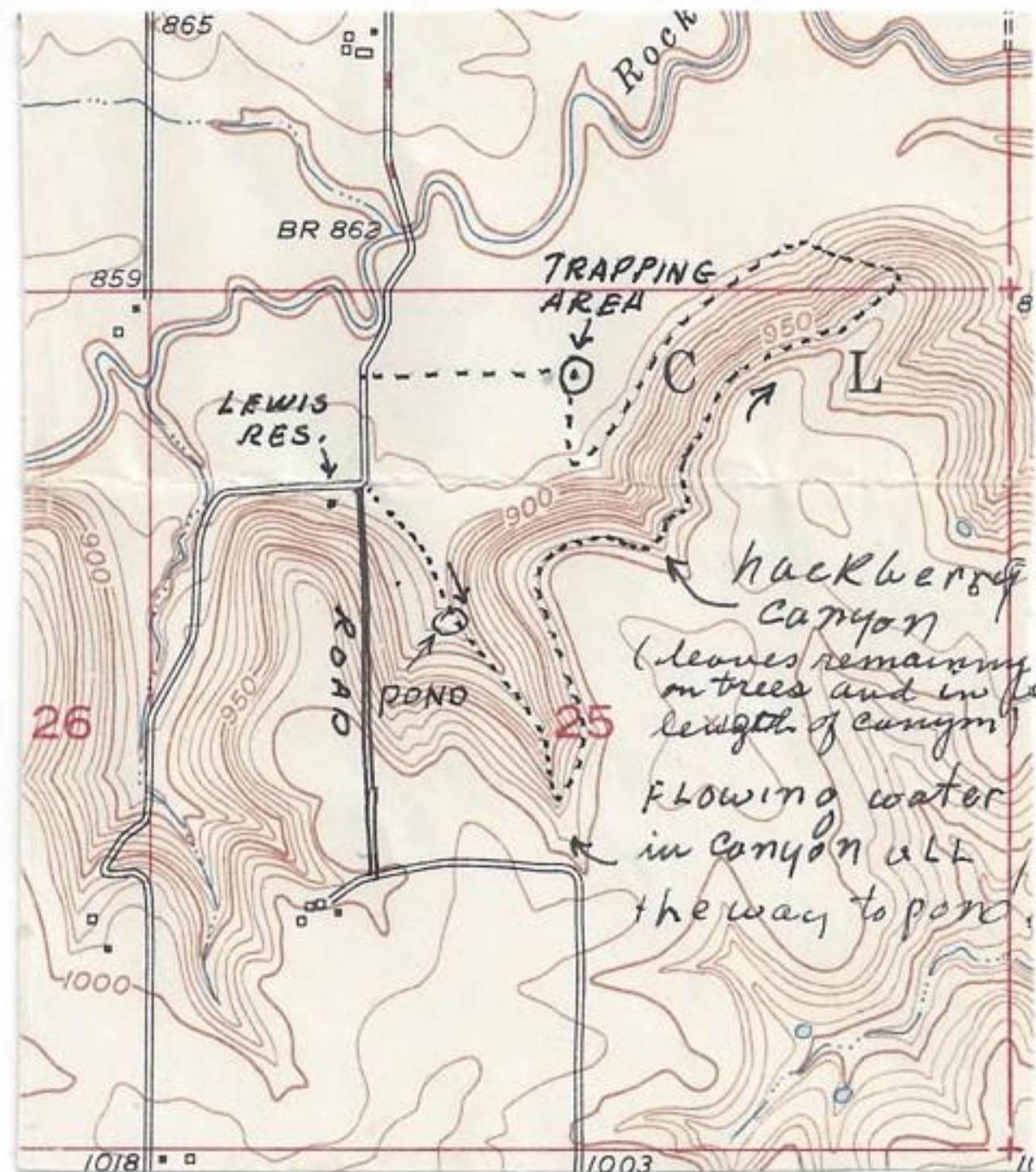
Jan 30, 1965
 Left 7:25 A.M. via highway 40. From 10 miles E of Casey, Illinois to Casey, noted approx 250 horned larks. From Casey to 10 miles W of Casey there were no horned larks, although equivalent kind of country. Temp. 0°F, sky clear & sun bright. Arrived St. Louis 11:00 A.M. & had lunch at airport. Left 12:45. Horn Lark census across Missouri from 1:00 P.M. at St. Charles west. Started at Missouri River bridge at 59030 (will record every 10 miles intervals); 0; 59040, 0; 59050, 0; 590560, 7; 59070, 20) 1, 6; 59080, 22, 4, 1, 5, 3, 1, 3, 3, 3, 2, 5, 5, 8, 5, 1; 59090, 4; 2; 59100, 18, 1, 6, 5, 8, 9; 59110, 2; 59120, 0 (Kingdom City 3:00 P.M.); 59130, 0; 59140, 0; 59150 (59158 Missouri River 3:47) 0; 59160, 0; 59160, 0; 59180, 5; 59190, 0; 59200, 5; 59210, 1, 2; 59220, 0; end census 5:00 P.M. at 59225. Arr. 59229 Hugginsville at 5:15 P.M. Sundown 5:40 P.M. Temp all day below 10°F, sun clear, snow last night all along way on ground. Arr. Lawrence 7:15 P.M. mileage 59327 or 3,163 miles for trip.

1 1/4 mi. E and 1 mi. S Clinton (center of town at store), Douglas Co., Kansas

Feb. 14, 1965

Left Lawrence 10:30 A.M (mileage 496) ^{for} trapping area SE of Clinton. Will set traps and then at sundown pull trap line. Enroute noted a sparrow hawk at pond, which was frozen, at the west side of Haskell Bottoms. 2 crows in area. Counted 13 meadowlarks up to S end of proposed Clinton Reservoir dam. at this point mileage 7.2 (this vantage point in all previous notes has been considered

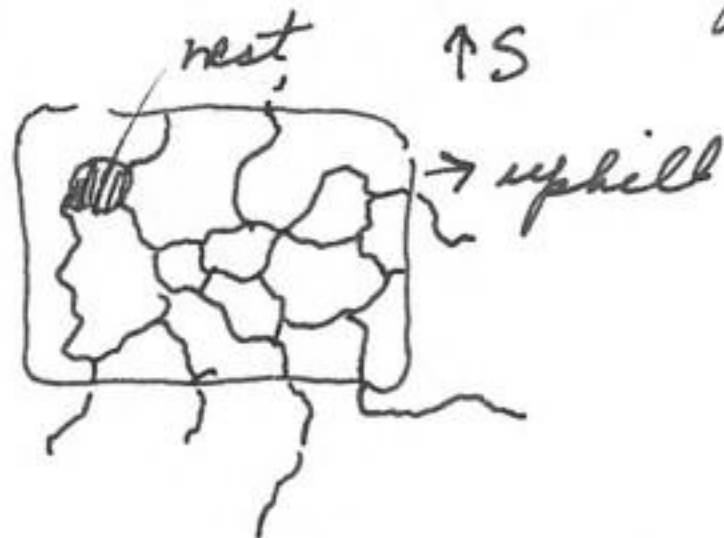
the S end of dam but actually is E of the most recently proposed site), at 7.3, 2 horned larks, 7.7 1 horned lark, 8.5 at bridge over Rock Creek, ice on water but free flowing on top. 9.6 now to S; 10.6 bridge over Rock Creek, ice in river but water flowing on top. Some places completely open. Continued S to old Lewis residence. Inspected damp areas surrounding the house area (raised by last tornado).



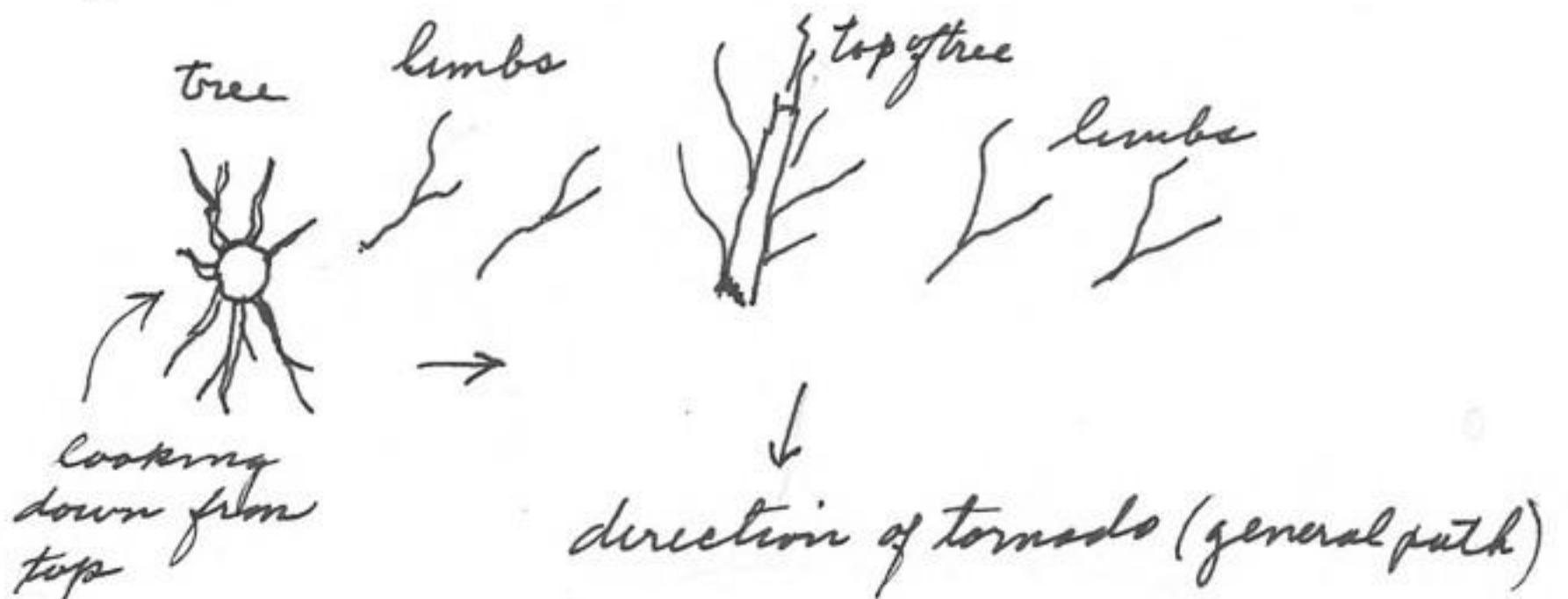
Sec. 25, R 18 E, T 13 S.


Population of rodents low but some runways present. Under boards (doors) to west of house foundation supported *Peromyscus leucopus* (one climbed a tree 2 feet & remained) ~~longicaudus~~ and *Microtus pennsylvanicus* (3 *P. l.* and 2 *M. p.*)

The two *pennsylvanicus* (one captured) had a nest and set of runways under a side of the house (removed 200 feet from original position) on sidehill among trees. The area covered was approx. 30 square feet and consisted of a series of runways, some leading beyond overhead protection in two directions. When disturbed the two mice left to the north on covered runways and did not return after 1 hour. (Collected no 650214-3).



noted a large sycamore broken off 1/2 way and limbs and upper part of trees distributed as follows:

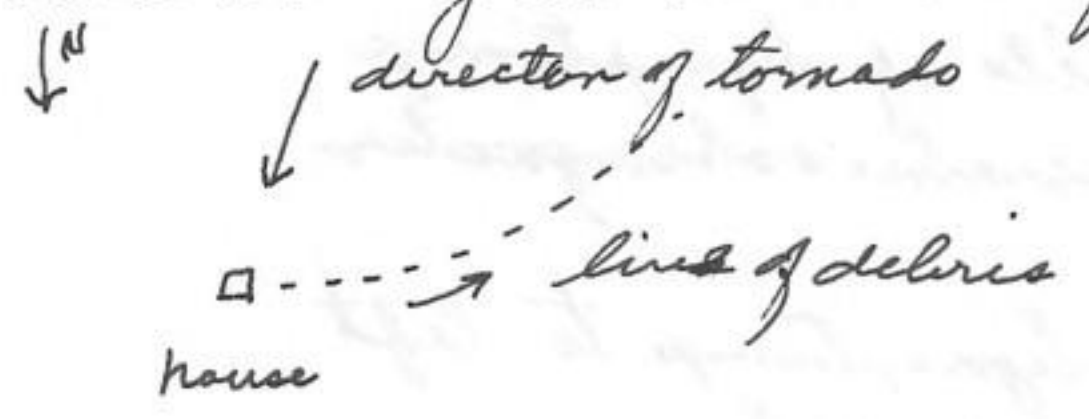


The large limbs had been pulled out of trunk of tree thus →  and all aligned directly to N from tree and most all branches on ground pointing N & (bases), leave portion SW. younger trees held

Mammals from trapping area

650214-1	<i>Synaptomys cooperi</i>	130-23-19-12-44 gms ♂
650214-2	" "	132-21-19-12-45 gms ♀
650214-3	<i>Microtus pinetorum</i>	132-24-17-12-38 gms ♀
650214-4	<i>Microtus ochrogaster</i>	161-38-20-11-47 gms ♀
650214-5	" "	148-34-19-10-44 gms ♂
650214-6	" "	136-29-19-10-36 gms ♀
650214-7	" "	137-30-18-10-37 gms ♀
650214-8	" "	150-35-20-11-47 gms ♀
650214-9	" "	154-35-18-11-43 gms ♀
650214-10	" "	143-32-19-10-41 gms ♂
650214-11	" "	150-32-19-10-44 gms ♀
650214-12	" "	148-34-10-10-42 gms ♂
650214-13	" "	136-32-18-10-30 gms ♂
650214-14	<i>Sigmodon hispidus</i>	190-82-28-16-55 gms ♂
650214-15	" "	[185]-[62]-28-16-55 gms ♂
650214-16	<i>Reithrodontomys</i>	136-68-16-10-12 gms
650214-17	" "	142-72-17-10-12 gms

large branches from blowing beyond, main trunk (1/2 way up) had snapped without shattering trunk above or below break. Other trees effected showed greater resistance of limbs on N side of trees to tornado than on S side of tree. I had also noted that parts of the house had moved in a westerly direction and in nearly a straight line. For example the several parts of an outside toilet (door, seat, roof, sides etc) were scattered west of the house for 300 feet but all in a direct straight line, debris was mainly on lee side of elevation on side hill



After checking house continued by foot to east along hill as outlined on map. There is a benchland just under the rocky ledge on top. This bench would make an

ideal trail base for hiking when Clinton Reservoir is made. All the interesting stands of timbers should remain as is. already the larger trees are being cut down. Bird life scarce in the wooded areas. Those noted were 14 black capped chickadees, 3 Cardinals, 6 red-breasted woodpeckers, 3 ~~scrub~~ titmice, 2 nuthatches

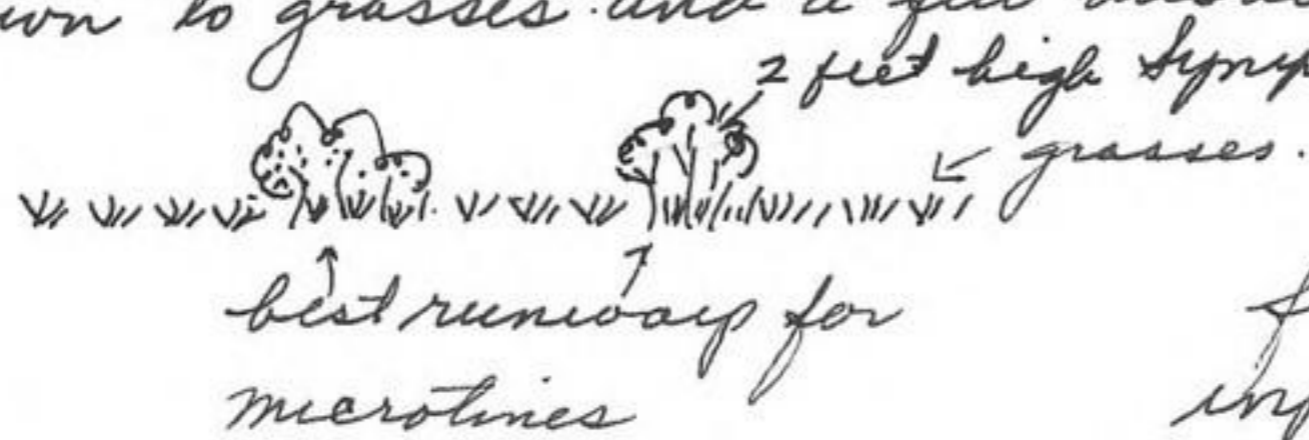
Photo 650214-21 Comparison of tails of *Synaptomys Cooperi* (no 650214-2) to left and *micratus ochrogaster penetorum* (no 650214-3)

Photo 650214-22 heads of above, *Synaptomys* to left.

Photo 650214-23 teeth of *Synaptomys* of above

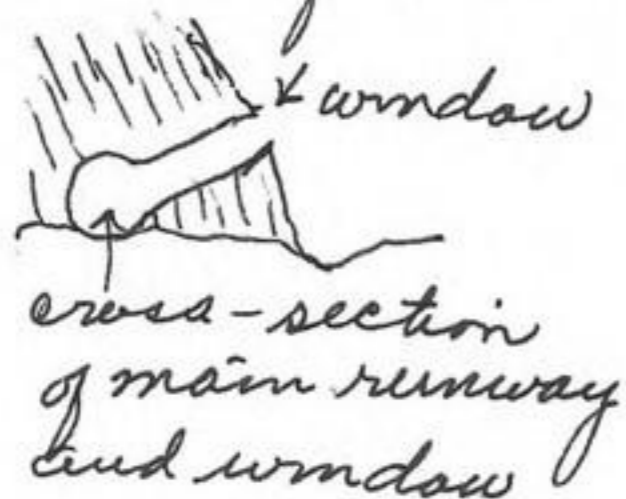
Photo 650214-24 teeth of *M. penetorum* of above

1 redtail hawk; 6 juncos, 1 downy woodpecker, 4 crows, 18 tree sparrows. These birds mainly at pond at first of trip. Birds rare in forest. No squirrels were seen and only one cottontail rabbit along entire route covered. Few deer tracks. At trapping area set 100 traps in groups of 2 at 20 foot intervals beginning at 3:00 P.M. and concluding at 4:45 P.M. From 5:00 P.M. to 6:30 made fine trip on line and then pulled line. It was noticed that the *Reithrodontomys* were the last animals to come out as twilight developed. The others were caught at evenly spaced intervals of time. The *Synaptomys* were taken on first inspection after 4:45 P.M. The area is on the flat valley floor and is grown to grasses and a few bushes of *Symphoricarpos*.



The grass was a fine leaved form and made a solid, almost impenetrable mass (3" to 12" high)

It was difficult to separate to fine runways. Many of the runways were located by noting holes or windows in the grass surface where the microtine had intentionally made a window above or immediately adjacent the runway where the animal would come to receive the rays of the sun. 90 percent of the holes faced the west. I do not believe these were spit holes.



Sometimes the holes were directly above the runway. Many of the runways which had been solid frozen water were again water but still being used. Heard great horned owl call for first time this afternoon at 5:00 P.M. It call frequently thereafter

and at the head of the first canyon to east of road that leads up over the hill to the south. Noted that the fecal pellets of one of the *Microtus ochrogaster* a bright green like those of *Synaptomys*. Succulent green vegetation was present among the green dried grass. I believe the color of the fecal pellets of *Synaptomys* is due to the kind of vegetation eaten and not a physiological difference when compared to *M. ochrogaster*. There was a predominance of green pellets in runways but a predominance of *M. ochro.* captured. Left trapping area at 6:30 P.M.

This afternoon noted that the water, at edge of pond which was just starting to thaw at edge, was moving out onto the ice and then, when the wind blew, returned to the edge of the lake again as determined by debris in water. This surging back and forth according to the wind may have an acceleration thawing action on the ice around edge of lake. In field solid soil about 2 inches below soft + wet soil. See photos of microtines on opposite page

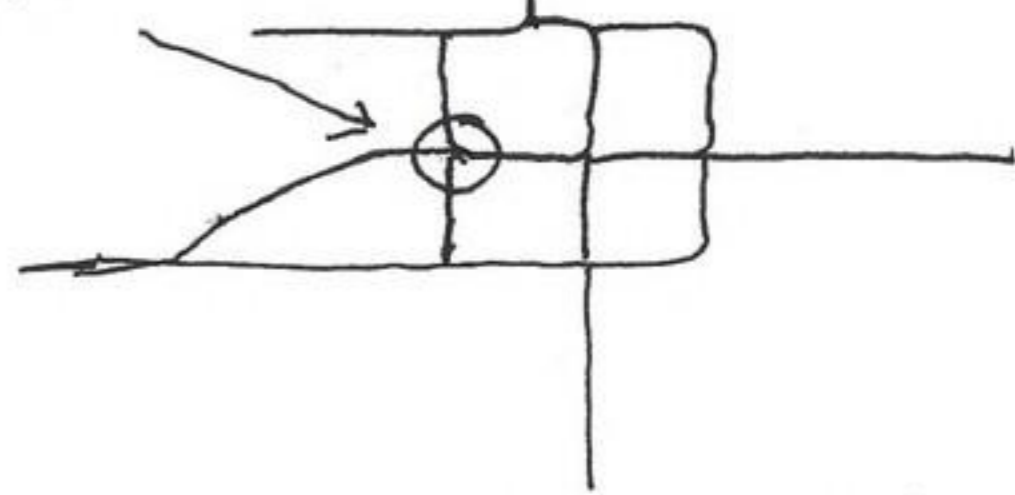
2 2/10 mi. S and 7/10 mi. W Clinton, Douglas Co., Kansas

Feb. 20, 1965

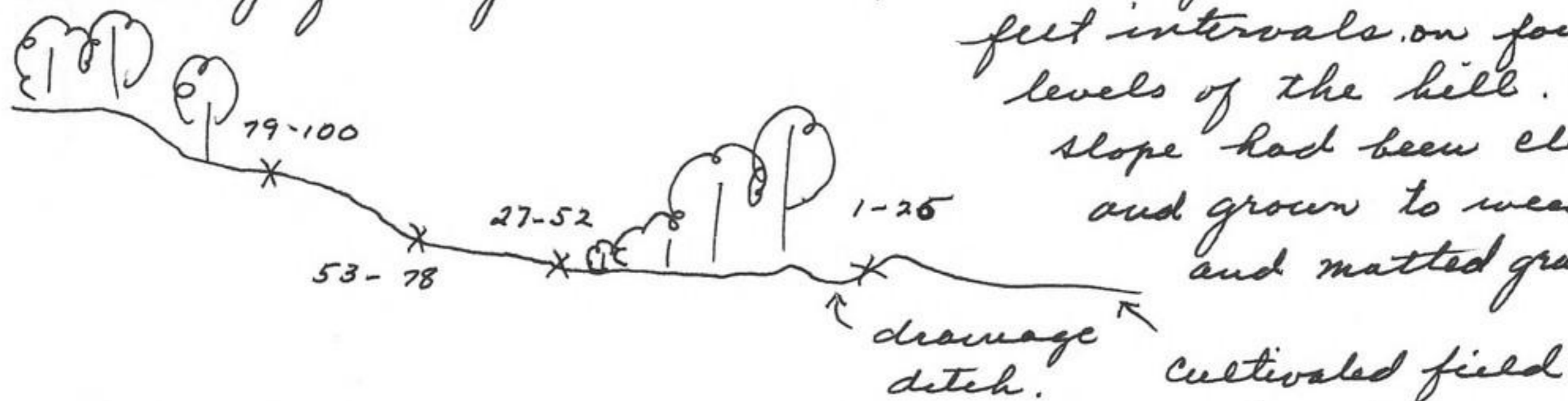
Set 100 traps at above locality. All localities from Clinton are taken from center of town as follows.

Traps set from 5:00 P.M. to late twilight with just enough light to recheck traps, although it was difficult to see last few traps.

Temp around 68° F today and a cold front from the north at about 5:00 P.M. bringing clouds into the bright clear sky of today.



Traps set in pairs at 20 feet intervals on four levels of the hill. This slope had been cleared and grown to weeds and matted grasses.



Soils damp to supersaturated. Grass matted and some holes opened to surface of grass for sun bathing. This evening collected three *Synaptornis* from traps no 7, 12, 28, and measured as follows:

650220-7	<i>Synaptornis cooperi</i>	122-19-19-9-31 gms. ♀
650220-37	" "	121-20-19-10-36 gms ♂
650220-38	" "	119-20-19-10-35 gms ♂

while inspecting trap at late twilight when trap were just visible, flushed 3 small birds, of sparrow size, from grasses. They left at about 2 feet from my feet.

2 2/10 mi. S and 7/10 mi. W Clinton, Douglas Co., Kansas

Feb. 21, 1965

Picked up traps this A.M. at 8:00 A.M. Temp from 68° F yesterday to about 24° F this A.M. Light snow last night. Enroute noted the usual horned larks as of yesterday. At trapping area found a rather unusual situation of per cent frequency of mammals captured. The 3 *Synaptornis* were the only animals caught before late twilight last night. The catch last night after that time included 2 *Sigmodon*, 1 *Rethro*, 3 *Synaptornis*, 1 *m. punctum* and 9 *Pers. leucopus* and nearly all of these from bottom trap line

650221-4	<i>Synaptomys cooperi</i>	138-20-19-10-41 gms ♀
650221-12	" "	125-20-20-10-32 gms ♂
650221-14	<i>Peromyscus leucopus</i>	172-82-23-17-30 gms ♂
650221-15	<i>Microtus pinetorum</i>	130-24-18-10-37 gms ♀
650221-18	<i>Peromyscus leucopus</i>	165-74-22-12-26 gms ♀
650221-19	" "	170-73-22-16-26 gms ♂
650221-23	<i>Sigmodon hispidus</i>	215-60-31-17-60 gms ♀
650221-25	<i>Synaptomys cooperi</i>	131-19-20-10-46 gms ♀
650221-26	<i>Peromyscus leucopus</i>	166-68-22-16-29 gms ♂
650221-32	" "	170-75-22-15-26 gms ♀
650221-38	" "	167-80-21-14-21 gms ♀
650221-40	" "	166-82-22-16-21 gms ♀
650221-43	" "	168-82-22-16-26 gms ♂
650221-48	" "	165-82-22-16-20 gms ♀
650221-87	<i>Sigmodon hispidus</i>	[175] [48] 28-15-54 gms ♂
650221-93	<i>Reithrodontomys megalotis</i>	138-65-17-12-10 gms ♂

Summary (including last night's catch): 6 *Synaptomys cooperi*; 1 *Microtus pinetorum*; 2 *Sigmodon hispidus*; 1 *Reithrodontomys megalotis*; 8 *Peromyscus leucopus*.

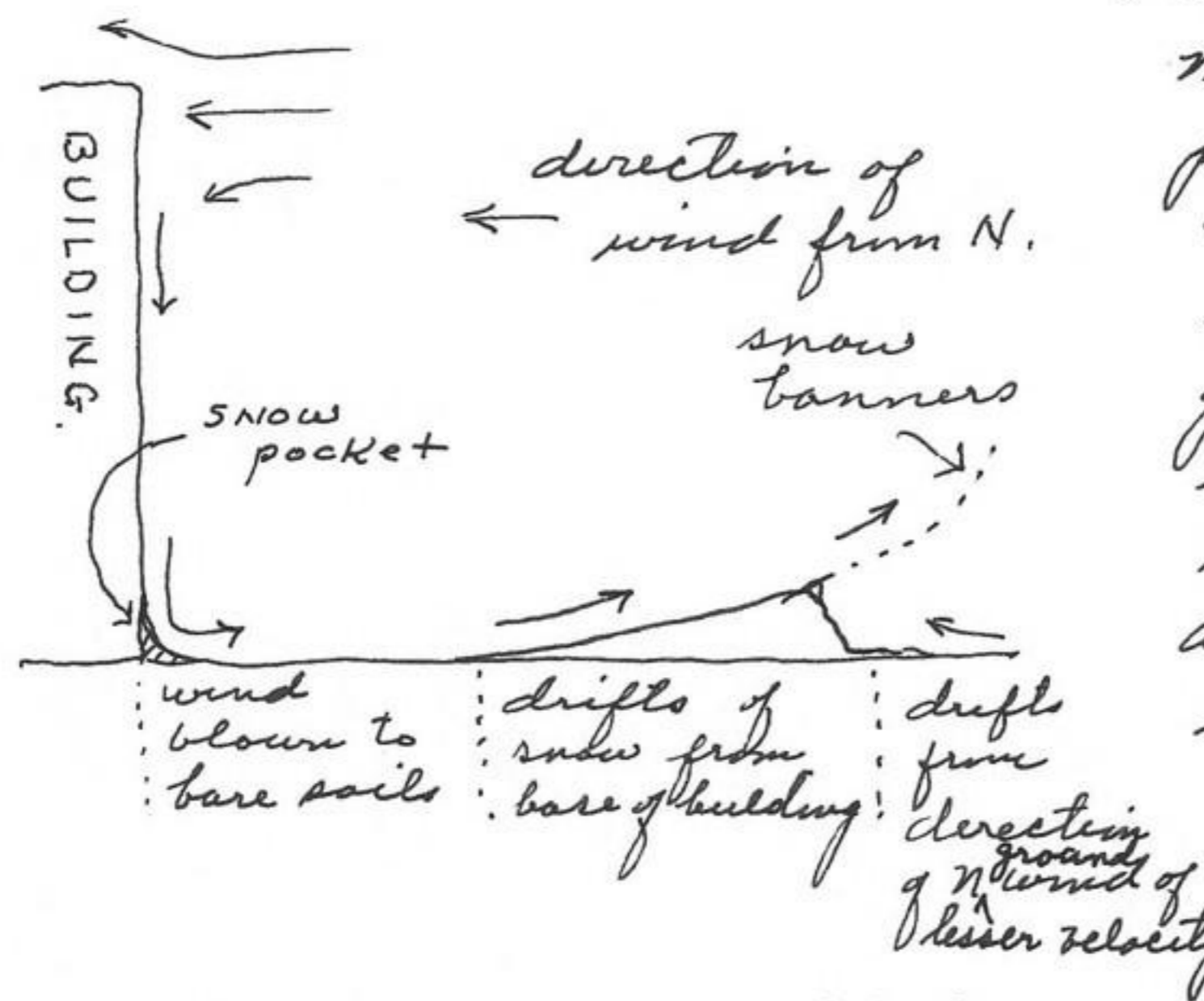
where I posulated the least number of animals would be taken. The surprising thing was the lack of *Microtus ochrogaster* on sidehill of dense grasses where considerable trail activity was associated with the grass community. There were not only a total lack of *ochrogaster* but of any other kind of mammal except a *Sigmodon* & 1 *Reithro*. The disparity of mammals may have been associated with predation as 5 nests had been excavated by coyote? and several other holes excavated. Whatever the cause may have been, there was definitely a lack of mammals in an area supported good trail and scat signs.

Left trapping area and continued S to road crossing Rock Creek, thence N again on W side Rock Creek. At a point at middle of east edge of sec 8, R18E, T14S, noted 3 redtail hawks. Two were close together flying & one about 100' away & tracking. This was all cattle range to NE & S. Along east edge (entire length) of sec 6, R18E and T14S noted 8 horned larks, and 15 ^{marsh} cardinals, one flock consisting of 9 birds. On road leading W at SE corner of sec 7, R18E, T14S, noted 42 robins and 2 eastern bluebirds in one flock feeding along base of rock fence. Streams clear and sparkling this time of year. I have noticed that there are not as many meadowlark as in past years. Starling in flocks at some residences, especially those where cattle are being fed. noted 3 such flocks this A.M.

Lawrence, Douglas Co., Kansas

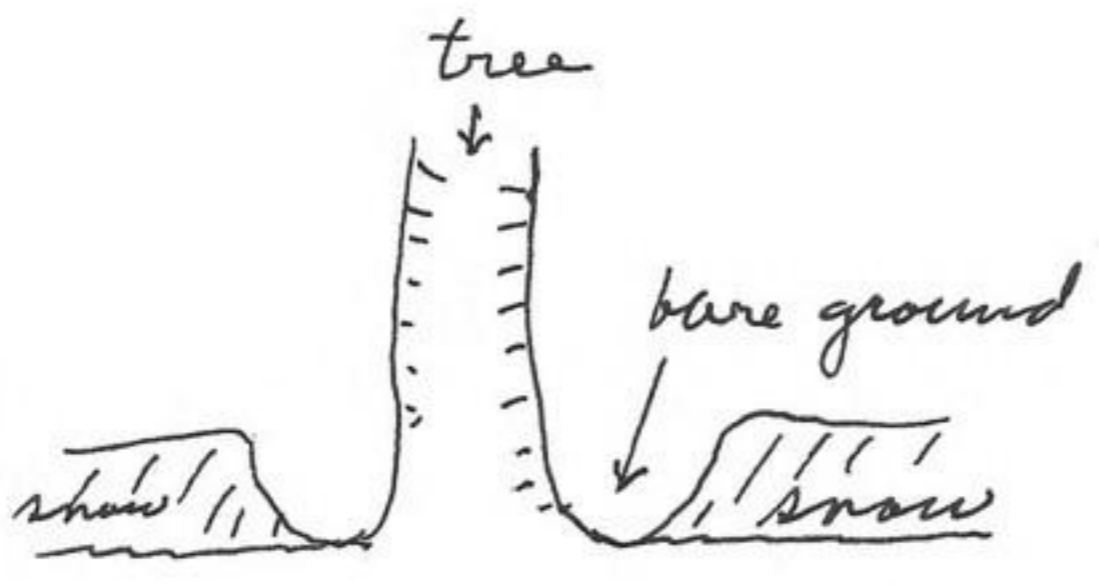
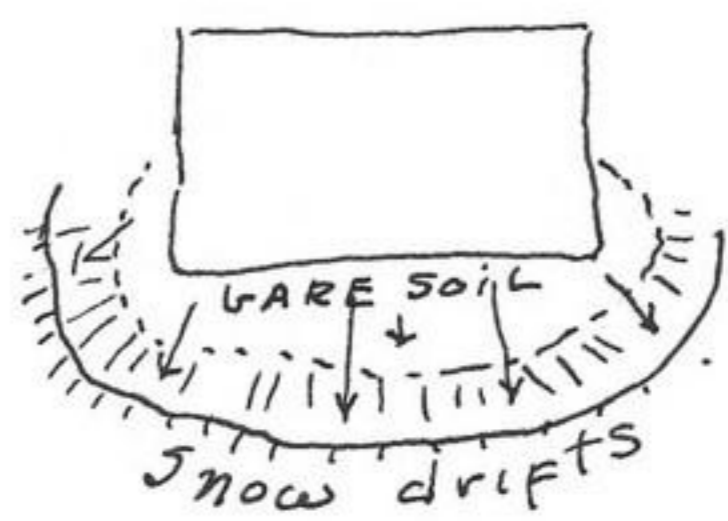
Feb. 23, 1965

Snowed last night and all day (7 inches or more) with strong northern winds drifting the snow. made observations of effect of buildings on controlling movement of wind as it might conceivably ^{be related and} influence cliff erosion in S.W United States, such as Monument Valley area. Wind from the north strikes buildings on mt Oread and with increased pressure on upper part of building forces air down the side of the building to ground, thence ^{prevailing} into direction of the wind, eroding the snow surface on ground and carrying the snow out into drifts with sharp cornice edges. Snow drifts from the north are formed up to the base of the



counterformed snow drifts. The height of the counter-wind drifts were approx. 2 1/2 feet high at cornice edge and sloped gradually to ground toward the building. Some snow banners seemed to send snow high enough to be placed into the main south wind thus causing a continuous circulation of the wind & snow in front of the building. It was also noted that the ground at the base of trees ^(not associated with above buildings) was blown free of snow. It was not ascertained whether the removal of snow was by the same action as controlled the removal of snow at base of building or by horizontal winds. It is postulated then that the perpendicular cliff face of sandstone pinnacles and cliffs in Southern Utah are formed and maintained by ^{erosional} downdrafts, especially as it concerns removal of talus slopes at base of cliffs.

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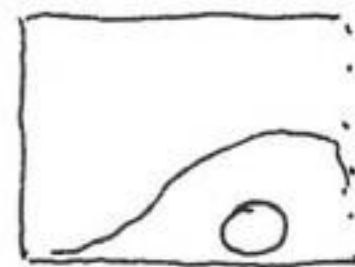


erosional maintained by downdrafts, especially as it concerns removal of talus slopes at base of cliffs.

Feb. 23, 1965

Snow of today drifted ~~into~~ into window box housing a *Synaptomys cooperi* (see previous notes).

Two possible routes led to the food cup at opposite end of window box, one free of snow and one of solid snow. The lemming burrowed thru 2 feet of snow to covered food cup rather than use the open route.



1620 Tennessee St., Lawrence, Douglas Co., Kansas

Feb. 28, 1965

Two starling inspected nesting box by entering and leaving box for several hours. At some times both birds were in the box.

March 1, 1965

Pair of starling actively preparing for nesting by spending 4 hours at the box, entering and leaving. Nesting material previously placed there by squirrels last fall was removed, till full at a time. Between each entrance to box for more material the male gave song and display of wing raising and open mandibles. He was interested in every starling that passed the area.

March 2, 1965

Cold and snow stopped nesting activity of starling. At no time has there been material brought to nesting cup. All nesting material concerned has been removed from box rather than placed in box which does not appear to be the normal instinctive procedure for nest building. These birds definitely recognized favorable days for nesting and courtship and refrain from such behavior pattern during unfavorable period of weather.

March 4, 1965

First morning dove observed in area this winter.

March 11, 1965

Heard morning dove calling this evening at about 5:30 P.M. In local paper 20,000 snow and blue geese were reported in Perry area by Eddie Bond, the local game protector. Only 8 Canadian geese were noted.

Geese were heard March 9 in the Lawrence area.

March 14, 1965

The (bobtailed) red fox squirrel active. (see notes of several years

age and longevity of this particular squirrel in the area at 1620
Tennessee St, Lawrence, Kansas

Lawrence, Douglas Co., Kansas.
March 15, 1965

at 1:15 P.M., in a clear sky and flying north across Lawrence
at what would be equivalent to Louisiana St, and at approx.
1500 ft elevation, ^{were} 900 snow and blue geese. They called occasionally.
This flock was composed of 8 incomplete V formations
they were too high to actually differentiate
between snows and blue but assumed
that they were both represented. The
last 2 days have been clear and
temperature higher than normal. They
continued north out of sight. at
4:15 another flock of approx 1800 flew
north at the same altitude and at the same position in re-
gard to Louisiana street. Sky still clear and temp about 50°F.
I do not know how many geese have passed by today. The
2 above observations were made ^{put of doors} on two occasions while
walking to school and returning in the afternoon.

March 16, 1965

Clear skies and 70°F temperature changed at about noon
as rain front moved in from the north. This front dropped
rain in successive waves in the afternoon and in evening
up to at least 9:00 P.M. rained continuously and substantially.
Temperatures are expected to drop to 20°F. Thunder & lightning
accompanied rains. Tornado in SE Kansas today.

March 26, 1965

One grackle flew into tree across street from 1620 Tennessee on
the Maupin property. The pine trees have been used as nesting sites.
It remained in one position for about 1 minute and moved its
tail up and down as by reflex action. It then moved three top
of tree and remained on one branch for 8 minutes without
body movement. Day 22°F and observation at 8:00 A.M.

1 mile S Williston town, Kansas

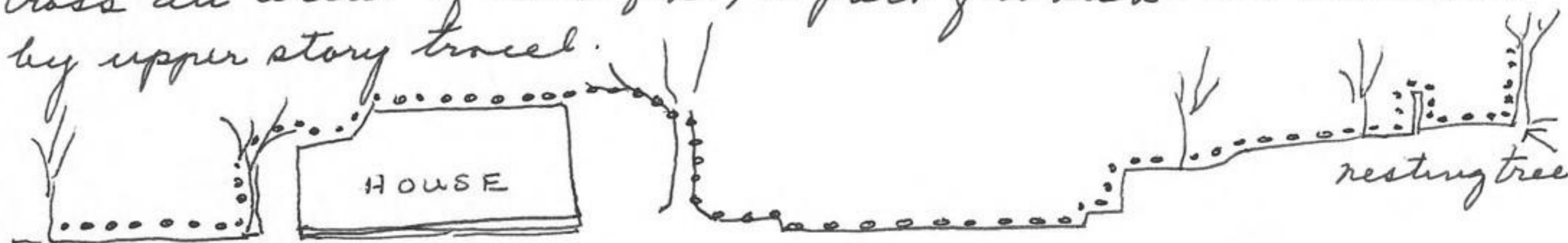
March 26, 1965

From the Lawrence daily journal World it was reported that
40,000 snow and blue geese (some Canada geese) took to the air

this morning at the Clyde Husted farm (9 miles northwest of Lawrence). The birds left and photographed in the air before they returned again. [The photograph in the paper was marked out in to units and counted - 1782 individual birds in the air]. The geese stopped at a 30-acre lake on the Husted Farm.

1620 Tennessee St., Lawrence, Douglas Co., Kansas
 March 29, 1965

Watched an Eastern grey squirrel (*Sciurus carolinensis*) cross an area of 280 feet, a part of which was connected by upper story truce.



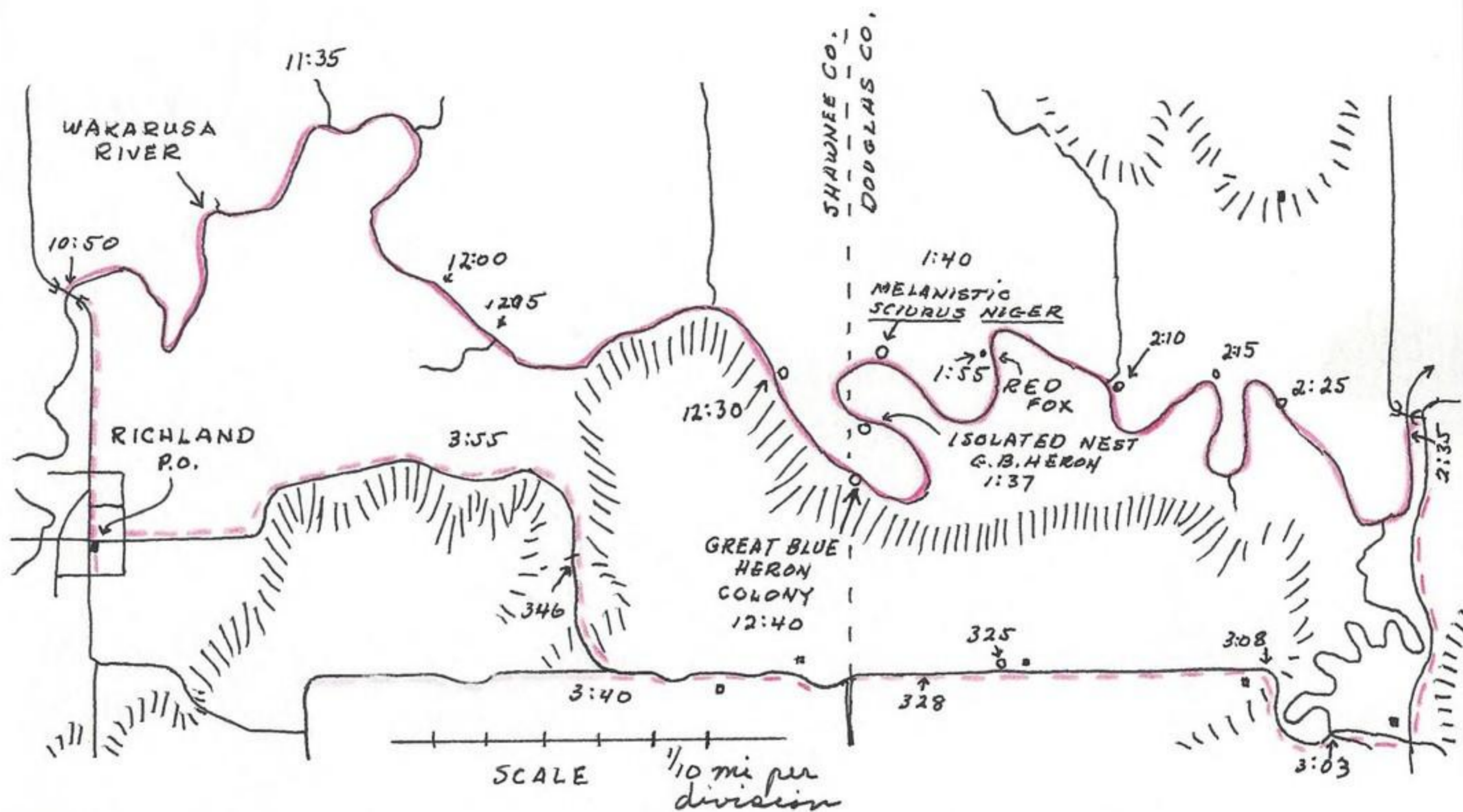
Rather than follow along the ground the entire way, it chose to take the overhead route up a tree, across the top of the house and down another tree rather than along the driveway between the two house. Also it climbed over a wooden fence rather than go thru the open gate which was directly on its way. It carried a half eaten walnut shell in its mouth the entire way. This kind of squirrel is frequently seen on the Maupin-McCloskey estate and probably had foraged 280 feet beyond its home range. The longer overhead route is associated with its tree inhabiting habits.

Also observed a *Sciurus niger* in tree at back of house. This squirrel is a bob-tailed squirrel and has been in same area or group of trees since several years ago when it first lost its tail in a transformer on a utility pole adjoining our property. It has never been seen beyond the area or more than 150 feet from its home base. This female squirrel has given birth to several squirrels which remain in the same general area. With the lack of the tail of this animal it has modified its habit of navigation. Instead of the lightning action of other squirrels of the same species, it runs more on the order of a cottontail than a squirrel. Its movements are more direct and forceful than other squirrels. While it remains in the same general area, it seems to be absent or less conspicuous at some times than other times.

Richland, Shawnee Co., Kansas

April 9, 1965

Annette P. and I make canoe trip on Wakarusa River from bridge E of Richland to bridge near mouth of Elk

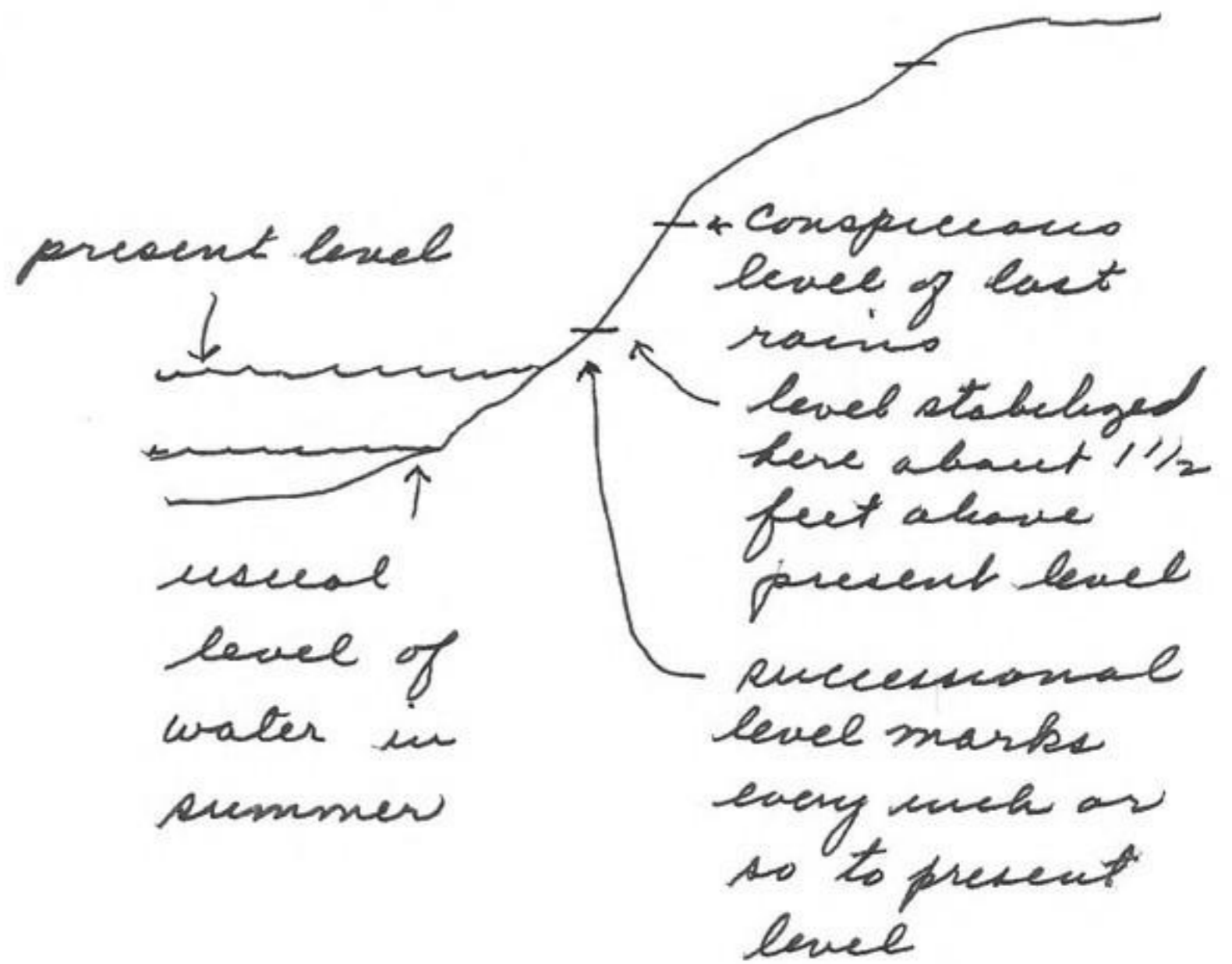


Creek down stream. Left Lawrence 9:21 A.M. with temperature 47°F. Mileage ^{bridge} 60090. Cloudy overcast and slight wind. Arrived Richland, 10:30 (mileage 014 or 24 miles from Lawrence. Enroute across the area to be ^{partly} inundated by the proposed Clinton Reservoir noted 1 red tailed hawk (just W of Clinton), 3 sparrow hawks, 10 meadowlarks mainly as singles, 2 flocks of common grackles of 250 birds each, 1 flock 18 starling, 1 eastern bluebird, 1 loggerhead shrike, 8 cardinals (singles), 3 crows, 5 horned larks, 4 mourning doves.

Left bridge at Richland at 10:50 A.M. ^{by canoe.} Cardinal and song sparrow at bridge; 11:35 first large drainage from left. Rapids with enough water to protect canoe from rocks. Water high from last rains. Between these rapids and starting point observed 5 fox squirrels (*Sciurus niger*) one of which chased another 150 feet along crest of river bank, 8 tufted titmouse, 3 eastern robins, 2 eastern bluebirds, 1 black capped chickadee, 1 white-breasted nuthatch, 1 brown creeper?, 3 red-bellied woodpeckers, 2 downy woodpeckers, 1 yellow-shafted woodpecker, 9 cardinals, 1 song sparrow, 1 great horned owl (at rapids) 4 turtles (approx 5 inch carapace), beaver tracks along edge of river,

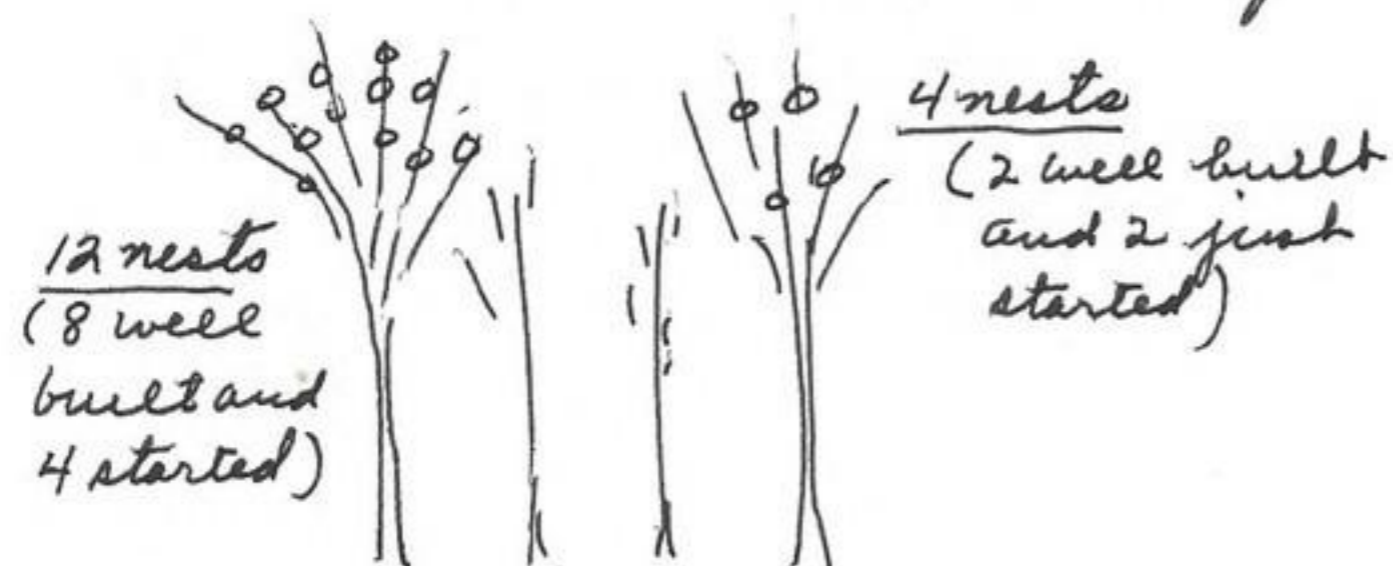
musk rat tracks, occasional raccoon track. The level of the water has been at near flood earlier in the season with debris and prone vegetation on bank.

at eight inches above the present level of the water is an inch zone of the buds of the Elm tree which 2 days ago, on April 7, were shed in great profusion, indicating a drop of 8 inches since that time.

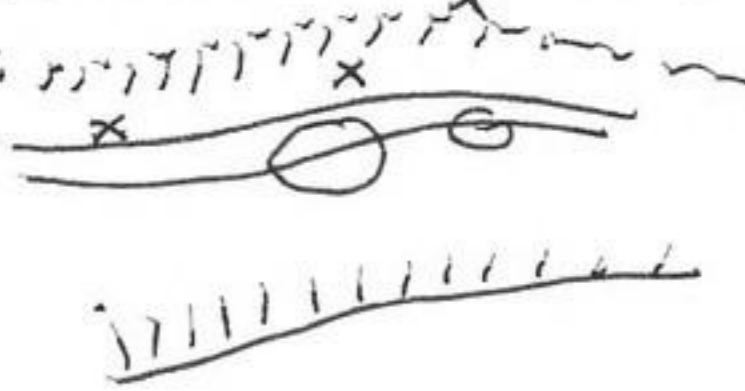


Arrived second rapids at 12:05. at a point 350' above these rapids

noted a Louisiana water thrush (*Seiurus motacilla*) walking along edge of creek. This bird has a relatively loud and aggressive-like call. The tilting of the tail is diagnostic. It used both low trees and shoreline for feeding activity. Other birds noted between the two rapids were 4 fox squirrels, 2 cardinals, 3 titmouse, 2 black-capped chickadees, 2 red-bellied woodpeckers, 1 downy woodpecker, 1 turtle, 1 small frog (amphibians are rare). 12:15 winter wren, kingfisher flying & at about 250' height, calling. Between 2 rapids and 12:30 saw 4 fox squirrels, 3 cardinals, 5 black-capped chickadees, 2 red-bellied woodpeckers, 1 downy woodpecker, 1 crow. Cow hear other crows to north in fields. At 12:30 noted a great blue heron feeding along edge of river. 12:40 great blue heron colony. As we approached counted 20 birds on nests. They gave low calls before leaving as we approached to about 200'. Not all left at the same time, some acting as if they were incubating eggs and were loathe to leave. They circled 4 or 5 times and then left to the N. We remained in area until 1:30. at the heronry made the following observations:

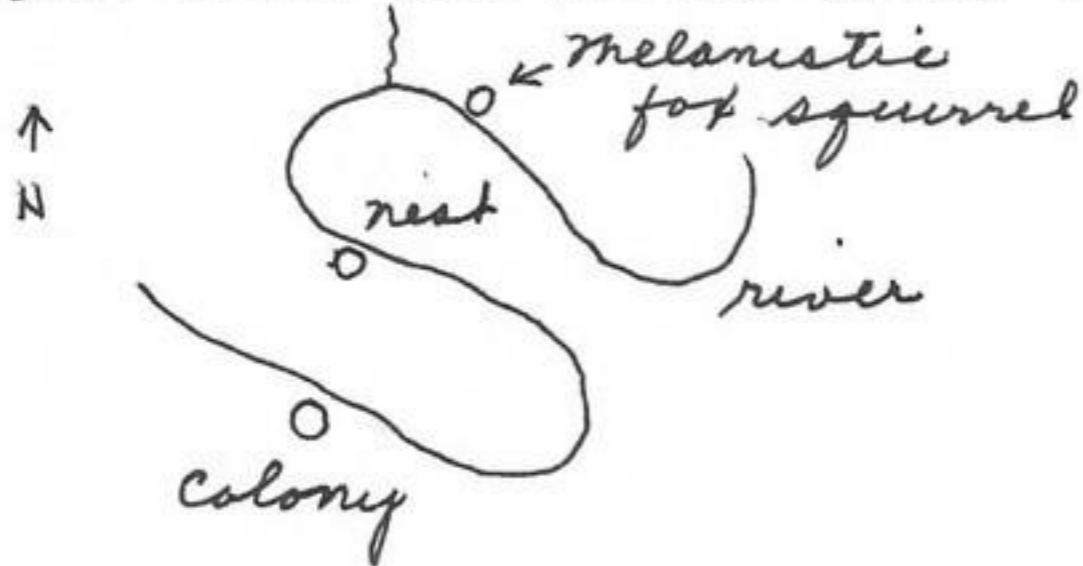


The nests which were well built were nests of last year (white washed with spores) with 3 or 4 inches of new sticks on top. The other nests were flimsy and

one could see up thru them. One last year oriole nest (Baltimore oriole) about 1/2 way up tree on west side. Epereta directly below nests covering 50% of leaves on ground at base of tree. One dead bird (last years) with a humerus that measured 152 mm total length. nest (highest one) about 82 feet from ground and another 12-15 feet to water. Circumference of the sycamore tree used for nesting 10 feet at chest height. Leave buds just beginning and offered no protection to nesting buds. Sycamore balls numerous in tree. The best places to observe these birds are:  while we ate lunch several birds returned to area, flew over nests but did not alight. At 1:30

Continued down stream. 1:37



another nest of a great blue heron in a sycamore tree. This nest is approx. 52 feet high. This tree is directly north of the main colony approx 1/10 mi to the south. This nest was in same tree last year. A cottonwood tree



50' SW of nesting tree is 12 feet in circumference. 1:38 turkey vulture, 8 crows, 2 blue gray gnatcatchers. 1:40 a melanistic fox squirrel (*Sciurus niger*) ran along the upper bank of the river for about 100 feet and then ascend-

ed an elm tree (largest one in area) where it remain resting in the crotch of the largest limbs (approx 15' high) while we watched it from the canoe. The animal was a blackish red color, mainly on tail and back. The animal seemed to have a smaller, less bushy tail ^{than} that typical fox squirrel. Two tree nests were approx 50 feet to the west of this large elm. 2 wood ducks in river just beyond.

1:55 2 wood ducks (not two above) in river near west bank. a red fox was along a fallen log 1/2 way down bank and approx 80 feet down river from the 2 wood ducks. It was definitely concerned with the ducks and could have captured them if the ducks had approached the bank below where the fox was hiding. It ran up bank and disappeared out of sight when we approached it. Ordinarily the fox would have left its position along the creek but it was apparently too interested in the wood ducks to notice us.

2 turtles just beyond (6 inch across carapace). 2:10 great horned owl, 2 wood ducks on bank ^{2 feet above water} and left without touching water. 2:15 2 wooducks. Turkey vulture in sky above, 1 small frog (*Acris*) on bank, one 20 feet from water. 2:25 4 wood ducks. Arrived bridge 2:35. Small birds noted since the herony are: 8 black capped chickadees, 1 ruby-crowned Kinglet, 8 cardinals, 4 downy woodpeckers, 1 hairy woodpecker, 2 yellow-shafted woodpeckers, 4 red-bellied woodpeckers, 2 crows, 3 eastern bluebirds, 3 Louisiana water thrushes. (one pair and 1 single). The pair were loud and aggressive in behavior which is unusual for this species, at least ^{when encountered} later in summer. 3 turtles, 2 robins, 7 tufted titmouse, 1 red-tail hawk, 9 fox squirrels, 1 great blue heron, ^{2 mourning doves.} The drainage creeks that enter the Wakarusa are covered with mud at their mouths and are smooth and concave . Later these side creeks with erode the mud and they will look like this. . Beaver tracks and limbs eaten by beaver along bank but not common. Muskrat tracks, a few raccoon tracks also.

Left canoe at bridge and walked back to Richland as indicated on map. Kept complete census: Left 2:45 12 bobwhites in one flock, 2:50 1 brown headed Cowbird, 2 tufted titmouse. 303 Elk Creek bridge. Phoebe left from under bridge. Song sparrow, 1 Harris sparrow, 1 cardinal here. 308 2 blue jays, 1 juncos, Eng Sparrow, 3 turkey vultures fly about 2/10 mi to W. 3:10 top dugway. 311 2 eastern bluebirds, 1 meadowlark. 3:25 mown made brush pile with 2 cottontails, 18 Harris sparrows, 1 downy woodpecker, 1 blue jay, 1 red-bellied woodpecker. 3:28 top second hill. 3:37 Hairy woodpecker, 2 eastern bluebirds, meadowlark singing beyond road. 3:40 to north down hill. 3:43 2 fox squirrels, one row 300 feet on ground, 8 black capped chickadees, 1 hairy woodpecker, juncos, 2 tufted titmouse and several other small birds beyond road. 3:46 crossing creek, clear. a 10 inch *Thamnophis* in road. 3:50 1 cardinal, 2 chickadees, 1 large trail in dust of road (Pilot black snake or *Pituophis*?) 3:55 picked up by car and transported to our car at bridge N of Richland. arriving at 4:00 P.M. Length of canoe trip on Wakarusa 5 ³/₁₀ miles. (3 hrs and 45 min). From bridge to

bridge on return trip 4 $\frac{3}{10}$ miles. On return trip to Lawrence noted pair red-tailed hawks at middle of N side of sec 8 where road turns east toward Deer Creek, and one at the Synaptomys marsh on the Peterson property SW corner sec 12. 3 ♂ & 2 ♀♀ blue-wing teal on lower drainage pond, horned larks in usual place just N of crossroads. 4 red-wing blackbirds (♂♂) along road about $\frac{1}{2}$ mile W of N end of proposed dam.

Richland, Shawnee Co., Kansas

April 10, 1965

Mary Pauline and I made trip to the great blue heronry on Wakarusa River at the Shawnee - Douglas Co. line, and to check especially on the status of the melanistic fox squirrel noted yesterday on the horse trip - to collect it if possible. From the N end of the proposed Clinton Reservoir dam continued west on river valley road. (Census Complete); N end dam mileage 66, day clear, 60°F but with heavy wind, the kind of wind that is forceful enough to blow over old trees ^{their limbs and bark.} 67.1 Cowbird. 67.2 turkey vulture, cricket frogs calling along side of road. 67.3 red wing blackbird on territory (♂). Just a trace of yellowish green in trees of the valley from new buds and beginning leaves. 68.0 road to north toward Petersons, horned lark here. 68.7 bridge over Wakarusa, 69.2 road to Clinton to S but continued W. 69.8 going by bridge to N. 70.2 now in forest along Wakarusa ^{S side.}, few leaves on shrubs of understory, leaves not on main trees as yet. Can hear a few birds calling but none observed. 70.9 main road from Clinton and now going W. 71.3 4 eastern bluebirds. 71.7 bridge over Wakarusa, ♂ cardinal, 72.6 turned to south at crossroads, meadowlark & frogs calling. 73.2 phoebe at bridge over creek, song sparrow, meadowlark. 73.5 phoebe at bridge over drainage ditch. 4 yellow-shafted flickers feed-
in ^{burnt} road field S of road. These birds were here yesterday & flew to sidehill to N. 74.1 crossroad, now to W 74.8 mouth canyon of reservoir. 75.4 2 meadowlarks, 75.8 Sparrow hawk, 76.1 meadowlark, 76.3 cross road, now to S, 2 meadowlarks. 76.7 creek, 2 black-capped chickadees. 77.2 main bridge over Wakarusa. Left the car here and continued W up creek by foot on N side of Wakarusa bluffs. High wind reduces bird activity and is expressed in numbers of birds noted. [at 10:15 A.M.]

Richard, Lawrence Co. Kansas
Apr 10, 1957

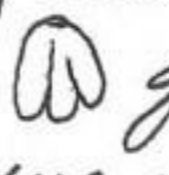
Photo 650410-1 Great blue heron nests in sycamore tree. numerous seed balls.

Photo 650410-2 same as above

photo 650410-3 " " "

photo 650410-4 " " "


photo 650410-5 Mary Pauline & large cottonwood tree at melanistic squirrel site

10:24 4 chickadees, 1 red-bellied woodpecker. 10:30 Great horned owl.
 10:35 E end of horse-shoe ^{bend} bend of river, 1 phoebe. 10:35 W
 side of horsehoe bend, great blue heron feeding at edge of
 creek, first cattontail, gooseberries in leaf, 1 downy woodpecker,
 1 red-tail hawk. 10:42 cardinal, red-bellied woodpecker, cardinal,
 5 species of butterflies, ^{including swallowtail} are active include the small blue one.
 10:47 bend of river just below center of section 26, now to N. Here
 observed a growth of seed pods  growing from bushes
 5-6 feet high. These seed pods were being vigorously
 blown and as a result made a noise similar to the glass
 fragments of the Japanese wind lamps. It was indeed an
 impressive sound. 10:50 Cardinal ♂. 10:52 2 mourning
 doves, 10:53 drainage from N. ^{4-12 inches in diameter} Boulders in deep erosional
 creek bed about 250 feet up drainage from where it enters
 the Wakarusa. 255 2 blue jay, 2 cardinals, white throated
 sparrow?, 1 redtail to NE, 1 hairy, 1 downy woodpecker.
 11:10 Wakarusa now to S but we will cut across to area of
 the melanistic fox squirrel, 1 great blue heron along edge of
 creek here. 11:25 squirrel tree. Check area thoroughly but did
 not see squirrel. Left 11:45 for heronry. 11:50 drainage from N.
 good erosional level in this drainage that corresponds ^{to} main level
 along Wakarusa (about ^{1/2 to} 2/3 way up bank). 12:00 west end last
 bend before isolated heron nest. 2 great blue heron in creek, 2 in
 field to N, 1 ruby crowned kinglet, 2 downy woodpeckers. 12:10
 cattontail rabbit 12:12 heronry. ^(see opposite page for photos) Only 1 bird on nest, all others
 along creek or in field mainly because wind is so strong they
 cannot remain on nests. 2 Louisiana water thrushes at heronry
 at entrance of drainage from S about 100 feet W of nesting tree.
 Left heronry 12:45. In field to W were 3 heron in middle of
 field. Remained at melanistic fox squirrel nest until 2:20, ^(photo 650410-5 - opp page) but
 no squirrel activity ^{because of high wind} in area. During the wait 2 great blues flew S
 toward heronry (1:45) Forest quiet except a pair of titmouse and 1
 red-bellied woodpecker and a pair of bluebirds ^{Wakarusa high, muddy, but silent.}. Arrived car 3:20 P.M.
 On return to N end dam noted (some way): 77.4 Car. 77.7 2 bluebirds, one
 turkey vulture. 78.6 to E. 79.9 2 bluebirds. 80.1 horned lark. 80.7 cross-
 roads, 81.4 to N. 81.6 meadow lark, 1 red tail, 82.0 meadow lark, 82.3
 to N from Crossroads. 82.4 Sp. hawk, meadowlark. 83.0 Crow, 83.1 meadow
 lark. 83.2 dry creek. 84.0 to E 2 meadowlarks. 85.0 budge. 85.6 2 Cow-
 birds. 85.8 meadowlark. 86.1 to S. 87.1 budge over Waki now to E. 88.5 budge
 over Waki. 89.0 N to Peterson field just burned. Photo 650410-6. 1 red-tail
 in area. One microtus ochro in nest that had been burned, escaped into hole beneath.
 Peterson said barn swallow arrived April 2. 89.3 return to main road. 89.5 to E. 90.4
 redwing. 90.5 redwing both males, 4 cowbirds. 90.8 N end dam.
 Lawrence, Douglas Co., Kansas April 13, 1965
 Chimney Swifts in air at 5:00 P.M. in greater numbers than summer population, first
 Robin pulling grass & roots for nest construction birds noted this spring.

3 mi. W Lone Star Lake, Douglas Co., Kansas

April 16, 1965

Robert Pierson presented me with 6 snakes collected in the Lone Star Lake area. These snakes are preserved as follows:

- 650416-1 *Agkistrodon contortrix mokeson*, length of body 600 mm, length of tail 96 mm, weight 190 gms.
- 650416-2 *Agkistrodon contortrix mokeson*, length of body 532 mm, length of tail 78 mm, weight 115 gms.
- 650416-3 *Crotalus horridus*, length of body 840 mm, length of tail 88 mm, weight 440 gms. This snake has a reddish stripe down its back and a prominent dark stripe behind its eye  suggesting the characters of the subspecies *C. h. atricaudatus* (Canebrake rattlesnake).
- 650416-4 *Agkistrodon contortrix mokeson*, length of body 240 mm, length of tail 40 mm, wt 12 gms.
- 650416-5 *Elaphe obsoleta*, body length, tail, wt.
- 650416-6 *Elaphe obsoleta*, body length, tail, wt.

Lawrence, Douglas Co., Kansas

April 17, 1965

Robins and starling actively carry nesting material. Noted a pair of starling (nesting in box at 1620 Tennessee), to copulate on the ground while in the process of nest building.

Richland area, Douglas Co., Kansas

April 18, 1965

Made trip to heronry and to check the melanistic fox squirrel noted previously. This trip is the same route as followed April 10, 1965. Did not keep complete record but made the following observations: One elm near area of melanistic squirrel measured 16 feet in circumference, ^(C.H.) another measured 14 feet. marmat at first drainage from N. Many more trails along Wakarusa River than elsewhere I have examined. Trails cross at upper edge of bank when a barrier (land slide) is present. Yellow warbler in area. For the blue-gray gnatcatcher at certain times looks like a warbler. Feeds under logs near ground as well as in upper story of trees. 6 Great blue herons on nest, one on isolated nest to N. No fox squirrels along entire route both ways. No rattontails. 2 redtails at first drainage to N. 5 vultures in air. At 1/2 mi W of ~~the~~ S end of dam along main highway noted a scissor-tail flycatcher.

a fisherman informed me that catfish bite best when fox squirrels are noted to be active and playful. He has noted flying squirrels in the area.

Wakarusa River (down stream from Richland), Douglas Co., Kansas
April 24, 1965

Left bridge ($3\frac{1}{10}$ mi downstream from mouth of Elk Creek on bridge on W border sec 25, T 13 S and R 17 E) at 12:05 P.M. Annette P. and I made trip in canoe. Will not keep complete record because of difficulty of recording and navigating. Some noteworthy records are as follows: 12:25 2 redtail hawks flying about 300 high, 1 sparrow hawk left tree and circled several times. 12:40 hawk slightly smaller than redtail left tree and remained circling several minutes. It called with a more constant shrill than the redtail hawk. A wood duck dropped from a tree hole (12 feet above water) into water and then left down river. Six turkey vultures in one group overhead (just above tops of trees (end of long straight stretch of river). In addition to the usual ^{winter} birds noted last week, there are some new ones moving into the area. 1:10 green heron. 1:20 great horned owl. 1:³⁸~~45~~ major drainage from S. 1:45 drainage from N. 1:50 spotted sandpiper flying up river, turn around and flew down river. 2:00 P.M. drainage from N. 2 great horned owls together at the mouth of this creek. Arrived bridge 2:15 P.M. at the SW corner of sec. 19, T 13 S, R 18 E. This part of the Wakarusa, especially the upper end is very interesting and similar to the area between Richland & Mouth Elk Creek, however the lower part has been cut on banks and the larger trees are not represented. Some beaver actively but not as common as in previous years. Left bridge at 2:40 and walk back to car at point of debarkation by following along S side of valley. Old Synaptoneup marsh still in usual condition but more water in spring area, a redtail called at point ^(end of ridge) SW from Synaptoneup area. There are two nests in trees in this area. I have always noted redtails at this point. 3:08 mouth of canyon, native grasses still in good stands. 3:20 2 E Kingbirds. The previous canyon (second one along way) has considerable water flowing in drainage canal. Many spring area. The area (3:20) has extensive wetland meadows valley-word and should be investigated (E of windmill). 4:05 1 yellow-throat warbler. 4:10 6 pipits in cultivated field, 4 vultures flying over slopes to SW. Arrived car 4:15 P.M. Mileage 34.5. Return

two bridges (via road) noted 6 pairs of mourning doves, 4 horned larks, 1 red-wing blackbird all in open river plains. Continued E but did not keep record of birds except that they occurred in usual numbers & kinds. One mockingbird at Peterson Scout Camp area. Along the road that crosses sec 13 of T135 & R18E (eastern 1/2) noted 8 male red-wing blackbirds on territories, one ♀ noted with one of the males.

Wakarusa River, Douglas Co., Kansas
April 25, 1965

Mr. Onker Christensen and son Aksel and myself made canoe trip on Wakarusa River from a point 1/10 mi E and 1900 ft N of SW corner of sec 19, T135, R18E to bridge near south central border sec 10, T135, R18E (3/10 mi down stream from Klee Creek that enters from the N). Number of miles covered is 6 1/10 miles. Started at 10:00 AM and finished at bridge at ~~2:00~~^{1:00} P.M. or 4 hrs enroute. Day heavily overcast with rain clouds (rained last night) and temperature approx 50°F wind moderate and cold. Enroute to area, and at a point 1/10 mi N of crossroads in middle of section line between sec 19 and 20, T¹³5, R18E, in an artificial pond, noted 1 pied-billed grebe, 3 tree swallows, 8 bank swallows, 4 Band sandpipers, 1 green heron, 2 redwing blackbirds. Because of circumstances could not record notes of canoe trip because of demand of steering but recorded general impression for entire trip. This stretch is not as beautiful as upriver from here to Richland, because of extensive cutting of brush and trees along banks of river. Trees have been cut to water edge for some reason. Water level high enough for floating all rapids without hitting rocks. Last mile of river wide and slow moving and large trees bordering. Good beaver activity here.

mammals & birds observed along river (via canoe route)

Sciurus niger. only two noted today. These were chasing one another along edge of river.

Great horned owl. 5 evenly distributed along river, two of which were together. There is considerable difference in size of these birds. The pair represented one large & one smaller in size. These birds generally leave at approx 200 feet down stream and fly 200-300 and alight to be flushed again on our approach. They finally leave and return up river. Jays & Crows harass them when they leave the tree

bordering area.

Turkey vultures. 5 singles noted. One left from old tree on n side river. It had to fly up to higher limbs before it failed leave.

great blue heron. One noted but was exceptionally large. It was fishing at head of rapids.

green heron one only. It continued down river for approx 3/10 mile, stopping about every 200 feet. It finally left river and flew back upstream at 200 feet above top of trees.

blue jay. approx 12 first half and approx 30 last half of river course. There was definitely a difference in number in certain areas.

downy woodpecker. 13 noted.

Lairy woodpecker 3 noted

red-bellied woodpecker. Average of 4 per mile. They did not call as usual or were as aggressive.

white-breasted nuthatch. 1 only

blue-gray gnatcatcher. most regularly distributed along river of the small herds. Groups of 2-5 approx 5 per mile. One was annoying a red-bellied woodpecker. They frequently are in association with chickadees and titmouse.

tufted titmouse. singles & pairs at approx 3 per mile. These birds frequently were at water edge in low shrubs; an area seldom used by birds along the river.

black-capped chickadee. groups of 1 to 3 and not as common as winter population. Average about 3 groups per mile. They call less frequently than winter population.

yellow-warbler. 2 birds noted

Crow. noted 8 and heard several others nearby.

bluebird, eastern. 9 noted and distribution irregular

olive-sided flycatcher. 6 noted (in pairs)

eastern phoebe. 3 along river and 4 others at bridges

house wren. 4 noted & heard 3 singing

cardinal ♂♂ + ♀♀ at approx 8 per mile.

E. Kingbird. 3 along river (8 others outside river area) one preyed upon a butterfly.

common grackle. occasional one flew over area of river. (at least 200 noted in general Clutum Res. area outside river course)

Cowbirds commonly seen (6 per mile) in river area either as pairs, singles or groups of 3-4. These birds seemed to be in riparian

Mourning doves approx 2 pr per mile

barn swallow occasionally fly over river area.

as belonging, in contrast to redwings & grackles that merely passed thru or rested in bordering tree tops.

red-wing blackbird. few along river in trees as resting only others on territories beyond river. Some females present.

Chimney swifts. Two singles flew over area.

gold finch. group of 5-20 at 2 groups per mile - common today. Birds noted beyond river in river valley or on slopes beyond river valley. (all in Clinton Res. area)

meadowlarks. approx 3 per mile in favorable places.

horned lark flat, extensive areas. 13 individuals

lark sparrow 6 noted.

savanna sp.? 1 noted.

house sparrow at farms.

starling only at farms & few in numbers

loggerhead shrike 4 noted.

mockingbird 5 noted.

rock doves (domestic) bridges & general

noted only one acris along entire trip along river in decreasing influence of cold weather. no turtles noted. no beaver or muskrats. no dipkissels as yet this season. 5 snipe noted feeding along bank, with fins out of water. no wooducks, these probably prefer areas of mature trees closely bordering the river. 40 birds observed today.

Univ. Kansas Campus, Lawrence, Douglas Co., Kansas

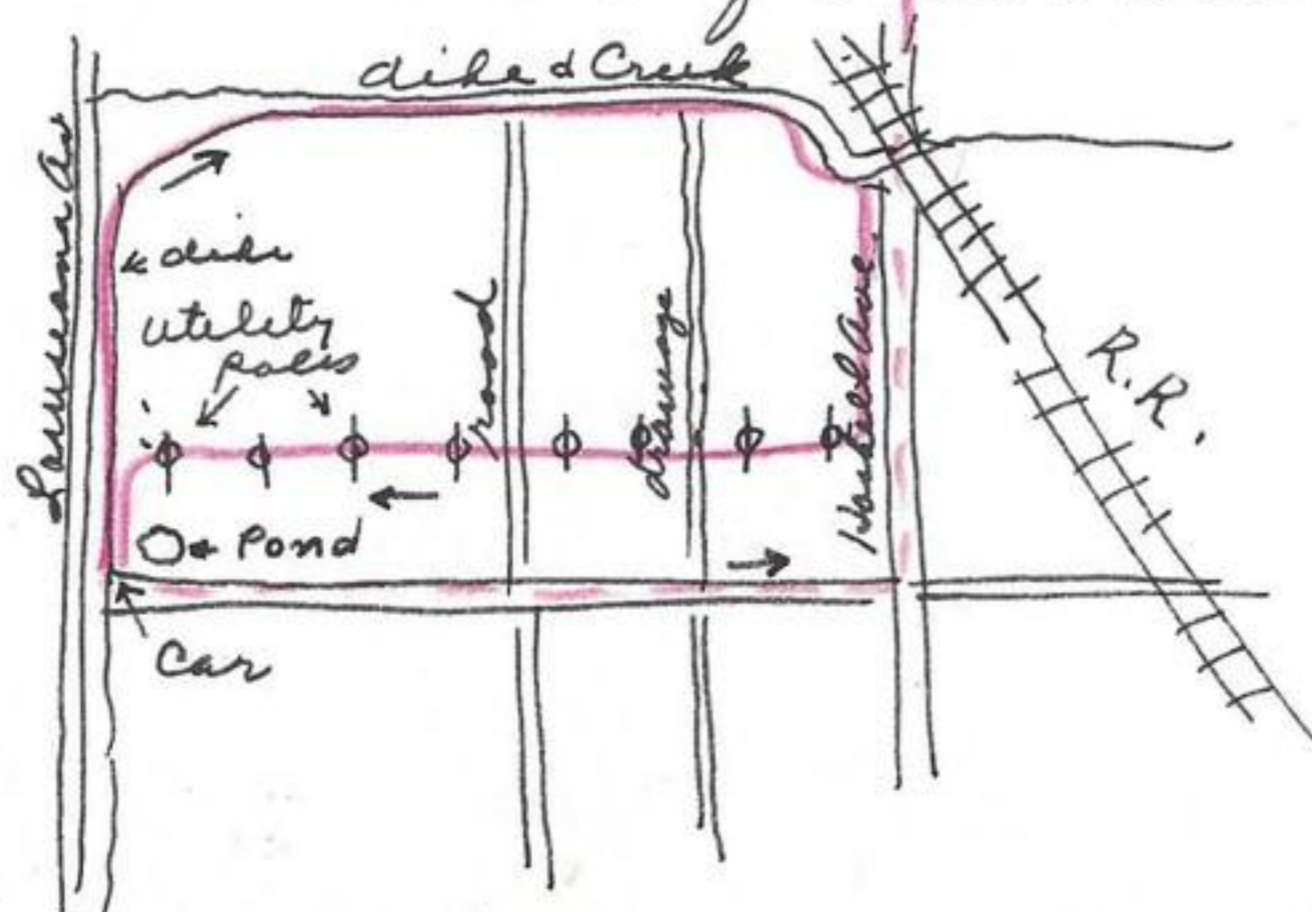
April 27, 1965

noted catbird for first time this spring. Last 3 days have been cool (average 50°F) and cloudy but not actually raining. All trees with buds or leaves but only just starting. Some leaves 1/3 grown. Red bud still in blossom.

Hashell Bottoms, Lawrence, Douglas Co., Kansas

May 1, 1965

Made census of birds & mammals in Hashell Bottoms.



Left home 5:00 P.M., mileage 44.3.

Following birds noted enroute: Eng sp., starling, meadowlark, redwing blackbird ♂+♀, the ♂ was chasing the female in her own territory. Arrived at pond in Hashell on Lawrence Ave at 5:10 P.M. mileage 46.9

5:11 AM
 Left car at pond as indicated on map and followed dike N, thence E to Haskell Ave, thence S across meadow to utility poles, thence W to original dike, thence S to car. Drove E to Lawrence, thence N to Lawrence on Haskell Avenue high wind, sky clear, sun bright. Temp in the 80°F. At pond noted 1 pied billed grebe, meadowlark flew by, 2 Wilson snipe left N end pond. 5:13 2 meadowlarks left dike, 2 redwing ♂+♀ on territory, Grasses on previously burned dike now grown to 1 foot high, last years weeds 4-8 feet high. 5:15 ♂+♀ redwing, male calling, grasses in field to E not as highly grazed as in previous years. Water in drainage ^{along} base of dike, E, is intermittent and in some places dry and soil cracked; robin in tree; 3 meadowlarks calling beyond range of observation; 5:17 killdeer in field to west of Lawrence Ave. 5:18 ♂ redwing blackbird calling 50 feet ahead; ♂ redwing, large Rana pipiens into water, large bumblebee searching grass; channels between ponds cleared by muskrat; mourning dove flying to east; ♂ redwing blackbird; barn swallow; several large Rana pipiens (1 per 20 feet), 5:24 dike now angles slightly to E; 2 barn swallows concentrating above 2 ponds at angle of dike, 5:25 R.W. blackbird ♂; 5:27 beginning of debris in old drainage channel along dike (cement blocks, bricks, wood, tin roofing etc) completely obliterating water surface areas; this debris extends E to road; chimney swift in air; 5:30 angle of dike, now to E; 2 mourning doves left ground; barn swallow in air; ♂+♀ red-wing; 3 robin along fence beyond water to N; 1 mourning dove flying N; water flowing in creek 2 inches deep & 3 feet wide, other places creek 8 feet wide & 1 1/2 feet or so deep; locust trees in leaf but leaves small, usage orange less developed; 5:33 meadowlark singing to S; 5:34 ♂+♀ red-wing; savanna sparrow; 5:35 three meadowlarks singing in field to S; one ♂+♀ redwing; while redwings are on territories I do not see the nest under construction in small trees where they usually build. It may be that the early birds nest in grasses & latter birds in trees when leaves supply adequate protection, some old nests in small bushes of last year; 2 unidentified sparrows; 5:38 ♂+♀ redwing blackbird; 5:39 2 mourning doves in south field; 5:41 windmill to west; Rana pipiens all along creek, 1 yellowthroat warbler; 5:42 ♂+♀ redwing; males not as aggressive later when nesting; 5:43 bridge; one meadowlark to right; 2 cottontails 10 feet east of bridge,

one row S into field and one row down into creek bed and
 across to other side; eastern phoebe at bridge with two
 colored bands on ^{right} leg, one distal a green and one above on
 proximal a red; 5:47 pair redwings; 5:48 2 bobwhites left dike
 and flew 100 feet to east on dike; 2 meadowlarks singing to N;
 2 meadowlarks singing to S; others singing to N + S beyond
 range of observation; 5:50 2 brown thrashers flying east along
 dike in shrubs + trees; 5:51 g. h. owl left area of drainage
 gate and flew S along drainage to 1/2 way across fields +
 lit in tree, as it passed by, 3 redwings on territories
 chased it; *Rana pipiens* about one every 30 feet along drainage
 ditch, saw 5:54 water gates, checked 20 boards and down
 debris and found 1 immature 350 body, 102 tail, 20 gms
650501-1 and
 4 *Peromyscus maniculatus*. They had nests under this
 debris. These are the boards that on previous dates have
 support great numbers of *Agnodon* and other kind of
 snakes; 6:00 left area of old pld and continued east
 again on old dike; 6:01 cardinal ♂; 6:02 American bittern
 left edge of creek and waded up 3 feet to grasses among
 elm trees (30' high) where it remained quiet with head straight
 in the air, it move some but slightly, when approached at
 25' it left and legs dangle characteristically until in flight;
 2 killdeers in swale to right; stinging nettle wherever found
 is approx 1 1/2 feet high; 6:05 savanna sparrow; red-wing black-
 bird to left; 2 mourning doves to right; 2 meadowlarks flew in
 from field to S; 6:06 2 males redwing; cottonwood trees mainly
 in flower, some leaves present but small; 6:07 end of dike, now
 trending SE along same dike; one cottontail left dike; one
 yellow throat singing; 2 grackles + 2 redwings, creek frog
 calling; the pond at east of head of dike muddy and not like
 clear water of creek or other ponds; 6:07 ♂ + ♀ redwing in tree; 6:08
 1 lesser yellowlegs and 2 solitary sandpipers (*Tringa solitaria*)
 in pond right of dike. The yellowlegs left calling and alighted
 in field 200' beyond. The solitary sandpiper have a complete
 body tilt and frequently wash bill ^{in water} after feeding on insects
 or small molluscs. Their call is very soft and suggest the
 volume of a smaller sandpiper. They left in rapid flight
 and did not return to area. Remained at sandpiper area for
 6 minutes and then continued on dike to bridge arriving at
 6:15; heard first dickcissel call in field to W; continuing
 S along E edge of Haskell area (along W side ~~Lorraine Ave~~ Haskell Ave)

6:16 red-wing blackbird; 6:17 dickcissel to w in open field;
 6:18 savanna sparrow + field sparrow, meadowlark left grass;
 mourning dove flew w across field; 6:20 ♂ redwing, meadowlark
 calling to west in field; 6:21 now at utility line and will turn
 w and follow under lines to Louisiana Ave (this is the
 usual census line for microtines and has been made on many
 earlier occasions). Soils between poles 1 and 2 is cracked
 and dry and has been heavily grazed, native grass approx 5
 inches high, meadowlark approx 1 every 200 feet; 6:25
 second set of poles, no microtine runways between first poles
 and second poles; 6:28 passing thru area 50' east of drainage
 ditch (1/4 mile) that previously supported hundreds of microtines
 ochrogaster, no animals or trails now; 6:29 at drainage
 canal leading N-S, will go N until I see cross, then back to
 census line on opposite side of drainage (W side); mosquitoes
 along ditch; 6:30 now on west side of drainage and will con-
 tinue W; no runways along ditch because of overgrowing this
 winter; 6:31 third set poles 50 or so feet W drainage ditch;
 28 grackles left field in one group; no runway between 2
 and third utility poles; soil damp enough to build mounds;
 in low spots; eastern kingbird in small 4 foot elm tree
 in open field; the cottonwood tree in field (successional
 is approx 10 feet high, elms 3 or 4' high; 6:34 dickcissel
 singing to left, there is only a small percentage of the
 usual population of these birds and are mainly in
 eastern end of Haskell Bottoms which is most severely
 grazed; meadowlark still singing approx 1 per 200 feet;
 6:36 4th utility pole, no microtine runways so far; juniper
 tree here 2 feet tall; 6:38 dickcissel singing to south;
 6:40 road leading directly S Haskell Institute or 1/2 mile
 road; no microtine runway in tall grasses along fence;
 6:41 5th set poles, no runways so far; 6:42 microtine runway;
 soils damper + not as fully overgrazed; 6:43 microtine run-
 way; 6:44 m. runway; 6:45 microtine runway; 6:46 utility
 pole line no 6; one runway 10' beyond; 6:47 m. runway;
 wind still blowing from W and most of old dry vegetation
 blown to east from winter winds; sun about 15 minutes from setting
 elm trees from 1 foot to 4 feet and are gradually invading the
 field, they are generally distributed from 2 or 3 feet apart to
 30 or so feet apart; 6:50 microtine runway; 6:52 7th set utility
 poles; one microtine runway 20 feet east of these poles; it is

becoming more & more difficult to see runways because of light and denser vegetation at this end of the field; only conspicuous runways can be identified; meadows still singing; have not heard dickcissels since last recorded; 6:55 microtine runway; 6:56 m. runway; 6:57 8th set utility poles; 6:58 m runway, they are ^{mainly} along N-S drainage course across field where grasses are greener & higher; 6:58 m. runway; 6:59 now in tall Andropogon grasses just E of water that runs N-S along E side of dike; one runway in this area; 7:00 m. runway along border of water; 7:01 top of dike and end of microtine runway census; continued E to car. one Wilson snipe at pond. In car and thence E toward Haskell Avenue. 13 redwings ♂ + 4 ♀ from car to first road (1/2 mile) only 2 beyond to Haskell Ave. At the 1/4 mile drainage before Haskell noted 1 scissortail flycatcher on fence wire. At dense wooded area E of Haskell Ave were approx 500 grackles and some red-wing blackbirds which is unusual in lieu of the fact that most grackles have been on territories for some time. Continued N; at RR tracks heard a yellowthroat singing about 100 feet NW in pond area. Today has been the time when the seeds of the elm are blowing off trees and piling in windrows against barriers. Baltimore ^{crude oil tank in} Lawrence.

Wakarusa Valley, Douglas Co., Kansas

May 2, 1965

Made census of area of Clinton proposed reservoir by car. This is not a favorable day because of winds that keep many birds low in grass or shrubs where they are inconspicuous. Left Lawrence at highway 59 and 23rd street and travelled west (continuation 23rd street). Mileage there 60.0, 1:10 P.M., Temp. 85°F, sky clear, high wind. Will record kinds of birds only from here to Clinton Reservoir: Eng sp., meadowlark, r-w blackbird, mockingbird, crow, dickcissel, purple martin, blue wing teal, barn swallow, cardinal, gnatcatcher. At north end of proposed dam for Clinton Reservoir 66.2 mileage, time 1:25 P.M. Will keep complete census of birds seen along road within 200 feet either side. 66.4 Eng. Sp., 66.5 ♂ red-w. blackbird; 66.7 4 crows, one ^{of which} on fence post 3 m field by road; 66.9 one grackle, 24 cowbirds in one flock and one mourning dove, all in flock formation; the dove followed along with the cowbirds; 66.9 mourning dove; 67.3 savanna sp to W., 67.4

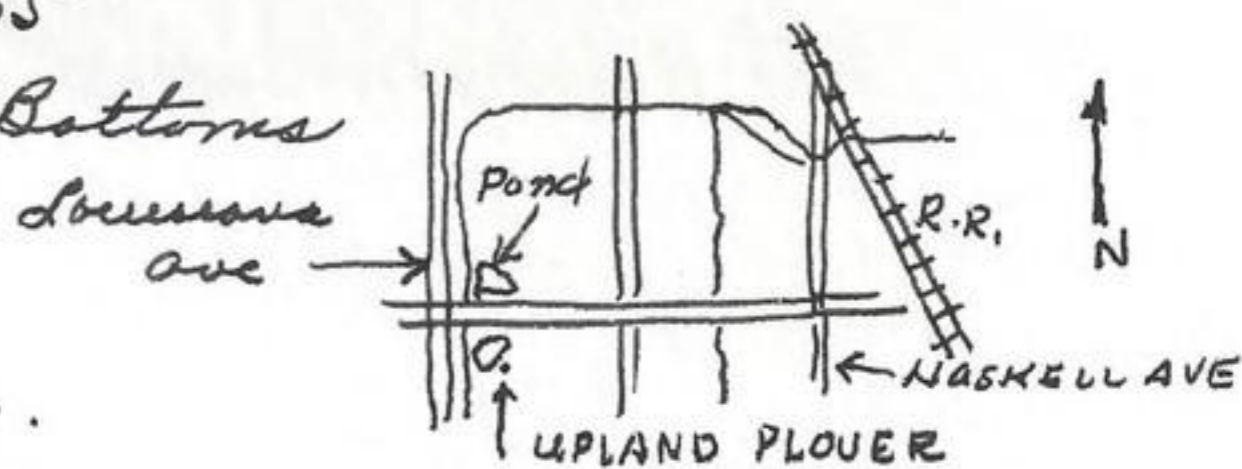
29
 29
 horned lark; 67.4 passing rd from N; turkey vultures soaring
 over trees 2/10 mi to SW., 67.9 Wakarusa bridge at 1:31 P.M.
 Can hear red-wing blackbird & yellowthroat at base of hill;
 68.6 passing road from south; 68.8 savanna sp.; can hear
 birds singing to S on side of valley, yellow warbler common call;
 69.2 passing Wakarusa River bridge to north; 69.5 bird songs
 beyond range; 69.6 now S thru forest along Wakarusa River;
 can hear tufted titmouse & chipping sparrow; no birds visible
 but tufted titmouse most common call; 70.1 Chickadee
 calling; 70.3 now on main highway leading W time 1:42; 70.4
 phoebe at bridge; 70.5 Cowbird; 71.1 bridge over Wakarusa;
 cowbird along road; 71.5 2 grackles; can hear dickcissel to
 S; meadowlarks calling 71.9 crossroads; 72.5 turning S;
 at 1:48 P.M.; redwing singing to east; 2 chimney swift
 flying by; 72.7 mourning dove; 72.8 horned lark; 72.9
 crow; 73.2 savanna sparrow; 73.4 pond and stopping, 2
 male redwings, 1 male grackle, 4 cowbirds only birds
 at pond; in making roadside census it is important
 to take into consideration the time of day & weather
 conditions, especially the amount of wind blowing; if
 not, censuses are not too significant; this is a good example
 today with wind blowing & keeping birds low, in areas
 supporting many kinds & numbers of birds, there was none
 today. Speed of travel is important, if one were to travel
 at 2 miles an hour with windows down would no doubt
 record more birds than travelling 40 miles an hour.
 Left pond at 1:56 P.M. 73.6 turning W & following river
 valley at edge of hill; 73.8 lark sparrow; 73.9 2
 lark sparrows; 74.4 mouth of canyon with lake beyond,
 crested flycatcher here; 74.4 red-headed woodpecker; 74.6
 gnatcatcher; 74.9 top of hill; 75.2 male & ♀ redwing; 75.3
 meadowlark & savanna sparrow; one lark sparrow;
 75.3 red-headed-woodpecker; 75.4 eastern bluebird; mead-
 owlarks calling on either side in field; 75.8 crossroads on
 steep hill, now turning to S; 75.9 meadowlark & gnatcatcher;
 76.3 crossing creek; mourning dove left road; 76.4 phoebe
 in abandoned home; 76.5 lark sparrow; 76.5 lark sparrow
 flew from road into tree; can hear chickadee to left;
 77.0 Wakarusa bridge, now to E; water in river relatively
 clear & can see reeds along sides & in shallow areas;
 77.4 now to N; 2 cowbirds at turn; enough wind in road
 to move dust ahead as if made by car, fields holding soil,

77.9 starting road curves along river; 78.1 now straight
 E; can hear meadowlarks to N+S; 78.5 drainage ditch
 from S; fields on both sides plowed and may account
 for lack of horned larks along road, they may be
 requiring vegetation now for nesting; 79.3 Waharusa
 bridge at 2:16 P.M.; most of fields and river bottoms are
 now plowed and planted but no growth, other fields in
 short winter wheat; 79.5 now N; one meadowlark flew
 by; 79.8 2 mourning doves flying west; 79.9 now to E;
 2 horned larks here; 80.2 Cowbird; 8:05 now to N; 80.8
 creek, cardinal, dickcissels calling on uplands to right;
 81.2 lark sparrow; 81.2 2 redwings; 2 mourning doves;
 81.5 crossroads, continuing N; 2 meadowlarks left edge of rd;
 81.7 field sparrow; 81.9 top hill; 82.0 Cowbird; 82.3 Dry
 Creek, water running 82.6 3 crows; 82.9 top hill, good
 native grasses to W; 83.1 to E; 2:28 P.M.; 83.4 mourning
 dove in wire, chickadee calling; 83.5 lark sparrow;
 83.8 cardinal ♂; 84.1 Deer Creek bridge; 84.3 turkey
 vulture 1/10 E; 84.4 mockingbird; 84.6 mockingbird;
 8:47 passing road from N; 85.0 mourning dove; 8:51 passing
 rd from N. 85.2 passing rd to S at bridge, eastern blue
 bird, 2 turkey vulture, 1 grackle; 8:55 2 lark sparrows;
 8:57 top of hill; 86.0 bottom creek; 86.3 creek; 86.8 top hill;
 87:0 now to S pass Petersons; 87.7 going down hill to valley
 floor; 87.9 bottom hill; 88.1 2 crows; 88.3 horned lark;
 88.4 now east; 89.0 same group of cowbirds, grackle and
 mourning dove noted at mileage (66.9); redwing blackbirds
 formerly had territories (8 of them) along N side of road
 but none today in evidence, plowed field to N made
 have caused them to leave area; 89.3 another group of
 32 cowbirds surround a horse; 89.4 ♂ red-wing; one
 mourning dove; 89.6 mileage (2:45 P.M.) at N end of
 proposed Clinton Reservoir dam. Will keep list of
 kinds of birds noted along route to Lawrence (some one
 as followed this trip but earlier in day). 2 red
 tailed hawk just beyond dam site to N; meadowlark;
 eastern bluebird; mourning dove, cardinal, Eng sp;
 blue wing teal; eastern phoebe, cowbird, dickcissel,
 common grackle, red-wing blackbird, 3 red tail hawks
 95.7 at start (highway 59+23rd St) 3:00 P.M. at home in Lawrence
 noted a robin to actually knock a fox squirrel 1 1/2 feet from
 its position on a limb. It was within 5 feet of the robin's nest.

Haskell Bottoms, S of Lawrence, Douglas Co., Kansas

May 3, 1965

Checked birds for 1/2 hr at Haskell Bottoms
Left 23rd & Louisiana at
mileage 21.4, time 2:45 P.M.



Day windy, cloudy, hazy and warm.

Temp about 88°F. meadowlark
and redwing only 2 kinds of birds noted enroute. At 23.4
miles at pond at W side Haskell Bottoms. no birds associated
with pond, continued E to Haskell Ave. and returned to
pond. Birds observed across the mile road are: 4 redwing-
blackbirds, 3 grackles and 3 dickcissel to left and 2
meadowlarks between pond and first crossroads at 1/2
mile. at 1/4 mile beyond crossroads noted 1 lesser yellowlegs
and 1 solitary sandpiper feeding together along edge of
water of drainage channel. The solitary sandpiper preceded
the yellowlegs in foraging. The solitary has a characteristic
body movement like a modified spotted plover sandpiper,
tilting its entire body with pivot point at attachment of
legs. Between crossroads and Haskell Ave there were no
redwings because of dike area having been burned this
spring and not adequate vegetation present. 4 dickcissel
calling in field to N, however, one calling to right. Returned
to pond to W and noted an Upland Plover alight on the
S side of small pond on bank about 3 feet above the
edge of the water. It remained for 4 minutes and then
slowly worked its way down the grassy bank to the edge
of the water, the last foot deliberately as if not to disturb
the animal life at edge of pond. at water edge it drank
water (23 consecutive drinks at from 4 to 10 second intervals).
It would dip bill into water and then raise it up to allow
the water to drain down the throat. After drinking it
ascended bank much more hurriedly and then fed 5
three meadow, eating insects at about 1 per every 10 seconds,
searching right & left and in some cases hurriedly moving to
an insect on grass. This field, to my knowledge has
never been plowed but periodically ^{cut and} burned (once every year
on the average). The grass is native andropogon. It fed
at least 15 minutes at which time I left. at 300 feet S of
Broken-Arrow Park noted 1 scissortail flycatcher and one
barn Swallow. An added note about the upland plover:
the meadow has a new green growth of about 8 inches high

and the bird could be seen plainly at all times. This bird has a way of walking that suggests the mechanical cocking of head back and forth as it walks along. The back is similar to the Wilson snipe, the most characteristic feature is the large eye on a small head on a long neck. The bill seems a trifle large for the size of head.

1613 Tennessee St., Lawrence, Douglas Co., Kansas

May 3, 1965

Collected the following lizard:

650503-1 *Ophisaurus ventralis*, body length 201 mm, tail 274 mm
weight 40 gms.

From hillside among elm trees (remnant of old original deciduous forest but now modified to young growth of trees) on ground covered with dry leaves. Understory sparse and ground covered with 30 per cent vegetation. When touched with a stick (it was motionless when first observed) it ran 3 feet to a piece of cardboard. In 3 minutes it reappeared and cautiously moved out ^{its head out} about 10 inches and remained quiet until I placed my hand on its head & neck.

Several years ago I collected this species (see notes).

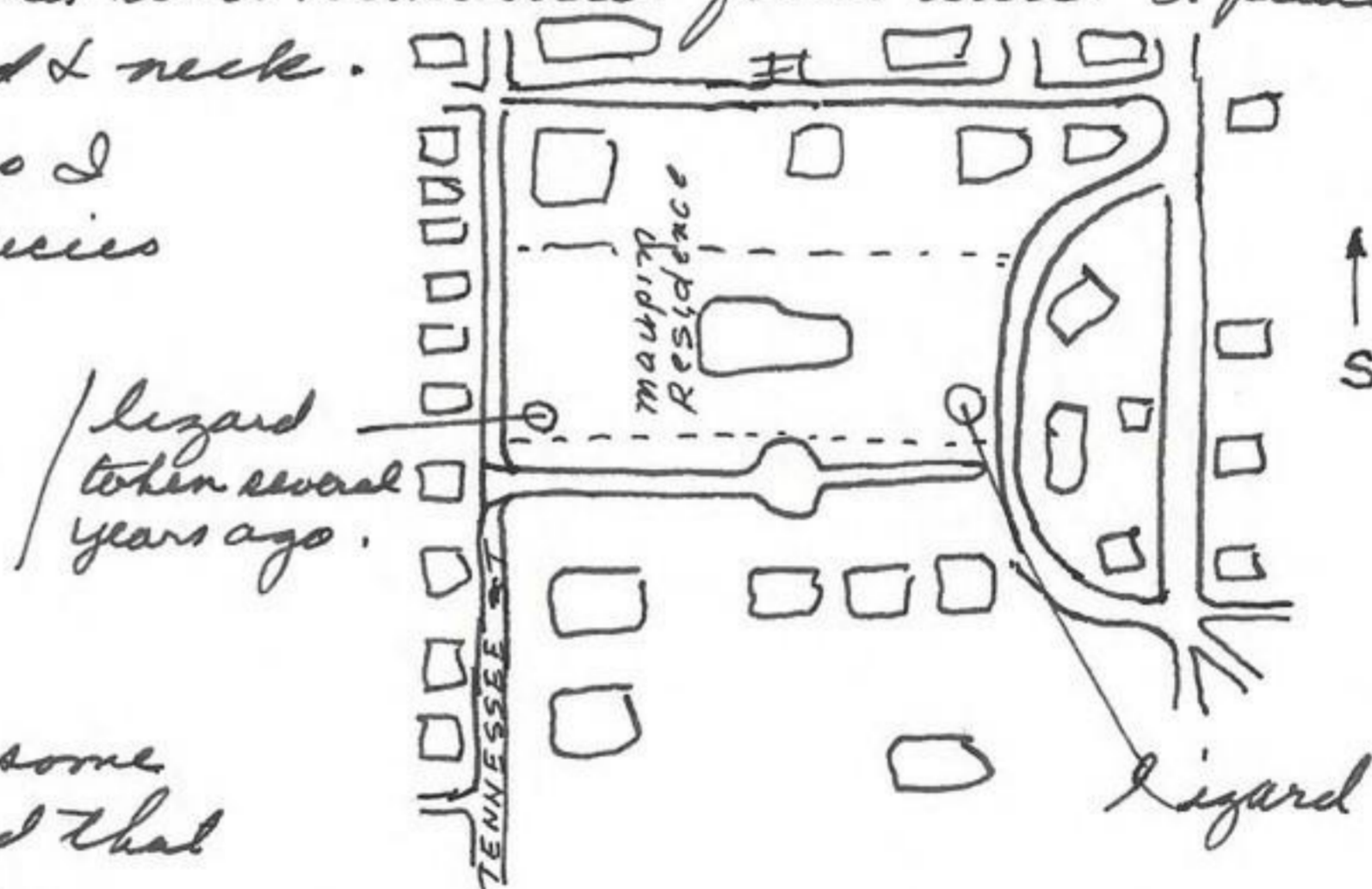
Dr. Edward H Taylor told me that 2 glass snakes were taken in

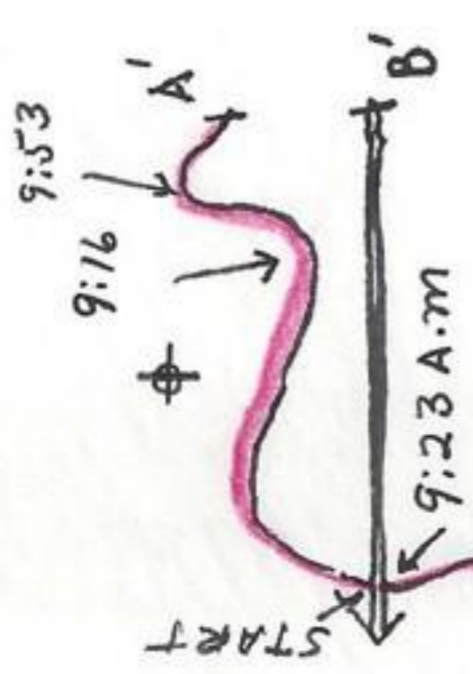
This same area some 5-8 years ago and that there is probably a

Colony here as this species is not frequently taken in Douglas Co. A robin nest and incubating female 10 feet from lizard. A colony of grackles about 150' from the area used by the lizard.

May 3, 1965

Two adult common grackles (males) were noted to fight on the ground for six minutes. At no time was the continuous body contact broken. Both birds rolled over from time to time with wings generally extended. The bill was used to hold on to feathers of the tail, wing or head. For a moment it appeared as if the grackles were caught by their wings and were attempting to free themselves. One finally escaped to fly across street some 150 feet closely



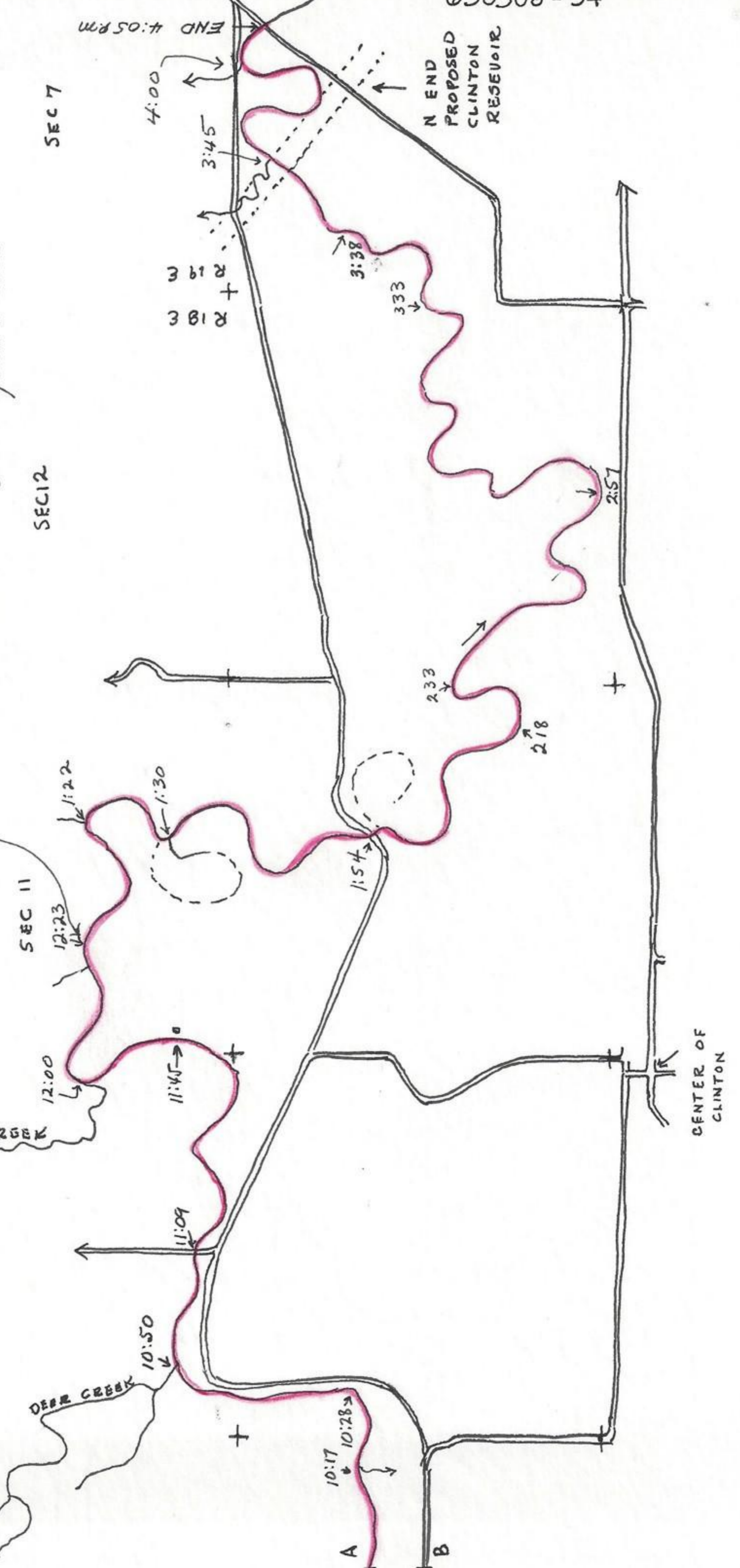


T. 13 S

Length of river = $9\frac{7}{10}$ miles
 Linear distance (direct) $4\frac{1}{2}$ miles



(Lunch, left 1:08)



73.5 robin, ² dickcissels on road & singing from telephone lines;
 73.9 eight grackles & 1 robin; 74.1 Eng sp., 74.4 2 mourning
 doves; 74.7 Eastern kingbird; 7:49 loggerhead shrike; dickcissel
 along road; 75.2 blue bird, eastern, arrived at bridge over
 Wabamoa at starting point at 75.2 mileage and at 9:10 A.M.
 Left bridge 9:23 and will keep complete census as far as possible.
 At this season there is great number of calls, some are difficult
 to identify because made by migrants and other calls not familiar
 to me. The larger conspicuous birds and those recognized
 will be recorded; others occurring in concentration ^{and} not easily
 identifiable will, of necessity, not be recorded but indicated
 as unknowns. I would consider this census as being
 80% complete because of the above limitations and that a
 some percentage of bird calls were not recognized or doubtful.
 I could see many small birds in trees but could not identify
 with certainty. It is difficult at this time of season with
 leaves on trees to see animals and birds and the lighting is not
 good because one is nearly always viewing into light rather
 than with reflected light. This morning before we left home
 the sky was blue & no clouds. At time we put in river the
 clouds had just started to form as rain clouds, wind high but
 not too noticeable in river channel, day warm. 9:23 yellow-
 warbler; water relatively clear and can see bottom in shallow
 parts; 9:25 2 mourning doves flew by; dickcissel calling from tops
 of trees along riparian growth. Cultivated fields adjacent; red-
 wing blackbird flew by; cardinal, redwing blackbird calling
 from top of tree; house wren; dickcissels numerous and at
 approx 1 per 250 ft singing from tops of trees; cardinal; 9:32 cardinal,
 9:34 2 bobwhites left side of river about 1/2 way up bank; 9:34
 Baltimore Oriole and 1 red-wing blackbird flew by; 2 cowbirds;
 yellow warbler, red-w. blackbird; 9:36 redwing; 9:37 2 ♀♀ red-
 wing blackbirds; 9:38 yellow warbler, dickcissel most common
 bird & always within voice range; 9:38 black capped chickadee; 9:40
 yellow-breasted Chat(?); chickadee, yellow warbler; 9:44 eastern
 kingbird, yellow warbler; 3 yellow warblers calling; Baltimore
 Oriole; now at turn in middle sec. 16, now to north; 9:45 yellow
 warbler, 1 red-wing blackbird; 9:47 indigo bunting, ♂♀ cardinal; 9:48
 yellow warbler, yellowthroat singing; Chipping sparrow; 9:50
 dickcissel still along edge of river in tree tops; 9:51 Baltimore
 Oriole; catbird; 9:52 eastern kingbird in small trees below top
 bank of river between large permanent trees and water, mourning

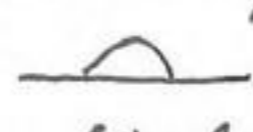
There are about 15 more birds in trees that I cannot identify as I move along in canoe at about 1 mile per hour. There are other calls that I cannot identify with confidence; 9:53 abrupt bend, now to E., Baltimore Oriole here, red-wing blackbird; 9:57 yellow warbling and warbling vireo; 9:58 2 titmouses calling. There seems, up to this point, that there are fewer birds on E-W section of river than on N-S sections and that there is a greater variety & number in less dense vegetation than mature riparian growth. moles have burrows down river bank to damp soil (2 ^{up to} feet above water) and then turn back, others go down thru damp soils to edge of water. There is another burrow that looks exactly like a mole but only $\frac{1}{2}$ inch wide. These generally are oriented parallel to water surface and somewhere in damp soils. Beaver tracks along edge of river and because of the slow moving, pondlike nature of the river, is a favorite place for beaver; 10:03 yellow warbler; 10:04 gnatcatcher; 10:06 fewer deckchessels along here; 10:07 goldfinch, several; since start have seen 15 large fish (probably carp), working on surface of water, one catfish caught on set line; 10:10 now approaching tree of mature stature, on both sides and are nearly in full leaf, some ^{spring} yellow in foliage; 10:12 several carp surfacing here, more than I have previously noted; 10:14 red-bellied woodpecker calling; yellow warbler calling; stinging nettle along slopes of bank from 2 to 3 feet high, plant growth from 3 feet above water to top of bank; 10:15 fox squirrel, these are difficult to see at this season of year; 10:16 ♂ & ♀ cardinal; 10:17 major creek from right; titmouse calling; there have not been frogs along bank; 10:20 Chipping sparrow calling; orchard Oriole calling; there are other kinds of birds I cannot identify; 10:22 titmouse, yellow warbler; 10:23 ♂ cardinal singing; 10:24 2 bluejay, 1 spotted sandpiper; maple leaves turn silver in channel when wind blows; 10:28 bend to N and old Camp site, rapids just around corner; black-capped chickadee feeding 3 feet above water in small shrub; rapids can be run if slowly negotiated (a long apron with shallow rocks, the spotted sandpiper noted earlier is preceding us down the river at about 60 takeoff and 200 feet return to river, 10:32 ♂ cardinal; 10:34, 2 Louisiana water thrushes, they fed at edge of water and flew from side of river to other side 4 times down the river before leaving edge of water, they had a sharp call, one Baltimore Oriole; 10:37 female red wing blackbird, yellow warbler singing; first deckchessel calling for some time;

10:39 *Luna pipiens*, first one noted and surprised there has not been
 more along river; 10:40 titmouse calling; gnatcatcher calling; can
 hear yellow-shafted calling; 10:48 red-bellied woodpecker, yellowthroat,
 spotted sandpiper flying up river; 10:45 yellow warbler, titmouse;
 10:46 several goldfinches, chickadee calling, several rill I cannot ident-
 ify; 10:47 cardinal; 10:48 yellow warbler; Census mainly by calls and
 difficult to see birds; 10:49 two mourning doves flew by, chipping sparrow,
 Cardinal; 10:50 goldfinch; gnatcatcher; ♀, female cardinal; 10:50
 mouth Deer Creek from left, creek clear and considerable water.
 East of here there are fewer large trees along edge of river; 10:51
 Baltimore oriole; cannot understand why there are not more
 oriole nest visible in winter when leave are off of trees; 10:54
 red-bellied woodpecker, gnatcatcher, yellowthroat calling;
 10:56 male cardinal; 10:58 yellow warbler calling; 11:00 considerable
 beaver activity along edge of river, cardinal & indigo bunting
 singing; 11:01 2 cardinal & yellow warbler singing, one yellowthroat
 singing in tree 70' above ground; 11:02 yellow warbler singing,
 cardinal singing; 11:04 yellow warbler; in last five minutes
 have seen 2 *Luna pipiens* and 3 *Aeris*, 11:09 bridge over river,
 one spotted sandpiper flying up creek, English sparrow, eastern
 phoebe at bridge, first *Aeris* calling along river, along all
 steep steep bank beaver have left slow marks above water
 edge and probably at a time when water was higher; trees
 smaller and fewer as we go down river east of bridge, beaver
 actively on both sides; 11:15 beaver house of sticks against bank
 on right, built over older mud packed base, hole at water
 level, sticks from small trees cut by man when just in bud,
 most recently placed limbs are beaver cut with green leaves and
 at water edge only. 11:16 frogs increasing in numbers, dickcissel
 calling, ♂ & ♀ cardinal; 11:17 indigo bunting, good beaver bank
 holes associated with general area of beaver house & down
 stream; 11:18 beaver trails up bank, mourning dove flew by,
 one cardinal, in 40 feet of river bank of damp to wet mud and
 approx 20% slope counted 6 frogs; 11:22 spotted sandpiper at
 cascades; Baltimore orioles, 1 b.c. chickadee; 11:24 orchard
 oriole, mourning dove, yellow warbler calling; 11:24 chickadee
 calling; 11:25 spotted sandpiper last seen still preceding us
 down river at short hops, three cowbirds on limb (2 ♂♂, 1 ♀)
 they call and bend forward with outstretched wings as if
 regaining balance, one mourning dove, dickcissel calling,
 orchard oriole within 10 feet of a female cowbird; 11:30 red-bellied

woodpecker, dickcissel calling, spotted sandpiper still preceding
 us down river; have noted 2 swallowtail butterfly, one black and
 yellow with considerably more black than usual and of different
 proportion and one a white & black of similar proportions; 11:31
 chickadee calling, dickcissel calling; 11:33 titmouse, 11:35 yellow-
 warbler & gnatcatcher, 3 cowbirds, 11:36 gnatcatcher & yellow warbler;
 11:37 red-b. woodpecker; 11:38 green heron feeding at edge of water &
 flew up into trees before flying down river, dickcissel calling;
 11:38 recent mud slip while water at present level, 8x8 feet,
 dickcissel; 11:39 dickcissel, yellow warbler, warbling vireo, pewee,
 11:40 one group of 12 large cottonwood, right, spotted sandpiper
 still preceding us down river, one tall willow tree still in yellow
 leaves; 11:41 Baltimore Oriole; thrush calling (gray-checked, call
 with ascending notes); 11:45 channel narrows with several small
 and navigatable rapids; yellow warbler calling, dickcissel, Eng
 sparrow at farm house to right; 11:47 goldfinches, cardinal,
 red-bellied woodpecker; 11:49 crow left trees and flew down river
 which is unusual as crows are seldom noted in river area except
 at outer edge of riparian vegetation bordering fields or flying
 over area, 2 cowbirds, red-bellied woodpecker, Baltimore
 Oriole, red-wing blackbird, mole to within 2 feet of water; 11:52
 yellow warbler, gnatcatcher; 11:54 house wren; 11:55 titmouse
 calling, goldfinch; spotted sandpiper still preceding us down
 river, gnatcatcher, cardinal calling; 12:00 mouth Coon Creek
 to left, spotted sandpiper allowed us to within 30 feet before
 it flew down creek, ordinarily it fly at about 60 feet or so;
 clear water from Coon Creek and considerably less than from
 Deer Creek and carries a grey color as if contaminated with
 silt, can hear cardinal, yellow warbler and goldfinch and
 Baltimore Oriole, dickcissel & chickadee, male cardinal bathing
 in water at edge of river; 12:13 cascades, meadowlark, dickcissel
 from right; 12:17 yellow warbler, cardinal ♂ & ♀, house wren,
 warbling vireo, titmouse, considerable beaver activity, several
 roots exposed and eaten, claw marks on side of bank; 12:20 pewee,
 12:23 stopped for lunch at first contact with side of valley. at this
 point several deer, some large tracks, had crossed the river and
 gained the opposite bank. The river at this point can be forded
 by deer. Pewee and yellow warbler here. a vireo called *sb* *sb*
 Day still overcast with procession of rain clouds, no sun and relatively
 high wind, temp comfortable. This area is removed from
 roads and is in undisturbed condition. Left lunch area 11:08 AM

beaver and raccoon traps along creek, one trail led to top of bank,
 1:10 pewee, good beaver holes in bank, mourning doves, cardinal
 chickadee, 1:12 spotted sandpiper; 1:15 2 spotted sandpipers saw,
 of the one noted at 1:12; one flew up and one flew down river;
 1:17 summer tanager; 1:18 cardinal, gnatcatcher; red-bellied
 woodpecker; b.c. chickadee, cowbird (2); 1:20 cowbird and
 painted bunting; good section of river for beaver; 1:21 cardinal,
 yellow warbler singing; 1:22 creek from Peterson pond and
 canyon, very narrow and graded high, water issuing into river &
 clear; 1:24 mud slide 1/2 way across creek, may have been all
 the way and since eroded to 1/2 way, recent; 1:25 pewee and
 b.c. chickadee; 2 spotted sandpipers; 1:26 Baltimore Oriole,
 b.c. chickadee; yellow warbler; 1:28 red-tail hawk; 1:30
 gnatcatcher and titmouse at mouth of abandoned ot-bow,
 b.c. chickadee, a large Rana pipiens was at the mouth of a
 beaver hole, abandoned, 1 1/2 feet above level of water and re-
 treated into hole as we passed. as we retraced and checked
 the frog was 1 foot in hole and then disappear further into
 recess. This frog seemed to have more black (lines) and white
 around eyes; 1:35 cardinal singing; yellow warbler; 1:38 cardinal
 singing and sandpiper preceding us down creek; one of the
 two spotted sandpipers left and flew up creek past us; yellow
 warbler singing; 1:40 cardinal, yellow warbler & yellowthroat
 singing; chickadee; 1:43 dickcissel, all along way have
 noted holes, approx 1 1/2 inches in diameter, extending from about
 4 feet above level of water to below water. These holes are
 tunnels. Some have been modified by carp and others
 have been excavated by muskrats, beaver & possibly raccoons.
 They may be made by crayfish; 1:45 pewee & cardinal, beaver
 runway up bank; 1:46 2 cardinals ♂ & ♀, spotted sandpiper let
 us get within 10 feet of him (or her); 1:47 red-bellied woodpecker;
 1:49 goldfinches; yellowthroat; chickadee; 1:50 orchard Oriole;
 1:52 mourning dove; cardinal & yellow warbler; 1:53 small
 turtle (3 inches in diameter) left log. (first one noted so far);
 1:54 bridge across Wakarusa; 1:56 Aeris calling; red-bellied
 woodpecker; 1:58 yellow warbler, cardinal; 2:00 cardinal and
 yellow warbler; 2:01 green heron left edge of water & flew into tree
 40' high; 2:01 major creek from right; 2:02 red-bellied woodpecker,
 yellow warbler; 2:06 chickadees; Aeris calling; 2:07 beaver house on
 left, small limbs, other good bank holes; 2:08 red-bellied
 woodpecker; beaver trail up bank; mole burrow to water level;

2:11 crested flycatcher; 2:15 spotted sandpiper flew up river, good beaver holes in bank, indigo bunting; cardinal ♂ + ♀; 2:16 chickadee (all chickadees are black-capped); 2:17 a carp 1 foot long jumped out of water twice in same spot and first to jump like that so far; 2:18 high shaly bank to right, raccoon tracks, spotted sandpiper; first rapids just below cliffs negotiable, second set beyond^{2:22}, refereed first partage on trip, house wren, mourning dove, red tail hawk, Baltimore oriole; 2:26 now straight N and slightly to W, wind at back, spotted sandpiper; good beaver holes and activity since cliff area; 2:28 dickcissel; cardinal, Baltimore oriole³, chickadee; 2:30 cardinal; 2:32 3 male Cowbirds, 1 female together; 2:33 big log jam at bend of river (largest seen on entire trip from Richland m); rapids below log jam shallow; yellow warbler singing, dickcissel, red-bellied woodpecker, narrow channel beyond; 2:37 2 spotted sandpipers; 2:38 great horned owl, first one seen observed today, chickadee, many unidentified bird calls, cardinal; 2:40 first cottontail today; 2:42 cardinal, yellow warbler; 2:43 Acris calling; 2:45 cardinal; 2:46 red-bellied wood pecker; 2:47 green heron, spotted sandpiper, 2 crested flycatchers (*Myiarchus cinerascens*); 2:48² blue jay, dickcissel, goldfinch, cowbird, chipping sparrow; 2 mourning doves; 2:50 2 downy woodpeckers, yellow warbler; 2:51 narrow mouth wood calling; 2:53 channel 10 feet wide at one point, chickadee, cardinal, red-bellied woodpecker, cowbird, channel very narrow thru here, crested flycatcher; 2:55 cardinal. 2:56 cowbird + cardinal; high sandy bank to right; 2:57 goldfinches; 3:00 yellow warbler; 3:04 yellow warbler + cardinal; spotted sandpiper; 3:05 large natrix on bank just above water, dead, tail damaged; 3:06 cardinal; 3:10 spotted sandpiper; 3:11 3 spotted sandpiper ahead of us, 2 blue wing teal ♂ ♀ left river; cardinal; 3:13 crested flycatcher; 3:15 cattle using river area + noted for first time on trip, they disturb the bank and soils immediately adjacent river, deer do not make such trampling effects, yellow warbler, cardinal; 3:18 in middle of straight course of river; 3:18 creek from S, ♂ ♀ cardinal, goldfinches, good beaver holes, cardinal, 3:22 2 red-tail hawks flew by to E, maple seeds dropping into river like helicopters, Baltimore oriole, good beaver tracks; 3:21 chickadee, titmouse; 3:23 good beaver holes; 3:25 mourning dove flew by, gnatcatcher; 3:33 young under utility lines, spotted sandpiper & goldfinches; 3:33⁴ cardinal + yellow warbler; 3:36 chickadee + sandpiper; 3:38 yellow warbler; 3:39 red-bellied woodpecker, cardinal, yellow warbler; indigo bunting

can hear from thunder to S, skies overcast with rain clouds;
 3:42 gnatcatcher, for last 5 minutes have been going thru
 area of last years tornado, scar still present and recognizable;
 3:45 major creek from left; high winds have been keeping birds
 down low; 3:46 yellow warbler; 3:48 nice sandy bank to left; 3:50
 started to rain, each drop as it hits water makes a bubble
 approx 1 inch wide ; 4:00 major creek from left, still
 raining; ^{4:05} bridge over Wakarusa and end of trip on river.

The following are noteworthy: Only one great horned owl
 was seen which is a rather low number for this length of river.

There were many groups or individual Cowbirds, general a ♂ + ♀
 together but some singles and as many as 4.

no starling.

Only 2 red-tail hawks which is a low number for distance
 covered.

Character of river different - from bridge W Clinton to bridge
 N Clinton of slow, wide, smooth water. From bridge E
 of Clinton to bridge just beyond proposed N end dam, irregular
 with narrow, fast moving water, many rapids. Some areas
 long, straight & narrow.

There are definitely aggregates of birds not correlated with
 vegetation communities. There are not many birds that inhabit
 the area of fluctuating water level. The four most common are:

1620 Tennessee, Lawrence, Douglas Co., Kansas

May 11, 1965

Bobtailed fox squirrel feeding on seeds of black walnut
 (see notes of the feeding in same tree last year at same period).

Compus, Univ. Kansas, Lawrence, Kansas

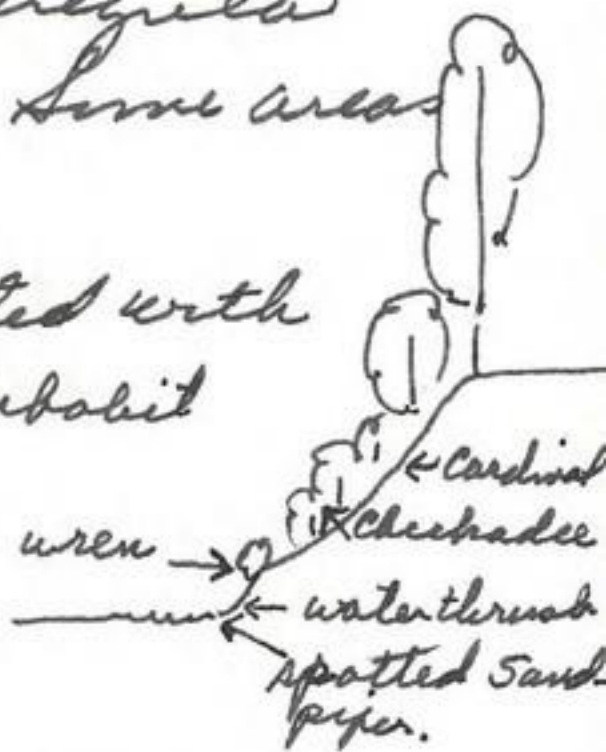
May 11, 1965

A fox squirrel with nest on W side Hawthorn Hall (on window
 ledge in Virginia creeper vines) was noted to be in nest in
 morning to about 1 o'clock and then away until twilight.
 may be factor of exposure.


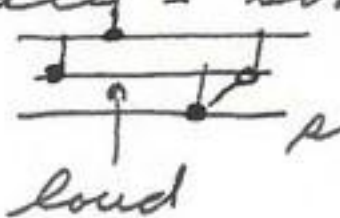
Wakarusa River, Douglas Co., Kansas

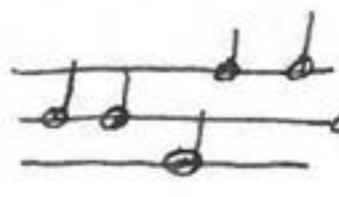
May 11, 1965

made quick trip to Clinton area for photographing but lighting
 conditions changed. Took one picture 650511-1 of ^{at} bend of
 Wakarusa River (see 10:28 AM position on map of May 8 for position).
 shooting S.W. ^{one sandpiper at rapids below bend downstream} At 3 mi. W and 1 mi. N Clinton noted a red headed
 upstream to



woodpecker. A hairy woodpecker, at 8/10 mi. W and 1 mi. N Clinton, was feeding insects to young in nesting hole. A hummingbird, 2 olive backed thrushes also noted here. Recorded several calls of birds here:

oakland oriole - song chatter followed by sharp notes. Peewee ,  slow slow.

gnatcatcher  soft song and not generally heard.

red-bellied woodpecker. loud call like for squirrel + a sturred not like a call given with a call.

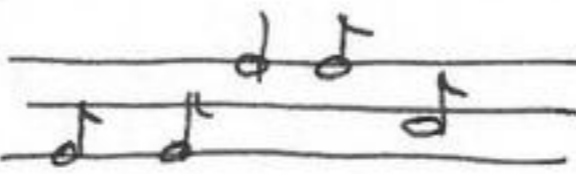
red-eyed Vireo (~~barrois eye song~~ ^{line})  always in tops of high trees and continually moving.

Photo 650511-2 Annette Christie.

Photo 650511-3 downstream at bend (see 650511-1 for position) beyond rapids

1620 Tennessee St., Lawrence, Douglas Co., Kansas

May 11, 1965

2 crested flycatchers in mulberry tree, just passing thru area as I have never seen this bird in the area before, noted at 7:10 P.M. with lights fading.

3 1/2 mi. S Lawrence (P.O.), Douglas Co., Kansas

May 15, 1965

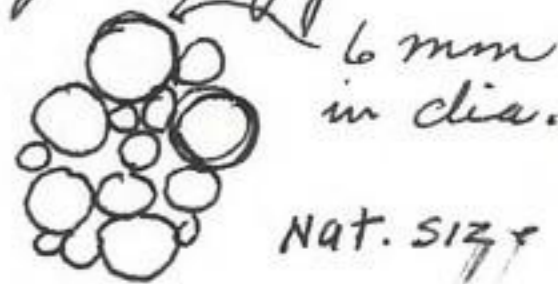
Collected a *Burtonia longicauda* as follows:

650515-1 ♀ *Burtonia longicauda*, ~~testis~~ ovary, largest egg

6 mm in diameter

Total length of
bud 167 mm,

weight 310 grams



This bird was bathing in a small pool of water (12" x 8"). Its tail bobbed up and down in a rather awkward way while the body (anterior end) was splashing in the water. It is likely that this female is a breeding bird and nests in the area. On the neck (inside skin) are two blackish areas 3/4 inch in diameter.

4 1/2 mi. S and 1/2 mi. E Lawrence (P.O.), Douglas Co., Kansas

May 15, 1965

Collected the following birds:

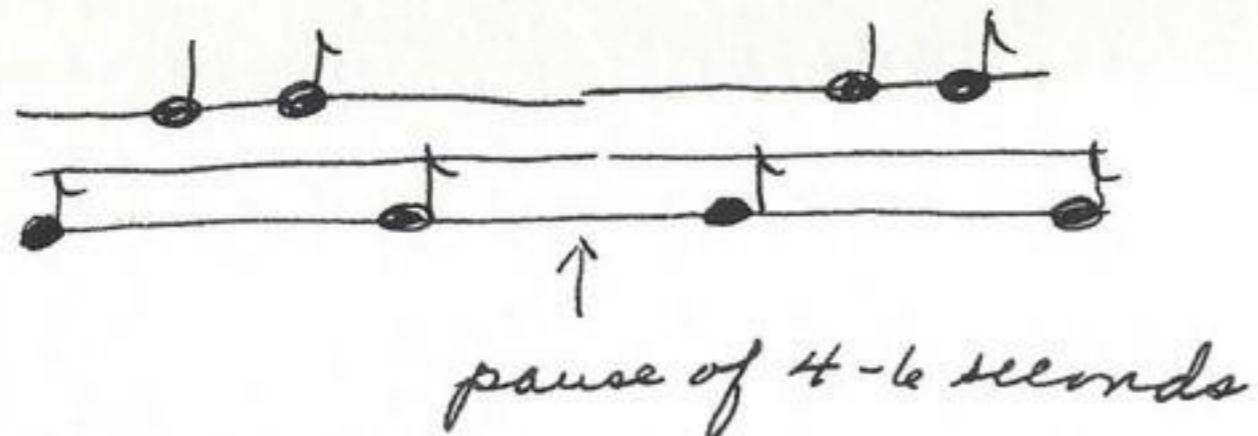
650515-2 *Vireo olivaceus* T.L. 165 mm, wt 15 gms, testis 10 mm

650515-3 *Contopus virens* T.L. 166 mm, wt. 16 gms, testis 4 mm.

Recorded the following songs: The red-eyed vireo gives a call while feeding, nearly always in top of high trees and with the wind blowing is seldom seen because of the

44
43
43

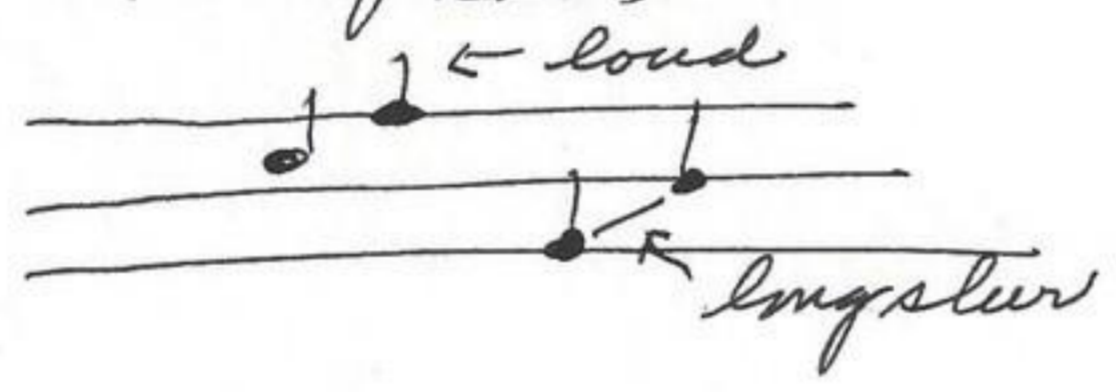
movement of the leaves. This call is given without variation and is the most characteristic call of the red-eyed vireo



The Baltimore Oriole has many calls but most common feeding call.

then 4-6 second pauses & then again when singing the song is variable and at times it seems as if the birds was preoccupied and the song is incomplete or irregular. when disturbed offers 4 or 5 sharp loud calls.

The eastern ^{peewee} phoebe is:



This is the usual but will sometimes variable. Under certain conditions the last slur only is heard.

The indigo bunting has a song (wobbling and mechanical like a duck's call) and then followed by three notes on same note

(song) → then most characteristically ♪ ♪ ♪

The song can be only two notes or other combinations but generally always followed by the three end notes.

The crested flycatcher has a loud harsh ^{warning} call of about 4 notes which in that combination is repeated after a pause



15/20 mi. E and 7/20 mi. N Clinton (center of town), Douglas Co., Kansas.

May 16, 1965

(The town of Clinton has been used many times for reference location. The center of town is 1 mi S and 200 feet W of the NE sec 22, T 135, R 18E.) From the stable hillside forest on S side of Wakarusa valley and at about 3/4 way up to top, collected 4 birds as follows:

- 650516-1 *Setophagus ruticilla* 132 total length, wt 9 gms, ovary 4.8 mm in length
- 650516-2 *Setta carolinensis* 147 total length, 21 gms wt Left testis 4.6 mm, R. testis 3 mm

650516-3 *Icterus galbula* ♂ 192 mm total length, 37 gms wt.
 Left testis 14.8, Right t. 12.5
 Total weight of both testes 1 gms.

Even though this bird was wounded with a broken wing, and while being pursued it continued to sing. When finally caught it gave a loud cry which brought the female to within 30 feet.

650516-4 *Passerina cyanea* 141 total length, 14 gms wt. ♂
 R. t. 8.8., Left t. 8.4

3 males and 2 other female American redstart were noted in forest. These birds were in upper 3/4 level of hillside in big timber and broad exposure. The males fed at about 1/2 way up height of trees, in what could be considered understory trees. Other birds, besides the ones listed above were noted in deciduous forest commonly in the approx. frequency (highest to lowest):

Baltimore Oriole	Chickadee	red tail
red-eyed vireo	orchard Oriole	
crested flycatcher	wren	
redstart	red-bellied woodpecker	
titmouse	thrush	
blue jay	goldfinch.	

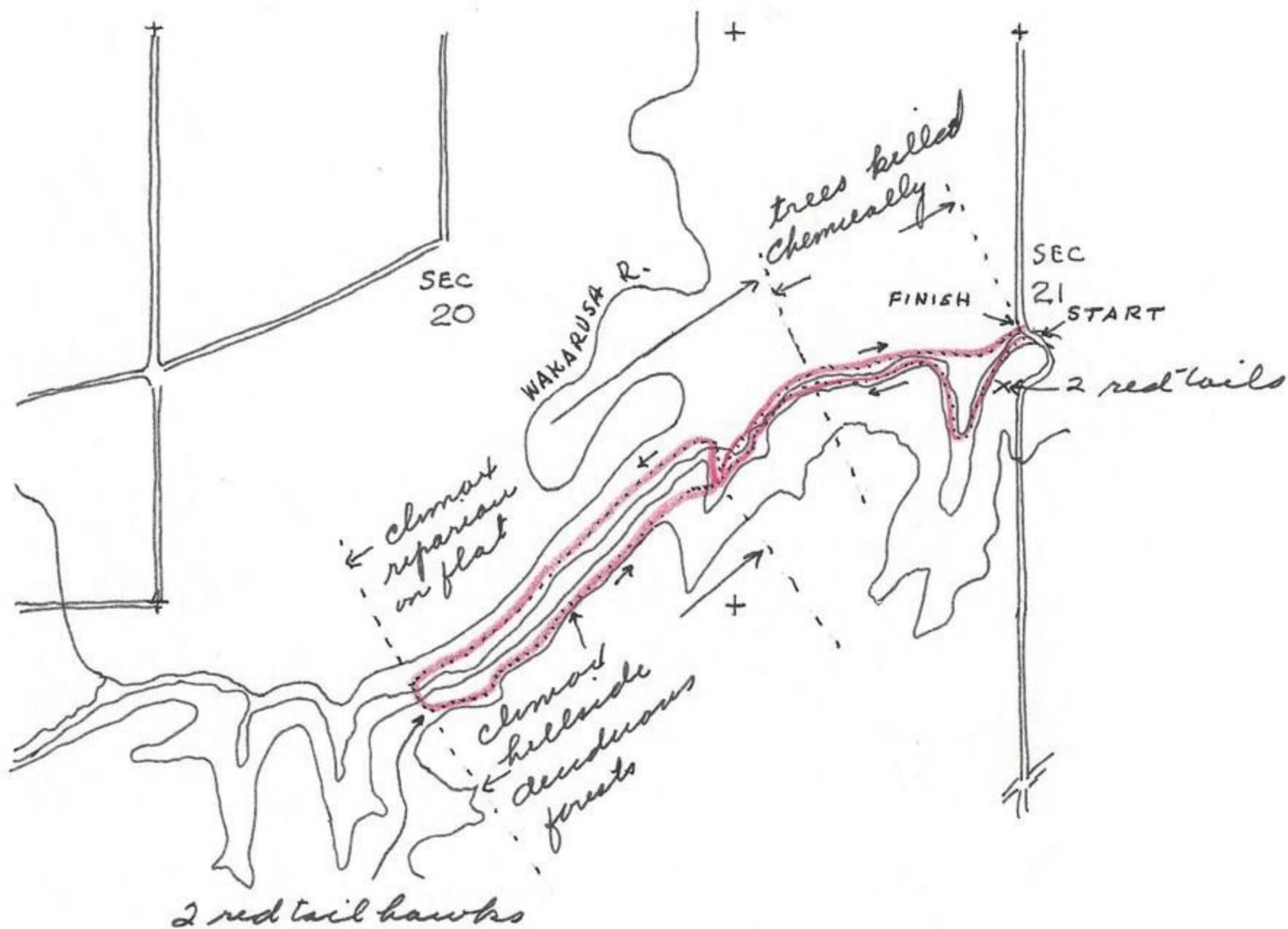
It is possible to walk thru this forest without too much difficulty. On way back to car at bridge photographed Wabarus River at bend at 9/10 mi. E + 7/20 mi. N of Clinton. Followed along river to bridge and noted the following birds. 14 Crested flycatcher, 1 great horned owl (1/10 mi. S bridge), 12 red-headed woodpecker, 2 warbling vireo, 8 red-eyed vireo (this bird is irregular in distribution, 10 cowbird (one female shot in field had an egg ready for laying. When shot it dropped to ground + male come over to within 2 feet + called), 3 house wren, 2 thrush, (no bluebirds), 2 gnatcatcher, 13 black capped chickadee, 6 titmouse, 2 white-breasted nuthatch, 13 peewee, 8 indigo bunting, 1 mourning dove, 2 hairy woodpecker, 5 grackles, 2 dickcissel, 8 goldfinches. On two occasions came upon 2 fox squirrels, sunning on lower branches of trees (generally old broken) 4 feet from the ground. They belated approach to within 40 feet and then left unhurriedly. One fox squirrel in log jam in center of river bed. It ran to the trees on bank.

In a muddy creek bed, raccoon had made a packed trail rather than use general area of mud in creek bed.

Wakarusa River, SW Clinton, Douglas Co., Kansas

May 23, 1965

made trip along S side of Wakarusa Valley, SW of Clinton, starting from road, at base of hill near middle of sec 21 and followed SW along side of valley, along base of hill to most western point



of trip and then on hillslope on return (1/2 way) then down to base of hill again. From along this route collected the following:
 At 9/10 mi. S and 2 4/10 mi. W Clinton (P.O.), Douglas Co., Kansas collected a young barred owl:

650523-1 *Strix varia* total length 310 mm, wt 410 gms. ♂
 A second owl ♀, 20 feet from this one measured 350 mm total length, being larger. These two owls were 12 feet ^{above ground} in height, one in an old fallen tree and one in a living elm. They faced the west and were calling when first discovered. At 20' away they finally recognized me and turn their head almost completely around and in this position remained motionless (20 minutes) until I knocked them to the ground with a stick. I do not think they were capable of flight. Both adults called approx 150 feet away from tall trees and did not come near but did return twice ^{to their original position} after leaving the area (returning to about same position 150 feet away). The young stopped calling when they

48
47
recognized I was in area; the adults continued with their morning calls and decoying activity. The area is climax riparian, on flat area between creek and side of hill. This area suggests tropical growth.

At the above locality about 200' from barred owl called:
650523-2 *Myiarchus cinerascens* T.L. 210 mm, wt 35 gms, testis 11 mm.

At 9/20 mi. S and 1 1/10 mi. W Clinton (P.O.), Douglas Co., Kansas collected the following three birds:

650523-3 *Myiarchus cinerascens* T.L. 215 mm, wt 34 gms, testis 11 mm

~~650523-4~~ *Phrona olivacea* T.L. 190 mm, wt 31 gms, testis 11 mm

This bird was molting and was regurgitated red-green.

650523-5 *Melanerpes erythrocephalus* T.L. 241 mm, 82 gms wt, testis 7 mm

In the first part of trip the trees, at least a greater percentage of them, had been chemically killed and were free of leaves. In this area were the greatest numbers of birds observed along trip and included: summer tanager, field sparrow, blue grosbeak, bluebird (eastern), red-tailed hawk, red-headed woodpecker, olive-sided flycatcher, crested flycatcher, acadian flycatcher, cowbird, indigo bunting, red-wing blackbird, yellow-throat warbler, blue jay, English sparrow, yellow-billed cuckoo, ^{cardinal} ~~mockingbird~~, ^{brown thrasher} ~~in field to N~~, wren, chickadee, titmouse, white-breasted nuthatch

In the lowland riparian (climax) noted fewer birds than in chemically treated area and included: scarlet tanager, red-bellied woodpecker, crested flycatcher, cowbird, blue jay, cuckoo, chickadee, white-breasted nuthatch, brown thrasher, downy woodpecker, hairy woodpecker, cardinal, ^{barred owl} red-eyed vireo

On hillside (3/4 up) on benchland noted even fewer birds: gnatcatcher, blue jay, cardinal, thrush.

As soon as possible I will check these three areas as to per cent frequency of birds in the three areas under consideration.

4 mi. S and 9/20 mi. E Lawrence (P.O.), Douglas Co., Kansas

May 24, 1965

From riparian community (on drier slope) collected the following indigo buntings:

650524-1 *Passerina cyanea* T.L. 140 mm, wt 15 gms, largest testis 8x7 mm

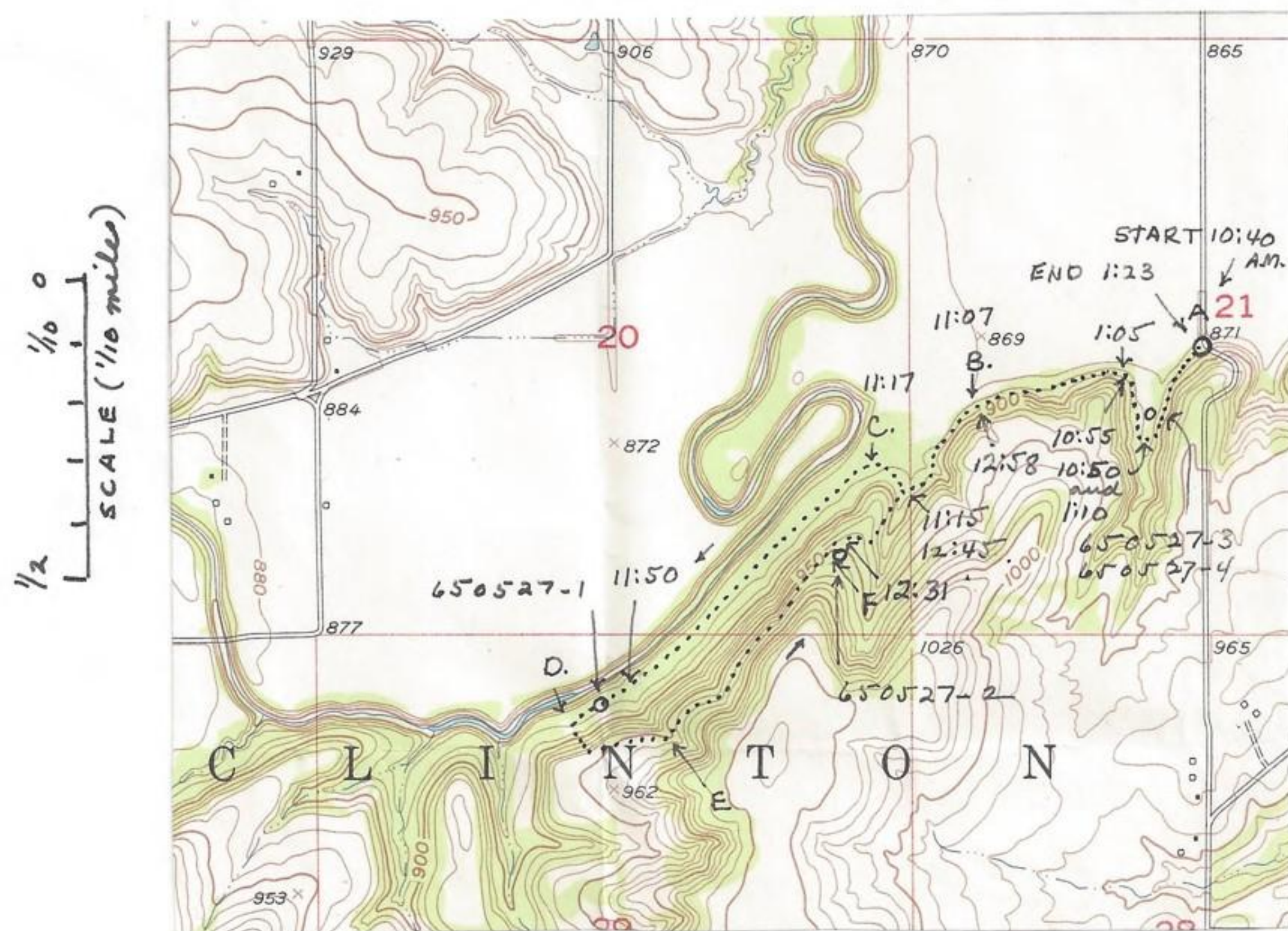
650524-2 " " T.L. 135 mm, wt 12 gms, testis 8x7 mm

These two males were noted in same area (separate territories) on several previous trips. One sang on wing about 150' above ground, after which it glided down to usual song perch,

South side Wakarusa Valley, SW Clinton, Douglas Co., Kansas

May 27, 1965

Annette^{P.} and I made census of birds on S side of Wakarusa Valley, SW Clinton. Objective: to determine percent frequency of birds in three different ecological communities; one produced by man (A to B) of chemically treated hillside deciduous



forests, now mostly dead standing timber without leaves; B to C is hillside deciduous forest, slightly modified but not chemically; C to D. climax riparian forests, dense like tropical forests and on flat from valley flood plain (upper story, understory and shrub); E to F hillside deciduous climax.

Enroute from Lawrence (via paved highway to turnoff west of Clinton) made a list of the birds observed. Left home 10:10 at 267.3, temp 62°F. meadowlark, robin, English Sparrow, starling, dickcissel, barn swallow, 2 great blue herons flying above creek at Washington bridge, grackle, red-winged blackbird. S end of proposed dam of Clinton Reservoir 75.8 mileage (will keep complete census across proposed dam area to starting of main census), 5.9 red winged blackbird, 5.9 meadowlark, red wing blackbird, chimney swift, 6.3 3 dickcissels, Eng Sparrow, 6.5 dickcissel, 6.6 red winged blackbird, 6.7 dickcissel, meadowlark, 7.0 dickcissel, 7.1 Rock Creek bridge, 7.2 dickcissel, 7.3 red-headed woodpecker, 7.4 Eng. sparrow, 7.6 dickcissel;

8.1 3 dickcissel; 9.0 dickcissel; 9.4 meadowlark, Eng Sparrow;
 9.5 Eng Sparrow, 9.6 grackle, 9.8 Center of Clinton (P.O.), orchard oriole,
 grackle, 10.1 meadowlark, 10.4 mourning dove; 10.5 2 dickcissel;
 10.8 meadowlark; 10.9 to N dickcissel 10.1 dickcissel; 11.0
 grackle; 11.7 2 cowbirds, 2 mourning dove; 12.0 now to S South
 and leaving main road; 12.0 dickcissel; 12.1 dickcissel;
 12.3 2 ♂♂, 1 ♀ Cowbird, dickcissel calling, horned lark; red-
 winged blackbird, dickcissel; 12.4 dickcissel; 12.6
 meadowlark, 12.7 dickcissel calling; 12.7 male Cowbird; 13.0
 south end of valley at base of hill and parking car here;
 10:40 AM starting census (complete). 10:40 yellowthroated warbler;
 titmouse calling to S; pewee calling; chickadee calling; 10:41
 2 blue jay; 10:41 mourning dove flew from nest in small elm tree;
 10:47 2 cowbirds; 2 crested flycatchers, brown thrasher, cardinal
 calling, field sparrow calling in same tree as observed May 23;
 10:46, ^{yellow-billed} Cuckoo; 10:47 ♂ ^{summer} ~~scarlet~~ tanager (moulting); 10:50 creek;
 10:51 house wren, indigo bunting; 10:55 point, dickcissel calling
 from N, redwing blackbird ♂ from marsh area, spring ^{seeping} flowing
 in good quantity; 10:56 cardinal, chickadee, dickcissel; white-
 breasted nuthatch; 10:58 sky clouding over and breeze cool;
 11:00 red headed woodpecker, Eng sparrow, these birds are about
 3/4 miles from human dwellings; 2 mourning doves, dickcissel
 calling to N; ruby-throated hummingbird; 11:02 3 eastern
 bluebirds; 11:03 acadian flycatcher; 11:05 field sparrow,
 mourning dove; 11:07 end of chemically treated forest. 11:10
 cardinal, titmouse, Baltimore oriole; 11:15 mouth canyon.
 11:16 blue jay; 11:16 acris calling, male & female eastern bluebird,
 red-bellied woodpecker; 11:17 starting into climax riparian forests,
 pewee calling, 2 mourning doves, titmouse calling, blue jay,
 cowbird, 11:21 2 crested flycatchers; 11:21 cowbird; red-headed
 woodpecker; 11:24 red-eyed vireo singing; 11:25 ♂ ♀ pewee,
 red-headed woodpecker; 11:27 pewee, whitebreasted nuthatch, crested
 flycatcher; scarlet tanager; 11:29 blue jay, red bellied woodpecker,
 crested flycatcher, red-bellied woodpecker; 11:31 thrush (not olive
 sides); white breasted nuthatch; 11:35 cardinal; 11:37 red-bellied
 woodpecker, cardinal, blue jay; 11:40 black capped ^{chickadee} ~~chickadee~~,
 3 blue jay, red-bellied woodpecker, titmouse; 11:41, ^{hairy woodpecker} 2 fox squirrels
 6 feet from ground and tame; 11:46 Baltimore oriole, titmouse,
 pewee, 11:48 2 cardinals; 11:50 thrush, out of climax riparian
 into ^{old} cleared riparian now grown to shrub and grasses. The
 butterflies in climax riparian are numerous and varied

The swallowtails are of at least 6 species, the common one a white and black. In cleared area and up slope and beyond to beginning of upper hillside climax forest, recorded the following: downy woodpecker; 11:55 collected a olive-sided flycatcher from old tree in cleared area of riparian community:

650527-1 ♀ *Nuttallornis borealis* T.L. 182, wt 34 gms, ^{ovary} testis 7.5 x 4.8 largest ovum 1 mm, most ova same size. Bird very fat on dorsal rump and sides. The locality for this bird is 1 mi. S and 2 1/2 mi. W Clinton (P.O.), Douglas Co., Kansas. This bird kept moving ahead of me about 120 ft distance.

12:00 red-bellied woodpecker, 2 house wrens, titmouse, pewee, 4 eastern bluebirds in area around open field. Gained benchland up slope to open field. 12:06 ² meadowlark and a mockingbird, the latter singing in isolated tree (bush) in center of field; 12:09 mourning dove left nest in elm tree, nest 12 feet high, bird performed cripple act; 2 blue jays; 12:12 4 cowbird, 1 red headed woodpecker; meadowlark; 12:12 titmouse; 12:14 entering sidehill deciduous climax. 12:16 cardinal; 12:19 2 blue jay; 12:20 2 chickadees; 2 redtails; 12:30 Titmouse; 12:31 leaving hillside climax; 12:33 collected an olive-sided flycatcher from tree bordering open field; (8/10 mi. S and 2 1/10 mi. W Clinton (P.O.), Douglas Co., Kansas);

650527-2 ♀ *Nuttallornis borealis* T.L. 183, wt 38 gms ovary 8.6 x 4.6 mm, ova all same size, bird fat in upper tail covert area & on sides around legs.

12:34 family blue-birds (eastern) one of family just able to fly; 12:35 pewee; blue jay; 12:36 dropping down slope to mouth of canyon along old road, at top of road noted a ♂ + ♀ Bewick Wren and young; red-bellied woodpecker; Baltimore oriole; 12:45 mouth canyon at pond, cowbird; now to east; 12:47 cardinal; 12:50 red-bellied woodpecker; 12:58 beginning of chemically treated deciduous forests, clear skies now but breeze cool and uncomfortable in shade; 12:55 red-headed woodpecker; 12:56 cowbird & indigo bunting; dickcissel north; 1:02 ^{house} wren and chickadee; indigo bunting; chickadee; indigo bunting; 1:05 dickcissel to north, chickadee, cardinal, Baltimore oriole, house wren; bluebird; cowbird; 1:07 summer tanager collected

650527-3 *Pranga rubra* T.L. 187, wt 31 gms, ♂, right testis 12 x 9.5 mm, left t. 11.8 x 10 mm, both testes weighed 1.4 gms which are large for size of bird. The locality for this bird is 1/2 mi. S and 1 1/20 mi. W Clinton (P.O.), Douglas Co., Kansas.

At a distance this bird looks like a cardinal as far as color is concerned.

Continuing on: bluebird, grackle; house wren 1:10 crossing creek, 1:11 cardinal, crested flycatcher; field sparrow collected here:

650527-4 *Spizella pusilla* ♂ T.L. 140 wt 14 gms, testes 6.8 x 5.3.

This ♂ was singing in some area this A.M. and on the 23rd of May. Its call is similar to Chipping sparrow song.

1:12 bluebird; downy woodpecker; pewee calling to E on sidehill;
 1:15 house wren; 1:18 redwinged blackbird, grackle, cowbird; 1:20 eastern kingbird and mockingbird; 1:21 2 bluejays; 1:23 end of trip census; yellow billed cuckoo at ear. Left area
 1:26 at mileage 183.1; mourning dove; dickcissel calling;
 3.1 cowbird; 3.4 dickcissel; 3.4 dickcissel; 3.7 cowbird; 3.7 dickcissel; 3.9 horned lark; 4.1 dickcissel; 4.2 now at end of road & to east on main road; redwing blackbird; storm to south of area; 3.3 dickcissel; 4.4 red-wing; 4.7 now to north; dickcissel calling; now into deciduous forest; 4.9 brown thrasher; titmouse, cardinal; 5.0 pewee; 5.1 acadian flycatcher; cardinal, crested flycatcher, titmouse, other birds in area but cannot identify at 20 miles per hour; 5.4 now out of deciduous forest & to E; dickcissel to N, yellow warbler
 5.8 now in main road to east (at bridge); indigo bunting; eastern kingbird; 6.0 cowbird; dickcissel calling, meadow-lark; 6.1 dickcissel; 6.3 dickcissels (2) to N; meadowlark calling; 6.4 road to Clinton to S; continuing east in valley road; 6.9 cowbird; 7.1 Waharusa bridge, water has receded since yesterday 5 feet and is about 8 feet above normal level now, muddy; cowbird, Baltimore Oriole, Eng sparrow, indigo bunting in bridge area; 7.6 ^{passing} road to N to Peterson, can hear crows; dickcissel to N; 7.8 dickcissel; 8.3 dickcissel; dickcissel; 8.7 Eng sparrows, grackle; 8.9 now at N end of proposed Clinton Reservoir dam. Will keep a list of birds noted from here to home in Lawrence of birds not observed this morning enroute to Clinton area: red-headed woodpecker, barn swallow, loggerhead shrike (2); bob-white;

Today has been cloudy in morning, developing from a clear early morning sky and gradually disappearing to a blue sky. Temp cool and uncomfortable in shaded situations in dense forests and warm and invigorating when exposed directly to rays of sun. This abnormal cool spell is a part of a front that extends south into as far as Texas.

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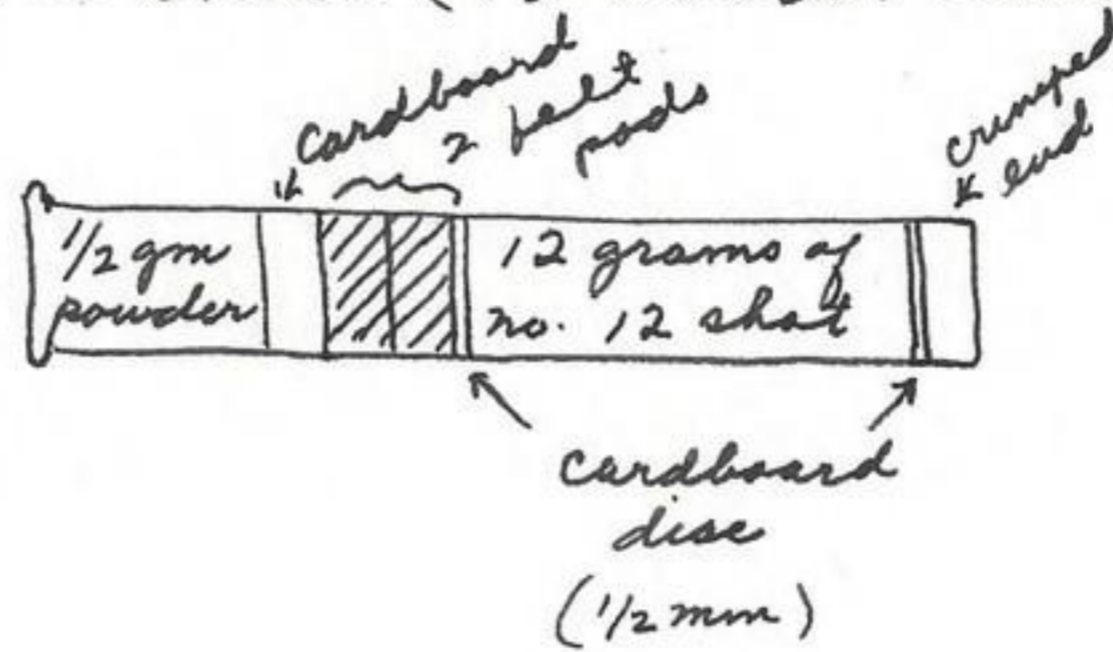
kinds	(1 1/20 mile) A - B	(1 1/20 mile) C - D	(4/10 mile) E F
	Chemically treated deciduous	climax reparation deciduous forest	climax hillside deciduous forest
yellow-throat warbler	/		
titmouse	/	///	/
black-capped chickadee	//	'	//
blue jay	//	///////	//
mourning dove	////	//	
cowbird	//	//	
crested flycatcher	//	///	
brown thrasher	/		
Cardinal	//	////	/
field sparrow	//		
yellow-billed cuckoo	/		
summer tanager	//		
house wren	/		
indigo bunting	/		
duckissel	///		
red-wing blackbird	/		
white-breasted nuthatch	/	//	
red-headed woodpecker	/	//	
Eng. sparrow	/		
ruby-throated hummingbird	/		
eastern bluebird	/		
acadian flycatcher	/		
eastern pewee		////	
red-eyed vireo		/	
scarlet tanager		/	
red-bellied woodpecker		////	
thrush		//	
hairy woodpecker		/	
Baltimore oriole		/	
red-tail hawk			//
Total	34	41	8
Species	22	14	5

The difference in species number is degree of available ecological niches. Hillside climax must be influenced by something more than available niches.

Lawrence, Douglas Co., Kansas
May 28, 1965

650528-53

2 1/2 inch .410 shell (1/2 load) consists of:



Weight of screech owl no 650522-3 taken May 22 is 118 gms an increase of 21 grams since first weighed. It called today in a screeching voice for first time. It also flew as far as 5 feet and up to 3 feet high from horizontal level. The call is similar to a fox squirrel giving warning call. The head & neck vibrates with the call. The owl also preens itself, raises 'ears' when observing birds and sleeps flat on its chest, belly and chin with wings slightly relaxed. In this position it appears dead. Have been feeding this owl the lungs, liver, small intestine, testes, spleen of small birds. It will wilfully take each item from a cardboard but sometimes will nibble at paper as if blind, in areas where there is no meat. The first grab is abrupt and if it get the edge of the cardboard or paper feeding disc, will not let go but fight at it even though it loses traction and falls on its back. When hamburger is given after such a meal it will take one bite but then refuse additional hamburger as if it had a preference. It will, however, consume hamburger when offered alone. It prefers to be 'fed' and if the meat is placed on floor will not touch it for as long as overnight. It has a way of moving its head back and forth from side to side when concentrating on an object or prepares to take-off in flight. At twilight, it becomes active regardless of the inside lighting conditions of the time. When feeding will grasp food with claws and hold while consuming parts, however, it generally gulps the entire mass of food with a thrust of the head & beak against the food mass held in its beak. When defending itself will lean back against wall and thrust claws out and grab finger or hand, a grasp which is strong and slightly painful to ones fingers or hand.

Wakarusa River Valley, Clinton Area, Douglas Co., Kansas.

May 29, 1965

Collected the following birds from these localities: at 4/10 mi. N and 6/10 mi E Clinton (P.O.), Douglas Co., Kansas

Collected a scarlet tanager:

650529-2 *Piranga olivacea* T.L. 176; wt 29 gms ♂ R.T. 11x8 mm
L.T. 9x8 mm.

This bird from dense climax deciduous hillside forest. These birds allow one to approach within 30-40 feet and are associated with dense growth.

From 4/10 mi. N and 8/10 mi. E Clinton (P.O.), Douglas Co.,

Kansas collected a summer tanager:

650529-3 *Piranga rubra* T.L. 180 mm, wt 26 gms ♂

From 15/20 mi ^S and 2 2/10 mi. W Clinton (P.O.), Douglas Co., Kansas

Collected a scarlet tanager and a grey squirrel.

650529-4 *Piranga olivacea* T.L. 180 mm; 32 gms wt R.T. 11x9 mm
L.T. 12x10 mm

650529-5 *Sciurus carolinensis* T.L. 445 mm, wt 473 gms

This afternoon made general reconnaissance trip to Lakeview, thence along river road to Leecompton, thence W along river road for 4 or 5 miles, thence return along road on uplands as near deciduous forests on side of Kaw River Valley as possible. Made list of birds observed, kinds only except for occasional added note or special census along route. Day warm, partly cloudy, wind slight: grackle, red-wing blackbird, Eng. Sparrow, scissor-tail flycatcher (1 mi. W Fall Mark Curd Co.), mourning dove, dusky woodpecker, meadowlark, orchard oriole, barn swallow, bank swallow, purple martin, red-headed woodpecker, lowbird, cardinal, ^{no} at Lakeview, horned lark, western kingbird at house ^{South} west of Brunes, (nesting on house), Baltimore oriole, crow, now along side of valley (forested) along R.R. tracks, pewee, red-eyed vireo, titmouse, indigo bunting, chickadee, red-bellied woodpecker, ruby throated hummingbird (2), Crested flycatcher, chimney swift, summer tanager, field sparrow, phoebe, bluejay, now at Leecompton, will continue west along S side of Kaw Valley sidehill, robin, red-tail hawk, loggerhead shrike, turkey vulture, families of 3 to 6 eastern kingbirds, from road hiked into wood deciduous forest (1/10 mi E and 2/10 mi. N from SW corner sec 29, R 18E and T 11 S (mouth of Canyon), followed on benchland up W side of Canyon & return on bench on E side, about 1/2 way up slope, all deciduous climax forest) Observed the different kinds of birds in this climax forest: 1 summer tanager, ^{2 scarlet tanagers} housewren 5, red-bellied woodpecker 6, hairy woodpecker 1, downy woodpecker 3, chickadee 13, titmouse 7, thrush sp. ? 3, pewee 4, blue jays 8, cardinal 5

crested flycatcher 4 pairs, white-breasted nuthatch 3, Baltimore Oriole 1, left wooded area and continued on by car for 1 3/4 mi. W, then S to top of plateau, for squirrel on fence post 90 feet from trees, feeding; bobwhite, killdeer, mockingbird, lark sparrow, returned home in Lawrence. Observed approx 50 different kinds of birds

Lawrence, Douglas Co. Kansas

June 2, 1965

Rained yesterday afternoon with hail and wind. The hail persisted longer than usual, possibly, on and off for 1 hr, and according to cloud masses passing over. The largest hail stone in yard measured 35 mm in diameter, round, and weighed 15 grams. After hail the cement patio was covered with dead twigs, from mulberry, at approx every 3 inches ^{or less}, twigs from small to 6-10 inches long. Leaves cinder trees, some branches, at about 1 per 2 feet or closer. This hail have a natural way of pruning out dead material and also live material from trees. At one time noted 3 Chimney swifts flying overhead at about 250 feet high at time when directly beneath hail stones were bombarding windows and the ground. They seemed to be beating their wings faster than normal. No other birds were active at that time. Tornadoes reported east and south of here on Missouri-Kansas line and trending SE rather than the usual NE trend. Hail at Lawrence mainly from NE. Some streets were flowing water 6 inches deep and accumulated this amount in a few minutes during severe part of rain in 15 or less minutes. 4.25 inch fell.

Today the Wakarusa River was only up approx 5 feet from its usual level and only about 1/4 way to top. This seemed unusual because fields were flooded and roads closed.

Lawrence, Douglas Co., Kansas

June 5, 1965

Checked Wakarusa River and because of an additional 3 or 4 inches of rain since June 1, the river was over its banks. At bridge on highway 59 the water was 2 feet from top of bank at residence at NE side of bridge. Took ^{three} photographs:

- 650605-1 River to E from SW corner of bridge.
- 650605-2 " " W from SW corner of bridge
- 650605-3 Course starting down river.
- 650605-4 Course going down river.

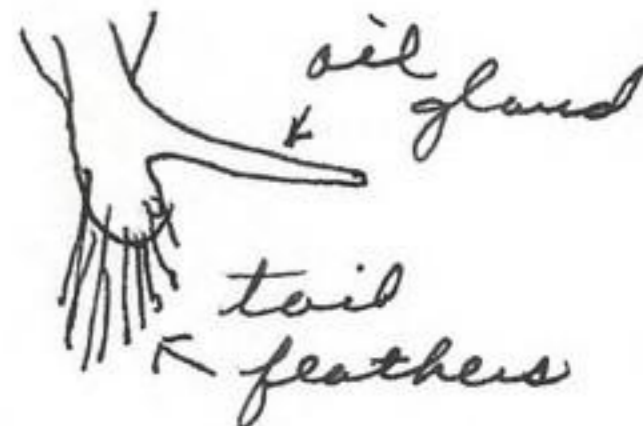
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One large snake swam across river 650605-56
Photo 650605-5 of Haskell Bottom area in vicinity of Coal Creek
Chris in foreground.

Lawrence, Douglas Co., Kansas

June 6, 1965

Placed 8x10 baking pan in sketch owl pen with 2 inches of water. The owl entered water and walked around for about 3 minutes and then started to drink. It would place bill in water and then thrust head upwards and with several swallows and working of bills force the water down. This would be repeated every minute for six minutes. After the sixth drink, the owl started to almost imperceptibly move its wings. This movement finally developed into a full fledge movement of vibrating tips of wings in the water in a semi crouched position. It then left water, shook wings and body and took position on perch where it remained and shivered until dry. It did not attempt to preen its feathers while drying. This is the first experience this owl has had with water and bathing and carried on the action instinctively. When dry or nearly so, the owl extracted oil from the oil gland and preened feathers. The gland is a long thin structure and sticks out beyond feathers. When resting on horizontal perch, drops head & neck and actually rests in this most awkward position.



Wakarusa River, Douglas Co., Kansas

June 6, 1965

afternoon 3:30 P.M.

Bridges on Wakarusa River were checked, to determine crest of river. At bridge W of Clinton (See 16) the water had been within 2 feet of bank but now approx 13 feet below highest level. It is now about 1/2 full. Bridge N of Clinton in sec. 10. had been within 3 feet of overflow onto flood plain. ^{receded} now 8 feet. Bridge NE Clinton (see 14) water has been in field to W but now approx 8 feet below highest water level. Two photographs here nos 650606-1 and 650606-2, will take this area later under normal water level. Bridge just E of the north end of proposed Clinton Reservoir dam the water was had been within 3 feet of overflow & now down 3 feet. Bridge of highway 59 the water was flowing into fields to

Photo 650606-3

south and within 1 foot of top of bank at residence at NE corner of bridge. Photo 650606-4 about 2/10 mi S of bridge on Highway 59 showing water covering floodplain and encroaching on fields on slope of valley. Considerable flooding of fields in this area from Wakarusa River. This flooding from the Wakarusa continued up valley along Clinton road to about Washington Creek bridge. At a point about 200 feet E of the N end of proposed Clinton Res. dam, the water had backed up creek that flows into Wakarusa at this point to 1 3/4 feet above the level of the bridge and road. The water, at its highest point was 3 1/2 feet higher than bridge.

At the point the Peterson road joins the main valley road on N side of Wakarusa Valley, noted 14 horned larks in one group, representing several families of the year. Two redheaded woodpeckers at road that turn S to Clinton from Wakarusa Valley road S of Wakarusa River.

Wakarusa River, Douglas Co., Kansas
June 7, 1965

James Robert Bee & his 2 friends, Daniel and Albert Brune left Lawrence bridge at 6:40 A.M. and arrived Eudora bridge N of the town at 10:20 A.M. having travelled approx 14 1/2 miles in 3 hours and 40 minutes or ^{approx} 4 miles per hour. They picked up canoe (Fulps) that had capsized the previous day and had lodged in a log jam. Fulps canoe and 4 passengers had struck a limb, to which the canoeist held on as canoe shipped water and finally pulled away from them and disappeared down current, filled with water but still buoyant because of 2 air chambers at each end of canoe. Paddles and thermos jug also lost. Water at time of trip (yesterday) was flooding over banks into fields. Two of Fulps passengers could not swim! At 6:40 A.M. water at Lawrence bridge approx 8 feet lower than flood level yesterday.

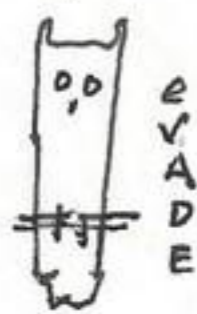
Lawrence, Douglas Co., Kansas
June 7, 1965

[no 650522-3] screech owl, flew 20 feet on horizontal plane. Ate at food with bill for first time. Owl measured today at: total length 185, wt. 136gms, wing 120 mm, wing spread 485 mm. ⁷⁵ Placed outside on grass but still in cage. It would pull on grass and feed at base of grass roots. It rested on belly with legs

extended directly back.

birds in the yard
in the course of the
meal, 2 bluejays, 1 wren.

the owl would straighten up to a perpendicular position and would remain in this position for as long as the source of intrusion was present. It would then return to its normal profile. When the suspecting a potential food source? it leans forward and drops head down.



wing stretched to full extent then →

the body being raised and lowered, at some times to a protracted position.

In viewing food 6 inches below its perch, it will extend its head upward, draw chin in as far as possible, and attempt to fix vision on food. Another pose is to draw head into shoulders and ^{stare} upwards.

June 19, 1965

screech owl dove at food with claws first time today.

7/10 mi. E and 7/10 mi. N Clinton (P.O.), Douglas Co., Kansas

June 9, 1965

collected the following Bullocks Oriole & yellow-breasted Chat;

650609-1 *Icteria galbula* T.L. 197, wt. 38 gms ♂

650609-2 *Icteria virens* T.L. 175, wt. 26 gms ♂

In the afternoon while cruising in the area of the proposed Clinton Reservoir, recorded the following kinds of birds and mammals. rabbit (3 1/2 inches T.L.), marmot, fox squirrel, grey squirrel, cardinal, mourning dove, robin, Eng sparrow, cowbird, grackle, red-wing blackbird, turkey vulture, red-tailed hawk, titmouse, black capped chickadee, chimney swift, barn swallow, bank swallow, great blue heron, red bellied woodpecker, yellow shafted flicker, downy woodpecker, red headed woodpecker, pewee, phoebe, indigo bunting, Bullock oriole, orchard oriole, field sparrow, crested flycatcher, Eastern Kingbird, acadian flycatcher, blue jay, blue bird, ruby throated hummingbird (4), meadowlark, horned lark, summer tanager, goldfinch, killdeer, loggerhead shrike, brown thrasher, mockingbird, dickcissel, lark sparrow, crow, house wren, red-eyed vireo, yellow throat warbler,

Wakarusa River, Douglas Co., Kansas

June 10, 1965

James Robert Bee and his friend Ron Rowland made canoe trip from Lawrence to Eudora, starting at 6:00 A.M. While travelling to Eudora to pick up the canoeist recorded the following birds (Konda only): robin, Eng sparrow, cardinal, blue jay, purple martin, mourning dove, grackle, sawbird, red-wing blackbird, meadowlark, dickcissel, indigo bunting, scissor-tailed flycatcher (2/10 mi. E of Coop), barn swallow, killedeer, red headed woodpecker, crow, pewee, Baltimore oriole, ^{♀ feeding young, same size.} brown thrasher, chimney swift, yellow-shafted flicker, red-eyed vireo, pewee, green heron. The Baltimore oriole fed young by forcing food in mouth of young and then if it appeared the young could not handle, would take it out of their mouth and try again, sometimes three different times. A pewee rebuffed a red-eyed vireo. Return to Lawrence.

2 3/10 mi. E and 2 mi. S Lawrence (P.O.), Douglas Co., Kansas

June 10, 1965

Checked cemetery along highway 10 and found an excellent stand of *Echinacea angustifolia* and *E. pallida*, the latter uncommon. I would estimate there being 8,000 individual plants. Photos 650610-1 of general view of *Echinacea*.

no 650610-2 of close-up of the two species of *Echinacea* and other associated flowers. The *E. pallida* has short thin ligules. The dominant butterfly was *Argynnis idalia* (Orury) and collected 4:

650610-3 *Argynnis idalia*; 650610-4 *Argynnis idalia*,
650610-5 *Argynnis idalia*; 650610-6 *Argynnis idalia*,

Three other kinds were represented:

650610-7 *Vanessa atalanta*

650610-8 *Euptoieta claudia*

650610-9 *Colias*

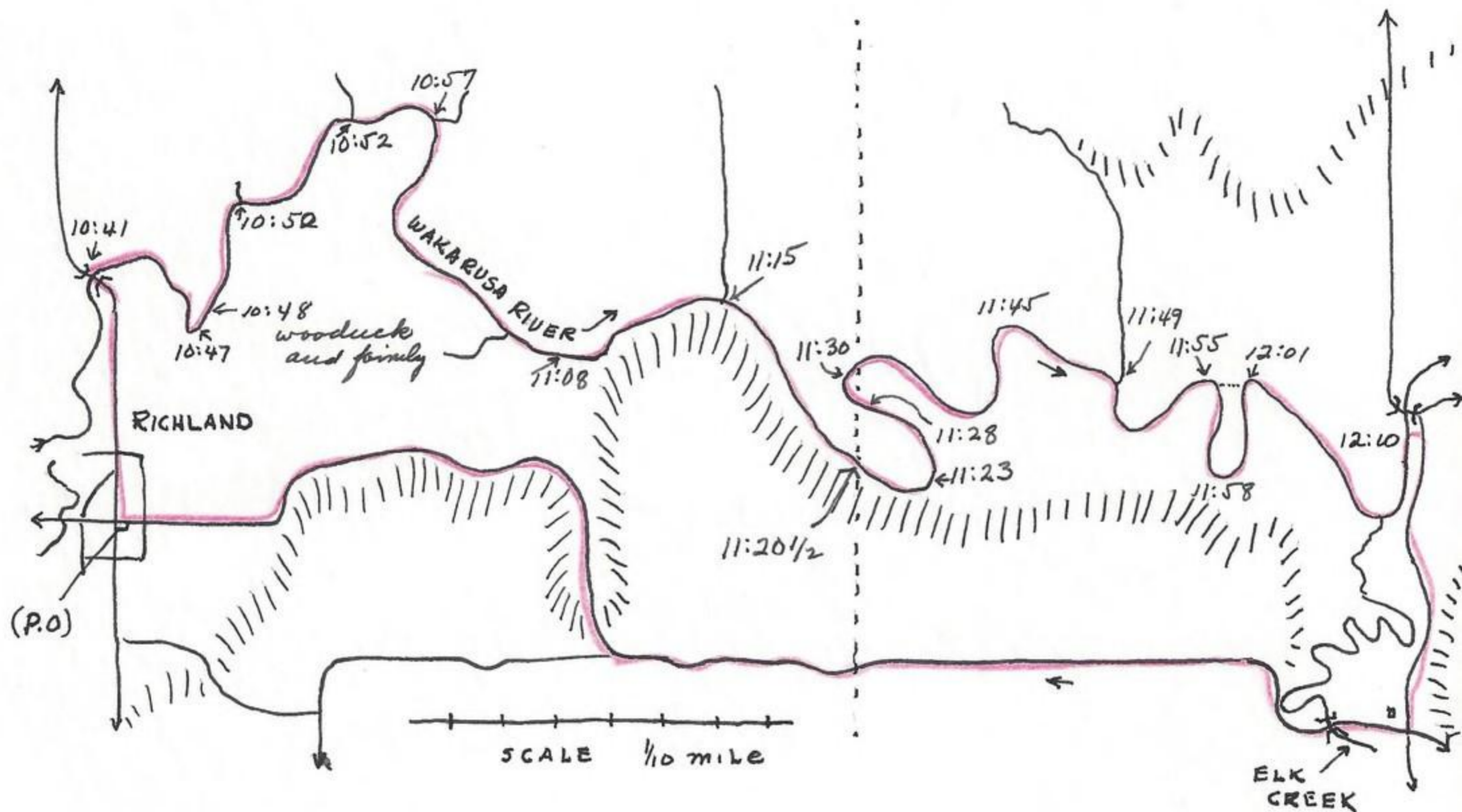
Anker Christensen presented these slides:
650610-10 Bee family
650610-20 J.W. Bee, owl and collection.

Wakarusa River (Richland, Shawnee Co., to Elk Creek, Douglas Co.), Kansas

June 12, 1965

James Robert and I made canoe trip from bridge over Wakarusa River at Richland to bridge over Wakarusa just beyond entrance of Elk Creek a distance of approx 5 3/10 miles by water and 4 3/10 miles by land on return trip to Kan.

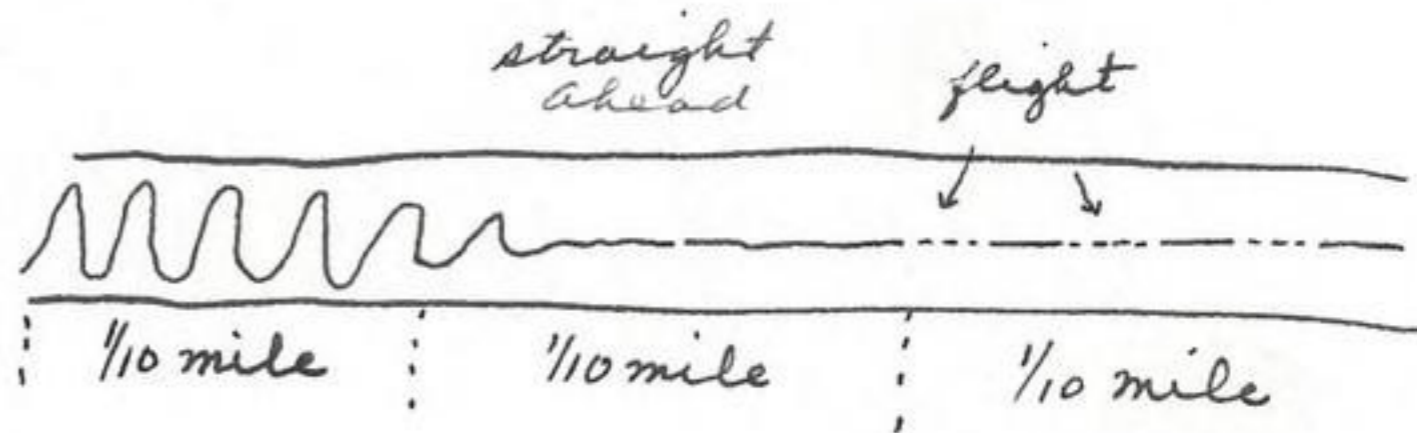
made census of birds observed across Clinton Missouri area from S end of proposed dam to Richland, following along regular highway thru Clinton, etc: Recorded according to mileage and secondarily by time as follows:



1.1 robin, 2 dickcissel; 1.2 meadowlark; 1.4 dickcissel, barn swallow; 1.5 meadowlark, chimney swift; 2.0 grackle, 2.5 crow; 2.6 dickcissel, redwing blackbird; 2.8 3 cowbirds, dickcissel, cardinal; 2.9? ~~Rock Creek bridge~~ ^{Wakarusa}, 2 cowbirds, barn swallow; 3.4 meadowlark; 3.5 2 dickcissel; 3.7 loggerhead shrike; 3.8 meadowlark, ^{3.9} mockingbird; red-tail 1 mi. to S; 4.2 orchard oriole, dickcissel; cowbird, loggerhead shrike, mourning dove; 4.5 red-headed woodpecker; 4.6 loggerhead shrike; 5.1 redwing blackbird, mourning dove; 5.2 mockingbird; 5.3 meadowlark; 5.6 2 redwing blackbirds; 6.0 orchard oriole; 2 cowbirds, meadowlark; 6.1 2 eastern kingbirds; 6.4 now to south; 6.5 2 mourning doves; 6.8 mourning dove, redwing blackbird, dickcissel, 3 cowbirds 7.4 now to west; dickcissel, 7.9 scissor-tailed flycatcher; 8.0 2 bobwhites, redwing blackbird, meadowlark; redwing blackbird; 8.2 marsh hawk, 3 redwing blackbirds, dickcissel, meadowlark, 8.5 Shawnee Co. line, Eng Sp. 9.1 indigo bunting; dickcissel, dickcissel; meadowlark, 9.6 dickcissel, meadowlark, red-bellied woodpecker, dickcissel, 10.1 S to Richland 10.2 meadowlark, 10.3 meadowlark; 10.5 red-wing blackbird, meadowlark

eastern Kingbird, meadowlark, 2 red-wing blackbirds; 12.0 bridge over Wakarusa River N of Richland.

Left Richland bridge at 10:41 A.M. by canoe and will keep complete record by time and position on river. Water about 3 feet higher than normal summer level but has been near flood in previous days. At bridge noted Baltimore oriole ♂, cardinal, pewee, red-bellied woodpecker, goldfinch, 10:44 A.M. Cardinal, titmouse calling; field sparrow, considerable slipping of bank, bringing in to channel new, live trees, 10:47 Cardinal, field sparrow, 10:47 end of abrupt turn to S and now going north; 10:48 ♀ woodchuck and 4 young about 4 inches total length. The young moved straight ahead on surface of water for approx 100 feet and then disappeared among branches, ^{and leaves} of a live tree that had fallen into the water. The female in the meantime fluttered on surface of water with wings making an audible noise at each flap of the wing. The delay movement was back and forth across river at about 50 feet ahead of us. This action was maintained for about 1/10 a mile and then the action changed to one of straight forward flight on water, keeping about 150 feet ahead of us. Finally she alternated swimming, beating of wings on water and flight directly above water. She called occasionally especially when blowing water in flight. Titmouse calling, goldfinch, chickadee, cardinal, warbling vireo; 10:52 N end loop and major drainage from N, now going east, considerable slipping of banks, displacing large live trees into channel, either upright or over on side in water, some blocking entire channel, cardinal calling; 10:55 woodchuck still in front of us at about 90 feet and preceding us down river ♀ horn owl, 10:57 drainage from left and now turning to S, rapids negotiable without danger of striking rocks, Baltimore oriole, pewee, chickadee (black capped), house wren, 11:00 drainage from left, Baltimore oriole, field sparrow, crested flycatcher, pewee, chickadees, titmouse. 11:04 indigo bunting, Gulllocks oriole, 11:04 Chickadees, red-bellied woodpecker, 11:08 rapids and easily negotiable without striking rocks, drainage from W immediately below rapids, 11:08 am impressed with extent of slippage and live trees displaced at edge of river channel, drainage ditch to right just before contact-



Contacting S side of valley. 11:08 drainage from right just before contacting side of valley, cardinal singing, field sparrow, 11:10 rapids and creek bending slightly to north, rapids easily negotiable, titmouse calling, raccoon tracks in fresh mud, others have been noted elsewhere, red-bellied woodpecker, titmouse, cardinal, 11:12 kingfisher flynd down river, red-eyed vireo calling; 11:14 red-eyed vireo, goldfinch, 11:15 rapids and drainage ditch from left, 2 crested flycatchers, gnatcatchers, 11:16 2 crested flycatchers, titmouse, 11:17 pewee, Cowbird, titmouse, red-bellied woodpecker, gnatcatcher, red-eyed vireo; 11:18 indigo bunting, 3 blue jay, 11:19 green heron left bank and flew 150 down stream and alighted in tree; 11:20 drainage from right, 11:20½ great blue heron colony (no birds in area but nests still in trees), chickadees, red-eyed vireo, green heron preceding us down river, stopping approx every 150 feet; great horned owl, 11:23 E end of bend, now going NW, 11:27 titmouse calling, 11:28 2 blue jay, isolated great blue heron nest, not occupied, olive-sided flycatcher, ~~Baltimore~~^{more} Oriole, summer tanager, chickadees, goldfinch; 11:30 west end of bend, now to E, Baltimore Oriole, ♂ Baltimore Oriole, 11:31 drainage from N and now going E; 11:33 blue jay; group of goldfinches, pewee, olive-sided flycatcher, chickadees, 11:34 crested flycatcher, cardinal, red-bellied woodpecker, chickadees, cardinal, chickadee, 11:40 red-bellied woodpecker, field sparrow, dickcissel, Baltimore Oriole, chickadees, 11:42 Baltimore Oriole, cardinal, yellow billed Cuckoo, ♂ & ♀ cardinal, fresh raccoon tracks, Baltimore Oriole, 11:44 yellow warbler, crow calling to S, summer tanager, red-eyed vireo, red-bellied woodpecker, now trending SE having turned bend 11:45, dickcissel, 11:46 cardinal (2), pewee, field sparrow; 11:48 2 blue jays, 11:49 major drainage from left; 11:50 chickadee, mourning dove calling; 11:50 crested flycatcher, mourning dove, 11:51 3 young wooducks (approx 4 inches T.L.), no adults around, young ran on top water for 100 feet and then disappeared among foliage of fallen tree. One could be seen partly submerged at bank, crested flycatcher, yellow-shafted woodpecker, dead fish (1 foot) floating down river, 11:55 west limb of hair-pin turn, now going S. 2 blue jays, Baltimore Oriole, 2 blue jays, cardinal, 11:57 dickcissel, 11:58 south end of hair-pin bend, 2 cardinals, 12:00 3 blue jays, 1 pewee, 2 titmouses, yellow billed cuckoo, 12:01 now at E limb of hair pin curve, at last high water, a channel was partly formed across neck of hair-

pin curve, 12:02 now trending SE, chickadees calling, red-tail hawk calling, indigo bunting, 2 cardinals, fox squirrel, titmouse, 12:03 red-eyed vireo, chickadees, 2 bluejays; 12:05 red-bellied woodpecker, 12:06 crested flycatcher, bluejay, red-bellied woodpecker, cardinal, Baltimore Oriole, 12:07 creek from S, 12:07 great horned owl, cardinal, 12:08 Elk Creek from S and now trending N to bridge, red-tailed hawk, cardinal, 12:10 end of census at about 200 S of bridge across Waharusa. Pulled cones out of river and started to walk back to car at Richland bridge via road on S side of river on uplands starting at 12:37. Today has been warm, bald clouds but atmosphere lazy. Rain in many of the cloud masses that passed by. 12:40 red-bellied woodpecker, red-tailed hawk, indigo bunting, 2 turkey vultures sitting in top of dead tree on E side of Elk Creek valley, yellow billed cuckoo, red-headed woodpecker, several bluejays calling in green trees directly below 2 vultures noted above, 12:45 white-breasted nuthatch, Baltimore Oriole, cardinal, 12:46 chickadees, 2 cowbirds, Eng Sparrows, summer tanager, 12:50 crossroads at farm house, now to W. barn swallow, pewee, red-eyed vireo, 12:53 Elk Creek bridge, phoebe, 2 turkey vultures perching to N, mourning dove, indigo bunting, summer tanager, indigo bunting, 1:00 top first hill, 1:05 dickcissel, 1:06 lark sparrow, 2 meadowlarks, field sparrow, 1:09 top second hill, cowbird, 1:10 passing house to right, Baltimore Oriole, dickcissel, chipping sparrow, dickcissel, meadowlark, dickcissel, 1:13 meadowlark, bobwhite calling, 1:15 yellow billed cuckoo, chased by E. Kingbird, indigo bunting, 1:17 rds to S but we continued on some road to W, dickcissel calling, 1:18 passing farm house, cowbird, dickcissel calling, 1:21 barn swallow, 1:22 passing farm residence to S, gnatcatcher, eastern bluebird, dickcissel, 3 dickcissels, 1:24 meadowlark, dickcissel, field sparrow, mourning dove, E Kingbird; bluejay, barn swallow, 1:27 orchard Oriole, summer tanager, now going down hill to N, cowbird, goldfinch, 1:28 bobwhite, 2 cardinals, 1:30 bridge, pewee, cardinal, 1 jay; chickadees, chipping sparrow calling, downy woodpecker, 1:32 indigo bunting, crested flycatcher, 1:34 cardinal, 1:36 residence, field sparrow, indigo bunting, field sparrow, 1:39 cowbird, 1:40 2 dickcissels, 4 cowbirds, Eng sparrows, field sparrow, jay bird, 1:44 3 dickcissels,

1:46 goldfinch, road now straight across valley to Richland,
 thundering and raining to SW; 3 goldfinches, 1:47 3 dickcissels,
 cardinal, grackle, redwing blackbird, 1:48 ♂ & ♀ robin,
 1:51 post office in Richland. Continued N to bridge and
 got car and returned to Richland. ^{Returned same way} Mileage at Richland
 at 2.0 dickcissel, meadowlark, grackle, meadowlark,
 2.3 across valley now to N. dickcissel, chimney swift,
 3 cowbirds, dickcissel, field sparrow, cowbird, 3.2 bridge
 at base of hill, cardinal, titmouse, 3.5 top hill, dickcissel,
 mockingbird, meadowlark, dickcissel, yellowbilled cuckoo,
 field sparrow, cowbird, indigo bunting, dickcissel, bluebird,
 dickcissel, 4.6 Elk Creek bridge, 5.2 crossroads. now to N,
 5.8 arrived at Conae. Put Conae on car and continued N to
 bridge over Wakarusa at 5.9. (Time 2:18 P.M.). Water at top
 of basal V of river bed, 6.4 Baltimore oriole, red-headed
 woodpecker, cardinal, 6.5 pewee, phoebe, 6.8 2 eastern
 bluebirds, 6.9 2 mourning doves, dickcissel, 7.1 crossroads
 on hill and continuing N. on main road, 7.2 eastern
 kingbird, 7.4 2 dickcissels, 7.6 orchard oriole, 7.8 meadowlark,
 2 cowbirds, meadowlarks, 8.2 turning to E on regular road to
 Clinton, mourning dove, 8.8 2 dickcissels, red-wing blackbird,
 8.9 2 mourning doves, 9.0 meadowlark, dickcissel, loggerhead
 shrike, grackle, mockingbird, 9.2 red-winged blackbird,
 grackle, indigo bunting, cowbird, 9.7 road from N, dickcissel,
 bobwhite, grackle, cowbird, phoebe, brown thrasher, red wing
 blackbird, 3 meadowlarks, 10.4 meadowlarks, dickcissel, ^{bridge}
 10.3 2 mourning doves, 10.6 loggerhead shrike, 10.7 Wakarusa
 10.8 dickcissel, 10.8 dickcissel, 12.3 dickcissel, 12.9
 Clinton Cemetery, meadowlark, 2 meadowlarks, dickcissel,
 13.3 meadowlarks, 13.3 dickcissel, 13.4 3 dickcissels, 13.7
 meadowlark, 13.8 cowbird, 14.1 (2:33 P.M.) center of Clinton,
 grackle, Eng. sparrow, dickcissel, red-winged blackbird,
 14.3 dickcissel, mourning dove, dickcissel, 15.4 dickcissel,
 road kill loggerhead shrike at 16.2, 16.7 Rock Creek
 bridge, downy woodpecker, 16.8 dickcissel, 16.9 dickcissel,

Douglas Co. State Lake, Douglas Co., Kansas

June 19, 1965

Made census around shore of Douglas Co. Lake, NE of Baldwin.
 water approx 3 feet below outlet gate on dam. Enroute listed
 kinds of birds from Lawrence to Lake and all meadowlarks.
 Day lazy, temp approx. F and wind from S (just under white-cap
 formation on lake)

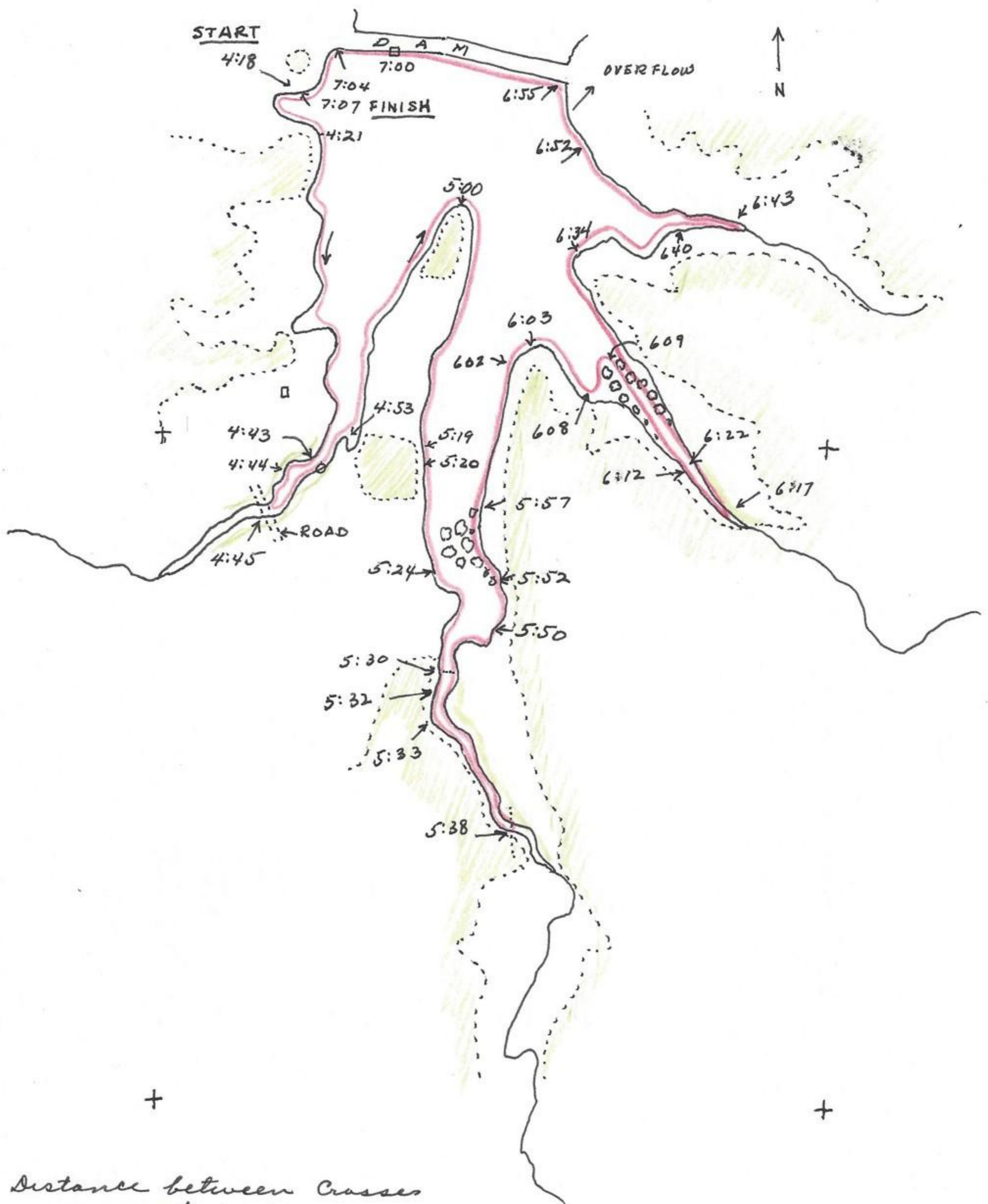
Left Lawrence 3:45 P.M. Blue jay, Eng sparrow, red-winged blackbird, meadowlark, meadowlark, robin, mourning dove, grackle, meadowlark, 74.7 mileage crossing Wabasca, water level about 2 or 3 feet above normal summer level, dickcissel, meadowlark, field sparrow, meadowlark, meadowlark, meadowlark, indigo bunting, meadowlark, barn swallow, crossing Coal Cr. at 81.5, meadowlark, 81.8 Vaulund, now to S, E. Kingbird, Cowbird, meadowlark, turkey vulture (6), meadowlark, 84.0 now E toward lake, leaving regular meadowlark wood, 2 red-headed woodpeckers, cardinal, meadowlark, bluebird, lark sparrow, meadowlark, 85.6 Douglas Co., Lake.

Starting census at point a point SW of ^W end of dam (see map). Well record all mammals & birds noted from water edge to 50' beyond water landward (other trips will census ecotone between shore line & forest and climax forest proper). Recorded only forms on right hand side of Conae (this will be true in small channels as we ascend & descend river channels. Starting at 4:18 P.M. slopes from Comp to water in good stands of grass (1 1/2 foot high) started at drainage W of Comp site. Water clear with submergent ^{aquatic} vegetation and formerly dry land plants. Soils not visible on bottom of lake. Some Lemna duckweed on surface but mainly Spirogyra which is submerged and forms masses up to 10x10 feet. Some Spirogyra is on surface, especially where wind is active. The wind compacts Spirogyra so that it is a green scum supported by air bubbles. The more compacted the greener the color. These masses make it difficult to paddle the Conae, offering considerable resistance. 4:20 male redwing blackbird on submerged shrub stick - ing above water surface. There is considerable young tree growth that has developed since area was cut over when dam first constructed and now in standing water and approx 8 feet high above water level. 4:21 Comp for boats; 4:23 redwing blackbird, these birds are in uncut trees at edge of lake; 4:27 second drainage, ♂ & ♀ blackbird, 4:28 ♂ & ♀ redwing blackbird; 4:30 ♂ + ♀ redwing blackbird, 4:34 bobwhite, dickcissel, & redwing blackbird; 4:35 orchard oriole, dickcissel, red-wing blackbird, 4:37 yellow throat & redwing blackbird, 4:40 indigo bunting & field sparrow; 2 large Lana pipiens since beginning of census; 4:41 cowbird; 4:43 large oak growing at water level (3 feet in



99-619000

DOUGLAS COUNTY STATE LAKE



Distance between Crosses is equal to 1 mile. Area of crosses = see 35, T14S, R20E (main part of lake in see 24). The outline of lake, with some modification is at the 950 foot contour level. Vegetation (trees) approximates mainly.

in diameter (on E side of river channel); 4:44 black-capped
 chickadee; 4:45 road crosses drainage channel and
 8 inches above water. Water continues but we returned down
 channel to lake. These water channels are an interesting
 addition to lake; *Lemna peruviana* uncommon but ^{large} ~~bars~~
 about ever 50' in channel; 4:47 cardinal; 4:49 dickcissel;
 indigo bunting; 4:50 cowbird; 4:52 phoebe; 4:53 mouth of
 second arm; ^(part of first arm) 3 ♂ redwing blackbirds, 2 dickcissels; 5:00 ♂
 redwing blackbird; and large bullfrog, female redwing;
 this side of arm has more *Lemna* dickweed and less
Spirogyra; darnwing needles (2 species) about 1 per every
 100 feet; 5:06 promontory point, water slightly muddy from
 land but vegetation will finally cover ground because it
 is of gentle slope and seal in soil from erosion; beyond
 point *Spirogyra* becoming more prominent; there are
 large lumber logs (8-12 feet) on ~~west~~ ^W side of this arm of
 lake which may have some significance in water circulat-
 ion or wind (approx. 25 logs); 5:12 killdeer, *Spirogyra*
 heavy and associated with logs; 5:14 2 redwing blackbirds;
 5:19 ~~beginning~~ beginning of large live trees on bank; 1
 kingfisher; old fence line puts lake; no scat or turtles
 on logs, *Acris* calling locally; ^{5:20 sycamore trees growing across head of arm;} 5:24 overhang tree on bank;
 5:25 field sparrow & one unknown call; 5:25 chickadees;
 drainage from ^W S. 5:30 under utility line; 5:32 shale
 bank with juniper tree in center; cardinal; 5:33 drain-
 age from right; 5:38 large sycamore tree on E bank of
 channel; 5:38 old road into lake & crossing utility line,
 summer tanager, continued 200' beyond utility line
 crossing and then returned, creek navigatable beyond;
 5:41 bobwhite; creek has been 5' higher than present
 level during last flood period; 5:44 downy woodpecker;
 5:47 yellow-billed cuckoo & yellow throat warbler; now at
 shale cliffs & juniper on return trip down river channel;
 5:48 passing under utility line; 5:50 cowbird ♂, redwing;
 large tree in lake; red-bellied woodpecker; 5:52 redwing
 blackbird in dead tree in lake; 5:55 redwing blackbird,
 redtail hawk screeching & calling in trees to E; 5:57 female
 redwing; bull frog; at head of sycamore trees in arm of lake;
 6:02 field sparrow; 6:03 promontory; 6:05 bullfrog calling (3);
 6:07 Baltimore Oriole; mourning dove; 6:08 5th turkey vulture
 in tree; ^{beyond census area} 2 redwing blackbirds, bull frog calling; 6:08 starting

up ill-defined channel, now marked by 8 foot high trees submerged, green heron, red wing blackbird, 5 adult woodducks in groups of 2 and 3, 6:12 beginning of large trees along creek, indigo bunting, 3 blue jays, indigo bunting; Baltimore Oriole, (6:15); 6:17 head of creek and forks, one hundred feet beyond forks ^{left} the water swirling over bottom of creek bed, great blue heron left trees ^{at forks}, summer tanager; 6:22 leaving large trees along creek, indigo bunting; 6:24 ♂ redwing blackbird; 6:25 indigo bunting, redwing blackbird; 6:33 ♂ redwing blackbird, grackle; 6:33 feral cat, passing old road leading into lake; 6:34 promontory, 2 redwing blackbirds; 6:37 redwing blackbird, nest of redwing blackbird 4 fresh eggs, nest 4 inches above water, in elm tree 4 feet high; 6:38 red-wing blackbird, 3 fresh eggs, 1 1/2 foot above water in elm 3 feet high; ♂ + ♀ at nest the male flew over nest before ♀ left; 6:40 ♂ + ♀ redwing; 6:42 red bellied woodpecker; 6:43 beginning of large trees along creek, 6:45 creek continues but barred by logs & returned. This creek is grown in with small trees & shrubs and makes passage more difficult than other creeks; bob-white calling; 6:48 orchard Oriole and Cardinal; end of large trees along edge of creek; 6:50 red wing blackbird; 6:52 camp site, in this area to dam the waves are eroding bank and producing muddy waters along shore (out to 50-80 feet) to beyond & down dam toward center, this area should be lined with rocks or sloped to proper degree to eliminate erosion that is fouling lake. This area will always erode because of prevailing wind action on bank; 6:55 east end of dam; 7:00 outlet gate, water 3 feet below outlet level (not overflow level to E); 7:04 west end of dam, E Kingbird, 7:07 end of trip and census (same area as beginning of census. Day has been moderately cool, windy and high hazy skies.

Summation of birds noted:

red wing blackbird		= 41	summer tanager		= 2
indigo bunting		= 6	green heron		= 1
wood duck		= 5	bobwhite		= 4
field sparrow		= 3	red-bellied woodpecker		= 2
Cardinal		= 3	Eastern Kingbird		= 1
Baltimore Oriole		= 2	turkey vulture		= 5
orchard Oriole		= 2	red-tailed hawk		= 1
Chickadees		= 6	grackle		= 1
blue jay		= 5	phoebe		= 1
			dickcissel		= 6
			great blue heron		= 1

yellow throat warbler 11 = 2

cowbird 111 = 3

killedeer 1 = 1

Spirogyra. Common around lake especially on w side of arms of lake. Some shores ^{areas} completely covered with compacted green masses, other areas with less wind are supporting submerged masses of very light green spirogyra.

Lemna - all shore waters, especially east sides of lake and some protected areas. Minimum plant growth along dam and NE shore beyond dam. Other species may be represented.

Rana pipiens 111111111 relatively uncommon

Bull frog 111111, others heard.

Darning needles approx 1 per 100 feet of shoreline but variable acrio. local group calling, especially head of arms + drainages no turtles, no beaver, no muskrats.

Birds arranged according to per cent frequency

redwing blackbird 41

indigo bunting 6

chickadees 6 (2 groups)

dickcissel 6

woodpecker 5

blue jay 5

turkey vulture 5

bobwhite 4

field sparrows 3

Cardinal 3

cowbird 3

Baltimore oriole 2

kingfisher 1 = 1

grackle 1 = 1

downy woodpecker 1 = 1

yellowbilled cuckoo 1 = 1

mourning dove 1 = 1

orchard oriole 2

summer tanager 2

red-bellied woodpecker 2

yellow throated warbler 2

green heron 1

Eastern Kingbird 1

red-tailed hawk 1

yellow-billed cuckoo 1

grackle 1

phoebe 1

downy woodpecker 1

great blueheron 1

killedeer 1

mourning dove 1

kingfisher 1

Total number of birds observed, 109. (or 1.6 birds per minute)

Hours in field 2 hours and 49 min. (4:18 to 7:07 P.M.)

Birds observed from Douglas Co., Lake To Lawrence. Birds only except meadowlark which were all counted. mileage at lake 66.4. Indigo bunting, meadowlark, 2 red-headed woodpeckers, downy woodpecker, meadowlark, E kingbird, cowbird, Eng sparrow, meadowlark, dickcissel (common across country), grackle, meadowlark, mourning dove, red wing blackbird, loggerhead shrike, 2 meadowlark, cardinal, meadowlark, Vinland highway, meadowlark, killedeer, meadowlark, at bend to W a peewee tail flycatcher, robin, 3 meadowlarks, 3 meadowlarks, yellowbilled cuckoo, chimney swift, 1 meadowlark, end of census at outskirts of Lawrence on Hookell Avenue.

1620 Tennessee St., Lawrence, Douglas Co., Kansas



June 21, 1965

measured and weighed the screech owl no 650522-3 as follows: Total length 210 mm, length wing 140 mm, weight 143 gms, wing spread 490 mm. made the following observations of behaviorism this date.


Reactions to first dead mouse (*mus musculus*) placed in cage: From its perch 140 mm above the floor of the cage it watched the mouse for 10 seconds, moving its head from side to side and up and down, and then pounced down directly upon the mouse, clowing it lightly with left foot. For the next 8 seconds it looked directly forward and then turning its head to the side focused beyond the cage, perhaps to see if there was interference from other sources, after which it directed its attention to the mouse by probing at all parts including tail and feet, not with the vigorous tearing action of pulling an animal apart but an action of testing the condition of its prey by gentle manipulation of the bill. It can turn the mouse from one side to the other by turning its foot (the owl) and leg. After 1 minute it flapped its wings in full extent for approx 5 seconds as if exercising flying but remaining on the ground. The first flesh was taken from the side and represented fat which it rejected. The second was intestine which it rejected part of it but ate the remaining. The liver, heart and lungs were eaten. The rest of the animal was eaten by the next day (overnight) but the manner in which it was consumed (head, legs etc) was not observed. After a meal it is nervous and chomps wire of cage and moves about as if to escape cage but in about 2 minutes frequently ^{billings of wire of cage or perch is performed at this time.} settles down. When owl has eaten all it needs it will not accept other food but will close eyes and ignore any meat that is placed or moved directly in front of bill or head, food that at other times when the owl is hungry, will be readily taken and consumed. When the owl is hungry and one enters the room, the owl will call in a mechanical rasping call and if not fed will drop down onto floor of cage and go thru a feeding action of clowing floor and pecking floor with bill. No pellet formed with first mouse or if formed and rejected was eaten. When 6 or 7 small pieces of liver are placed on floor of cage the owl

drop directly down onto meat with left claws of foot and generally start feeding from meat held in claw or from other pieces not held in foot. After clean the major pieces it will back up 8 inches, raise itself to full upright posture and focus on small scraps of meat for 2 or 3 seconds and then in one jump land on scrap or pick it up directly with bill, to back up again, refocus and repeat the action for each of the remaining scraps of meat. Apparently it is unable to see ^{clearly} objects closer than 8 inches away. If it does not retract for focusing it will bludely pick at floor of cage in general area of the meat. This same action occurs when there is no food in paw and its object is a black figure on the newspaper or some debris. If food is not placed in cage the owl will begin feeding reflexly by eating feces and wet newspaper of cage.

When an 8 inch pan of water ($\frac{3}{4}$ inch deep of water) the owl is placed in the cage, the owl will drop directly down into pan from its perch 140 mm above, after about 30 sec. of investigation from perch. As is the case with the feeding activity, it will first look forward & then to the side before drinking. The bill is placed in water and then raised slightly to near perpendicular position and then opened & closed as if swallowing. This action takes about 10 seconds or more according to whether the water is being directed properly down the esophagus and then repeats the operation for approx. 10 times when it then either starts to bite the edge of the pan and the ^{of one foot} claws go into contracted condition as if feeding after which it jumps up to perch and after rubbing bill on perch and shaking feathers, resumes normal activity, or it begins to bath by lowering its body into water and vibrating its wings and moving its bill back and forth in the water, throwing water onto wings, back and some on head but less there than elsewhere. This is done several times and in about $1\frac{1}{2}$ minutes leaves water and jumps, sometime awkwardly up to perch where it either remains quiet or shakes feathers. In approx 1 minute it begins to preen feathers and adjust wings loosely to side of body. The oil gland at base of tail is pinched with bill and then preening continues and claws ~~are~~ examined. While in water it will frequently turn from one side to the other to expose more wing to water.

When resting on perch it 'drapes' over perch with head hanging low, tail low and body arched . The eyes are closed and the body rests slightly to one or the other sides on ^{one of} the wings. On the floor of the cage, it usually lies flat (as if dead) with bill forward and head turn ~~to~~ slightly to right or left according to way body is turn which can be slightly to right or left and resting on wing. Frequently the tail is held above the horizontal position  (side turned slightly with body resting on wing) (cross-section)

The feet are usually forward but occasionally straight back. On this date the bird can fly 30 feet or so and gain altitude to top of ceiling of room. When placed on table it will frequently ~~exercise~~ exercise its wings by going through the act of flying but remaining with contact with the table (for 4 or 5 seconds).

One of the most interesting behaviours of this owl is a body gyration which is given at any time but more frequently when an object is moving and comes into view of the bird or when the bird is exposed to a new or different set of circumstances such as being released from the cage and placed on a table. There need not be an object concerned or does there need to be movement. I am not sure but there seems to be more accentuated movement when looking down than when looking up above the horizontal. These body and head gyrations are given with the head and eyes held in a horizontal level (this is not always true as sometimes when looking to the side it will turn the head & eyes to an oblique angle ).

These gyrations can be a simple lateral or perpendicular shifting of the head without body movement to a condition in which the body and head range from almost a croutched position with head directly straightforward to a shifting to a perpendicular position of legs, body and elevated head (eyes always directed forward). This movement is accompanied by a circular movement of head & body. Rotation can be in either

direction. The degree of gyration seems to be in proportion to degree of excitement or new situations



Small insects (some less than $\frac{1}{8}$ inch in length) are sighted and followed as far as 10 feet away. All birds flying by are quickly observed and followed. When a bird flies by the owl will quickly turn its head as far as 90° to pick up the object, indicating that the bird owl does not have to be looking straight forward. Certain noises will be perceived by turning the head quickly toward the sound. The iris adjusts to intensities of light rather than to accommodation under constant light source.

Lawrence to De Soto, Kansas

June 21, 1965

Recorded birds observed between Lawrence & De Soto along Highway 10. Time 12:30 P.M. Will record kinds and numbers starting at India School E of Haskell Ave. Mileage 57.9 meadowlark, Eng sparrow, meadowlark, 2 grackles, Eng sp., Eng sp., dickcissel, dickcissel, bank swallow, 2 cowbirds, dickcissel, dickcissel, meadowlark, E Kingbird, grackle, redwing blackbird, mileage 60.0 redwing blackbird, dickcissel, dickcissel, barn swallow, barn swallow, Eng sp., 2 cowbirds, Eng sp., mileage 61.0 redwing blackbird, dickcissel, mileage 62.0 redwing blackbird, 2 grackles, bank swallow, Eng sp., Eng sp., Eng sp., Baltimore Oriole, dickcissel, mileage 63.0, mileage 63.4 Wakarusa bridge and end of first part of census. Starting at 2 blocks E of Eudora at mileage 64.6, Eng sp., Eng sp., barn swallow, dickcissel, meadowlark, dickcissel, mileage 65.0 three meadowlarks, 2 dickcissels, dickcissel, red-headed woodpecker, mileage 66 dickcissel, dickcissel, 2 barn swallows, dickcissel; mileage 67.0 2 meadowlarks, dickcissel, cowbird, dickcissel, meadowlark, 2 Western Kingbirds, 2 dickcissels; mileage 68.0 Eng sp., robin, 2 robins, grackle, dickcissel, meadowlark; mileage 69.0 meadowlark, dickcissel, Eng sp. Mourning dove, 69.8 Sunflower City; mileage 70 meadowlark, dickcissel, Eng sp. Eng sp.; mileage 71 meadowlark, Eng sp.; mileage 72 Eng sp. dickcissel, dickcissel, meadowlark; mileage 73.0 De Soto now turn off highway 10 to City to N. end of census. Between Lawrence & De Soto there were six box turtles (live) on road. From bridge over Wakarusa N of Eudora made census to Lawrence (lower road, 15th St of Lawrence). Dickcissel, Eng sps, dickcissel, Eng sp. (8), Eng sp., dick-

Cessel, Cowbird; mileage 7.0^{3.0} dickcissel, dickcissel, dick-
 cissel, Eng sp.; mileage 8.0 Eng sp., Eng sp., mileage 8.2
 red-headed woodpecker, Eng sp., starling, Eng sp., dick-
 cissel; mileage 9.0, redwing blackbird, western kingbird,
 barn swallow, Eng sp., meadowlark, red-wing blackbird,
 4 cowbirds, dickcissel dickcissel; mileage 10.0 meadowlark,
 dickcissel, red-wing blackbird, dickcissel, grackle, dickcissel,
 dickcissel, 2 grackles, dickcissel, meadowlark, meadow-
 lark; mileage 11.0 Eng sp., dickcissel, Eng sp., dickcissel,
 meadowlark, mourning dove, mourning dove, dickcissel,
 2 mourning doves, dickcissel, dickcissel; mileage 12.0
 robin, 2 dickcissels, dickcissel, meadowlark, meadow-
 lark, dickcissel, mileage 12.6 at railroad track on 15th
 st at base of side of valley. End of census.

*(see page 650703-11 for date of June 24, 1965)

1632 Indiana St., Lawrence, Douglas Co., Kansas

June 26, 1965

Dr. Jensen (Morgan residence) presented me with the following bat (Hoary bat).

650626-1 *Lasiurus cinereus* 86-35-9-12-10 gms

This bat taken from lawn under large elm tree immediately after a heavy rain storm at about noon.

5 mi. S and 2 8/16 mi. E Lawrence (P.O.), Douglas Co., Kansas

June 30, 1965

noted a scissor-tailed flycatcher on fence post at 7:30 A.M.

3 1/2 mi. S and 2 7/10 mi. E Lawrence (P.O.), Douglas Co., Kansas

June 30, 1965

Collected 4 male redwing blackbirds, 2 females, 1 dickcissel, 1 Eastern kingbird for class room research. Prepared one of the male red-wings.

650630-1 *Agelaius phoeniceus* T.L. 236, 69 gms wt. ♂

Hasell Bottoms, S Lawrence, Douglas Co., Kansas

July 1, 1965

There has been a noticeable increase in numbers of juvenile cottontail rabbits and crows since a few days ago. Counted 56 crows in area that has been devoid of these birds during the summer months.

Between Lawrence and Kansas City, Kansas

July 3, 1965

Between 6:30 P.M. and 8:00 P.M. counted 5 snapping turtles on highway 18 between Lawrence & the Plaza, Missouri. These turtles were approx. 18 inches long. It is rare to see these turtles on this highway.

Jacomo Lake, SE Kansas City, Missouri

July 4, 1965

Annette and Lucy Remple competed at a sailboat regatta, having taken second place in their class and landcap. Recorded the following photographs.

- 650704-1 Sea Watch II their boat
- 650704-2 unloading sailboat
- 650704-3 dock for sailboats
- 650704-4 general environs
- 650704-5 bay at boat dock
- 650704-6 Chris & Lucy preparing for race
- 650704-7 " " " " " "
- 650704-8 " " " " " "
- 650704-9 FJ US 781 their national number
- 650704-10 Canon starter
- 650704-11 Chris & Lucy in bay
- 650704-12 Sailboat nearing completion for start of race.
- 650704-13 Others adjusting sails
- 650704-14 Competitors.
- 650704-15 bay near docks
- 650704-16 Competition of first race.
- 650704-17 Chris & Lucy on first lap.
- 650704-18 " " " "
- 650704-19 a competitor
- 650704-20 Winner of race
- 650704-21 " "
- 650704-22 Son of winner
- 650704-23 Mrs. Mary^{ie}anna Remple.
- 650704-24 Chris & Lucy after race
- 650704-25 Sails being lowered after race.

Bowersock Dam, Kaw River, Lawrence, Douglas Co., Kansas

(Date of insertion July 3, 1965) June 24, 1965 (see July 4, 1965 p. 650621-75 for proper sequence)

On this date the Kaw River was near flood stage and was the highest level attained since the flood of 1951. At this time the water was flowing smoothly over the dam and the difference in water level was approx. 5 feet lower on the downstream direction of the dam. As the water adjusted to the drop it created a water agitation similar to the white water below normal rapids or cascades in large rivers. Took several photographs to show the structural character of these waves and associated water interference.

Photo 650624-1 General character of agitated water below dam showing well formed first wave, several less well formed succeeding waves and lastly the zone of oscillating waves with minor crests forming in other directions to the main flow of the current.

Photo 650624-2 Primary ^{or} first wave. This wave has the general character of the ocean surf with upwelling of water, crest or cornice formation and overturned cornice plunging forward. This surf or wave differs from the oceanic type in that the water is moving downstream whereas in a surf the water is static.

Photo 650624-3. In reference to conoing one cannot anticipate the stage of the first wave as it is rapidly changing every second. One ~~can~~ ^{must}, however, understand the various stages of the wave development so that at impact one will ~~understand~~ ^{anticipate} the conditions under which the conae will react to the wave.

Photo 650624-4 A close look at the primary wave showing various stages of crest formation. At right hand side of photo a cornice is forming; at extreme left the cornice has overturned forward; just left of center is an irregularity of surf formation which will dictate to type of cornice to form!

Photo 650624-5 A cornice of irregular shape & extent. This is a solid mass of water and is the most hazardous stage of wave formation as far as running the wave with a conae. A conae strikes a solid wall if run head on or is deflected if contacted on either side of cornice.

Photo 650624-6 A similar crest of solid water forming on advancing side of wave. An overturned wave has broken to right of cornice. A conae is forced upward on

76
74
76

Contact with the crest of the wave. The conae drops down into the swale or onto the slope or crest ^{front of the} of the second wave.

Photo 650624-7 a cornice has overturned onto the slope of the first wave, ~~just~~ but has not advanced to the splash stage

Photo 650624-8. Cornice now in contact with slope and just beginning splash

Photo 650624-9 Slightly more advanced stage with splash separated between light fine spray at base and coarse spray above. This cornice ~~is~~ ^{has} less water mass than earlier stages of cornice development because advancing wall of water is a single layer rather than a solid mass. Under any condition the mass of water produce a solid shock to an advancing conae.

Photo 650624-10. Two stages of cornice with one ^{at} left ^a less a barrier than solid water mass to right.

Photo 650624-11 The most formidable crest for a conae is a double crested wave cornice. This crest has a greater mass of water and because of its irregularity of shape the conae is deflected in an unpredictable way.

Photo 650624-12. a ^{uniform} ~~regular~~ overturned crest ~~of~~ has less deflecting influence on a conae than an irregular one.

Photo 650624-13 a double crest is hazardous for conae because of the unstabilizing effect it has upon a conae preparing to meet the main wave just beyond.

Photo 650624-14 The spray of a forwarding crashing cornice is usually a near solid wall of water as can be seen by the solid shadow cast by the spray

Photo 650624-15 The first spray is fine followed by main barrier ^{splash} of water.

Photo 650624-16. At the maximum development of splash the water forms a barrier of water that completely obscures the vision of ^{wave} ~~water~~ beyond. One loose orientation at this time, water gets in eyes, nose + mouth and the conae is completely affected by washed by the spray.

Photo 650624-16 after a crest had ~~been~~ has completely overturned the surface of the water is irregular

Photo 650624-17 The surface rapidly settles to a more uniform but rough water

Photo 650624-18 Still rough which produces a buffeting effect on conae.

Photo 650624-19 water surface finally ^{settles} smooths out in preparation for next stage or succession of waves.

650624-20 The smooth surface is transformed into a surf which is developing the typical cornice or crest.

650624-21. The crest is well formed and the second cycle of an endless procession of waves is underway to repeat the sequence of events of the previous slides

Lawrence, Douglas Co., Kansas

July 5, 1965

measurements this date:
wt. 143 gms
T. length ~~184 mm~~ 222 mm
wing 154 mm
wing spread 538 mm

The screech owl (no 650522-3) is calling in a soft, weak tone, the same call it has always given when being attracted to food or when being harassed. The owl, however, is capable of given a loud call, especially when handled. The new soft call is a change in behaviorism. It stands more erect now and ears are extended. When bathing and at the time it is drying its feathers, it will shake its wings for 10-15 times in consecutive action by holding the wing close to the body rather than a partly open wing. The tail is extended bathing in drying process and when resting. The following birds, in order of aggressiveness, have approached the owl when placed out of door. The birds generally come to within 8 feet and call vigorously, however, very seldom is more than one species involved at one time. In other words one kind of bird does not attract other kinds to the site of action:

Eastern Kingbird, house wren, robin, blue jay, blackcapped chickadee, Catbird, cardinal, crested flycatcher.

A family of catbirds in area and being fed by adult birds. The call of the young (short tailed but capable of good flight) is similar to a warbler.

Lawrence, Douglas Co., Kansas

July 9, 1965

Noted for first time that the screech owl extend entire body (inflated-like) with wings dropped down to side like a strutting turkey. Head held in to body, back arched high. It produced a call dissimilar to any call I have heard so far, being a deep cooing sound. This behaviorism is, I believe, the first one produced in its development.

Lawrence to Douglas Co. State Lake (Baldwin), Douglas Co., Kansas

July 9 1965

Annette, Chic. Pally + I spent evening on Douglas Co. Lake. Enroute

made census of birds from highway (paved) starting from 23rd street on Haskell Avenue to Douglas Co. Lake (only those birds within 100 feet of road on either side) mileage at start 47.3, time approx 5:30 P.M. Complete census: robin, Eng sp, mourning dove, 2 scissortail flycatchers on fence line about 1/2 mi. S of 23rd st on Haskell Avenue, 2 mourning doves, redwing, dickcissel, ♂ redwing, dickcissel, dickcissel, dickcissel, dickcissel, redwing, dickcissel, redwing, 49.0 indigo bunting, dickcissel, dickcissel, dickcissel, indigo bunting, 49.6 (Wakarusa bridge), river about 4 feet above normal, 2 mourning doves, yellow-billed cuckoo, 2 mourning doves, dickcissel, E. Kingbird, 2 E Kingbirds, meadowlark, dickcissel, 5 barn swallows, dickcissel, 2 meadowlarks, 2 mourning doves, dickcissel, 50.0, 2 robins, 1 mourning dove, dickcissel, dickcissel, 2 mourning doves, 2 mourning doves, 51.0 dickcissel, dickcissel, 3 robins, 2 mourning doves, 51.6 road turns to N, barn swallow, grackle, 52.0, dickcissel, dickcissel, meadowlark, 2 meadowlarks, 2 mourning doves, 52.7 road to S, 2 grackles, grackle, Eng sp., 53.0 mourning dove, dickcissel, 53.6 road winding, meadowlark, E Kingbird, dickcissel, 54.0 meadowlark, Eng sp., 3 mourning doves, grackle, dickcissel, tabbywhite, dickcissel, meadowlark, indigo bunting, 55.0, dickcissel, meadowlark, Eng sp., dickcissel, Eng sp., meadowlark, mourning dove, dickcissel, 56.0 meadowlark, meadowlark, 56.2 road to N (near Venland), dickcissel, redwing, redwing, grackle, dickcissel, meadowlark, meadowlark, Loggerhead shrike, redwing, dickcissel, 56.7 turning S just before Venland, Eng sp., Cowbird, barn swallow, 57.0 meadowlark, killdeer, redwing, scissortail flycatcher, dickcissel, redwing, dickcissel, mourning dove, cardinal, meadowlark, 58.0 dickcissel, meadowlark, meadowlark, redwing, leaving paved highway & turning N toward Lake three deciduous forests, meadowlark (openfield), three cowbirds, Baltimore Oriole, red-headed woodpecker in same place observed on three other occasions, 60.0 Eng sp., arrived S end dam at Douglas Co Lake about 4/10 miles beyond last observation. From dam, crossed to second or middle arm and continued to overhang tree where we ate dinner of chicken & corn on the cob. Only 3 male redwings were noted which is a noticeable decrease since last trip, The great blue

heron, a green heron and a kingfisher were here. a great horned owl & a spotted sandpiper were birds noted this time but not on last census. There were fewer bass working in upper channel than last time. Returned to car by late twilight. Heard the whippoorwill here and in Baldwins woods area.

Lawrence, Douglas Co., Kansas

July 11, 1985

at about 1:00 P.M., placed a 6 foot piece of string on the leg of the tame screech owl and staked it out on back yard lawn. The following birds appeared in the following order:

Catbird, called at approx 30 feet but did not leave protection of trees. Its call attracted the robin.

robin, arrived and immediately called from approx 15 feet. Its loud vigorous call immediately attracted other birds and was responsible for the congregation of birds. The robin remain at about 15 feet and dove several times, passing overhead of owl by approx 3 feet. In two minutes 6 other robins had arrived from various directions.

blue jay: Immediately followed robin in arrival and in 1 minutes 5 blue jays were in area. They called at about 15 feet and four on four occasions passed over the head of the owl by less than 2 feet. The owl reacted each time. Blue jay remained at various distances while the robins were more consistently about 15 feet from the owl.

cardinal: four arrived (2 males & 2 females) and investigated the owl at about 8 feet away, some coming as close as 3 feet but never attacking the owl like the robin & blue jay.

starling: one local resident with family 100 away stopped and scolded at about 20 feet away.

song sparrow: 2 birds arrived late & called from 10 feet away.

yellow-shafted flicker: one arrived and alighted in tree 50 feet away & remained silent. It then dove down across owl (10 feet above it) and alighted in tree on other side of yard. It then return at a closer dive (3 feet above owl)

and alighted in bush 10 feet high. A blue jay that dove at the owl scared the flicker which left but remained in area.

House wren: arrived last, and although usual concerned with the owl and scolded at 2 feet away, remained in trees at no nearer than 18 feet from owl which was in open yard on grass.

All birds finally left in various directions (to nesting territories) in approx 6 minutes after having placed the owl on the lawn. When allowing the owl to fly at end of string, the same birds returned again and started to call. These birds are attracted by sound & not by sight.

Returned owl to cage in house where it closed its eyes, refused food and ignored its environment as if in a lethargic sleep. This first experience with birds at close contact out of the cage must have been a shock to the owl.

Sandpits Lakes, 12 1/10 mi N + 1 1/2 mi. E Lawrence (P.O.), Douglas Co., Kansas

July 11, 1965

Checked Refuge Lake (see Sept 21, 1963 for designation of this lake) between 10:00-11:00 A.M. Day cloudy and occasional rain. Around edge of lake were 8 male redwing blackbirds, some females associated and taking food to nests generally placed 3 feet above surface of water. Two yellow throats called from definite areas. One wood duck, ♀, arrived from E. One little blue heron, ^(immature) arrived from lakes to N. 4 chimney swifts crossed lake at one time. There were no swallows in area and except for a few small sparrow of unknown identification, these were the only birds in lake area. Bullfrog (2) and acris calling. The water in lakes is high because of heavy rain fall this spring and summer, the highest since 1951. Today the Kaw & Wabaruska are both high.

Midland to Tonganoxie Lake, Jefferson & Leavenworth Co., Kansas

July 14, 1965

will record all bird kinds and all meadow larks according to mile intervals. (Road to N, thence E.); 5:30 P.M. Started at 73.6 mileage. M. lark, barn swallow, dickcissel, red-wing, 75.0 Eng sparrow; 76.0 M. dove, field sparrow, cuckoo; 77.0

84
83

cardinal; 78.0; 790 robin, indigo bunting; 80.0, 80.3 now west of valley and on uplands, m lark, m lark, m lark, m lark; 81.0 m lark, m lark, m lark; 82.0 m lark, m lark, m lark, m lark, m lark, 83.0 m lark, 84.0 meadow lark, m lark, blue jay; 85.0; 85.6 road turns to E. 85.6 highway 16 and 92, meadowlark, m lark, m lark, 86.0 grackle, cowbird, m lark, m lark, m lark, 88.2 Mc Clouth, meadowlark, starling, m lark, m lark, 89.0; 90.0 m lark, m lark, 91.0; 92.0; 93.0 E Kuykendall, 94.0; 95.0; m lark m lark m lark; 96.0 junction 90-14 and 165, m lark, bobwhite, 97.0; 97.7 Leavenworth Co. State Lake, 3 young cottontails in park (lake area) end of census 6:25 The evening was spent on lake en course (Chr. Paely, Annette & I). Green heron at lake. Return Lawrence after dark.

Lawrence, Douglas Co., Kansas

July 27, 1965

measured screech owl no 650522-3 as:

wt 143 gms; total length 220; wing 156; wing spread 538. The owl is just beginning to call with a continuous screech for 3 or 4 seconds. This call is a continuation of the short recognition call usually given when approached or fed. Photos 650727-1 to 650727-6 of this owl (Kodachrome).

August 6, 1965

measured screech owl no 650522-3 as:

wt. 153; wing 154; total length 218; wing spread 539. The difference in total length and wing may be a result of wear of tail and primaries. The owl was released this evening in the back yard of 1620 Tennessee St in Lawrence because of our vacation starting tomorrow.

Lawrence, Douglas Co., Kansas

Aug 6, 1965

made final preparations for vacation trip to west coast and Utah. Completed the following check list:

- clean and paint trunk of car.
- clean, waterproof, repair apex of tent, new ropes (nylon)
- cut ground* cloth for tent, carrier and trunk
- modify top car carrier
- 2 new front tires for car, toe chain.
- spring helpers for shocks (rear)
- grease car + tune-up
- inspect mosquito nets for car windows
- * cut 14 stakes for tent (oak)
- * modify tent pole, hooks, shower jug.
- buy new metal gas can
- stone, pipe, top spark collector
- * 2 hatchets, saw
- * fishing material, fly pole, reel, flies, leader, hooks, sinkers, bobber.
- * pans for under seat.
- * altimeter, compass, thermometer, humidity gauge.
- * jug for water (1 5 gal and 1 one gal)
- * flashlights (3, lights and batteries) one for tent ☹ with open top

blue cross - blue shield
 car registration
 cloths - hiking* shoes
 * inner soles, * stockings
 gloves

collecting material

- * scissors, scalpel, forceps (2), ruler, ^{wire} cutters, pliers, 2 sizes
- * wire, bird sticks, skull + body tags, scales, needles and
- * thread, cotton, corn meal, skinning tray, specimen boxes,
- * pins, traps, stakes, Higgins ink, 3 ^{propagator} pens, gun, shells
- * Camera, accessories, film, exposure meter.
- * tape recorder, batteries, tape, car phone, extension phone.
- * sleeping bags, rubber mattresses, repair kit, hand pumps, pillows
- * bird book. * field book, * watch, counter, stop watch.

emergency kit: saw, nails, wire, grommets, * matches, tweezers for splinters, ear syringe, of candles, reading glasses, mirror signal

- * sun glasses, canteen 1 qt.
- * gas stove, gas can
- * 6-12 mosquito repellent.
- * plastic bags
- extra rope
- * electric shaver, battery shaver
- * binoculars.
- * pocket knife
- rubber boots, * umbrella
- * chair, * maps.
- * shovel

medical kit. asperin, sun lotion, burn salve, benadryl, bandaid

Turn off lights⁽²⁾ water, pull all electric outlets, leave key with neighbor be sure cat is out of house and arranged to be fed. Leave itinerary

Food and cooking equipment.

- * matches
- * large fry pan, spatula
- small " "
- * large handled pan
- * dish pan
- * butcher knife
- * spoons, forks & knives, cups
- * chair girl (SOS)
- * soap, rags
- reflector oven & pan
- * paper towels & cloth
- * toilet paper
- * paper plates - cups
- * can opener

used all these items

salt, pepper
 powdered milk
 coffee, sugar, saccharin
 dry drink, instant cocoa
 bisquick, bread
 bacon, canned
 crisco, oleo.
 canned meats, hash
 cereals, rice
 butter & butter jar
 potatoes (canned) (sliced)
 dried fruit
 peanut butter
 jam, candy
 Cheese, soups, baked beans
 Tong
 metheal, Carnation breakfast
 fresh fruit
 lemons


Cloths (per person)

- shoes (2 pair)
- 2 pants
- 2 under cloths
- 1 long sleeve shirt
- 1 sweater
- 1 raincoat
- 1 hat
- 1 pair gloves
- swim suit
- warm jacket

used all these

Lawrence, Douglas Co., Kansas

Aug. 7, 1965

Left 10:30 A.M. for Washington (Port Townsend). Mileage 63364. Temp 86, humid 43. Wind slight. Usual birds including meadowlark, dickcissel, mourning dove. Will continue across state on highway 70 interstate. Area around Manhattan green for this time of year because of excessive rains. ^{Forest} Junction City turnoff 63465, 12:40, temp 83°F, humid 29, cool strong wind from SW. Smoky Hill river bridge 63466 main Junction City turnoff 63470. General impression of country just west of J. city. Slopes not as green as E of Junction City. Undulating hills with green grasses, exceptionally good growth for August. more trees & farming than between Manhattan & Junction City. Grasses change from greenish to yellow when sun shines thru clouded pattern. On valley slopes grass extend from top to bottom but shrubs leave slope at point where alluvium begins  Between Lawrence and Junction City counted 4 opossums, 1 raccoon, 2 striped skunks. Census of birds on right side of road, ^{starting} at Detroit-Enterprise turnoff 63487 1:05 P.M. temp 82, humid 30.

mourning dove
sparrow sp.?, IIIII

starling 1

redwing 1

meadowlark
red-tailed hawk

most of the ponds are filled with water. Jack rabbits are increasing near Ogalalla & Wakeeney because of the flatness of the country which the jackrabbit is most adapted. Bird life rare along superhighway; birds observed a few meadowlarks & mourning doves. At Quinter, 63682 mileage, 5:00 P.M., temp 80 (in car) humid 24. At Quinter noted first pheasant and a marsh hawk (3 hawk seen Lawrence). A night hawk was flying in the air. Arrived 3 miles E of Oakley at 7:50 P.M. at sundown, Temp 80, humid 26, 63722 mileage. Covered 358 miles today. Drove to Oakley for supper. Bed by 9:50 P.M.

3 miles E Oakley, Logan Co., Kansas

Aug 8, 1965

up at 5:30 A.M. Temp 54°F, humid 44. elev. 2700 ft. Clear sky. Temp just right. Sun up 5:50 A.M. Left 7:00 A.M. humid 46%

Begin census outskirts goodland mi:-63804
 8 A.M. - 80% cultivation for more
 English sparrow-2,2
 striped skunk - road kill-1,
 jack rabbit - road kill-1,1,
 sparrow-species?-1,
 pheasant - road kill-1,
 meadow lark-1, - end of census mi:-63820 - 8:20 A.M.

Kans. - Col. state line - ~~begin~~
 Begin census state line to west - day clear, so. wind
 pheasant - road kill-1, raven 2,
 meadow lark-1, western kingbird-1,
 lark bunting,
 sparrow (sp?)-1,
 swainson hawk-1,
 English sparrow-6,
 horned lark-1,

(15th end census Burlington - mi:-63853
 Begin census - (cont.) 840 - 80% or more cult.
 vesper sparrow-1, Eng. sparrow-1,
 Sparrow sp.?-1,1,2,2,1,1 Red-winged blackbird-1,
 mourning dove-1, lark bunting-1,
 meadow lark-1, Stratton, Colo. - mi:-63853 A.M. - cont-

30% cult. - Vana, Colo - mi:-63861 9:15 A.M. - cont.
 Seibert, Colo mi: 63868 - 9:21 A.M. cont. - 50% cult.
 Sparrow-sp?-1, lark bunt. - 2,2,1,1,
 Swainson hawk-1, horned lark-1,
 mourning dove-2,2, Kildeer-2,

rabbit-jack kill-1, Arriba, Colo. mi:-63892 10:00 A.M. - day clear
 so. wind - 40% cult. -

lark bunt. 1, Jewa, Colo. mi:-63905 10:20 A.M. 98% native
 grass - change of country - drop to west census cont. -
 meadow lark horned lark-1,

junction 40-287 10:30 A.M. mi: 63913
 Mourning dove-1, Luman mi: 63916 10:35 A.M. - river valley dominant cotton-
 wood trees - great native grass - ponds full
 road kill - badger (63930) horned lark 3, - Agate - mi: 63938
 11 A.M. - begin of cult.

lark bunt. - mi: 63946 - Deer Trail mi: 63951 11:20 A.M.
 western kingbird, Cotton wood flood plain completely
 washed out in flood - sand covered (Bigou River)
 marsh hawk 63961 - East Byers - Bigou river mi:-63965 11:37 A.M.

Strasburg, 63970, 11:45. all tubulars of Bryan River
 have been severely flooded. Cottonwood trees grow up to
 highest flood level of water & sand and are probably
 controlled by periodic floods. altitude 5-380 ft.,
 temp 72 (in car), humidity 10 percent. Continuing birds
 census to Denver, having been in continuous operation
 since the Colorado-Kansas state line on highway
 24. badger - roadkill - 63975
 Watkins, 63987, 12:15.

mourning dove
 striped skunk (road kill)
 2 cottontails (road kill)
 jackrabbit

End of census, 64000, 12:30, Aurora

64006, Denver, 1:00 - Fitzsimons Hospital

Beyond Denver to Ft Collins there were a scarcity
 of birds, not much different than on high plain
 east of Denver. mourning doves & meadowlarks
 occasionally noted. Ring billed gull, ^{and Forster Tern} most numerous
 bird, some flocks 150. Lake overcrowded with
 fishermen & must influence water bird population. One
 badger kill near Loveland turnoff. Arrived Ft Collins
 2:30 near to Laramie on 287. Wyoming line 5:00

64120, Turkey vulture 64129. at approx 10 miles
 S of Laramie noted ground squirrels at 1 per every 200 feet.
 these continued to about 5 miles S of Laramie. Arrived
 Laramie 64146 at 4:45. Left Laramie, old road 30-287
 for Rawlins. 64156 prairie falcon

Census from 64161, 5:00 P.M. across Laramie Plains:

no birds to 64170 before arriving at river.

Begin census 64172 at Basler 5:20

Princeton (roadkill) 64178

8 antelope 64181

14 " 64182

5 horned larks 64186

2 mourning dove 64187

1 road kill jackrabbit

considerable water in river
 and on lakes. Some teal here

5 antelopes 64187

5 cowbirds 64188

1 meadowlark 64190

Rack Creek 64192

Rack River 64193

antelope 64195

3 teal 64198

redwing 64198

cowbird 64205 (Como Bluff)

2 mourning dove 64209

- 64209 swallow ^{sp?} at budge
 64211 12 teal
 64212 medicine Bar
 64229 5 antelope (2 small ones)
 64233 Hanna junction end of census from Laramie
 Junction at 6:40 PM
 64242 12 antelope. Camped approx 12 mi NW
 Rawlins, Carbon Co, on highway 287. at turnoff to Atlantic
 refining Co., O'Brien Spring Unit, Carbon Co., Wyoming.
 Approx 12 mi NW Rawlins, Carbon Co., Wyoming

Aug 9, 1965
 (length of skull)
 measured skeletons of coyotes, bobcats at near camp. Included
 in group were 29 *Canis latrans*, 11 bobcats, 2 foxes (small).

coyote	bobcat	fox (red?)
190	130	145
195	140	160
180	138	
180	140	
200	136	
210	130	
200	140	
190	118	
200	102	
200	114	
200	109	
190	112	
196	141	
204	132	
180		
212		
180		
180		
185		
195		
192		
210		

only horned lark at area.

Rancher stated that 40
 animals taken from unweeded
 area last winter.

Antelope common, elk occasional,
 mule deer in foothills. Few
 badger. Jackrabbits taken
 for dog food, pelts at night &
 disrupted coyote, bobcat
 population.

tail 140
 body 750

Left Camp at 9:10 A.M., temp 78, humid 20, elev 6390 ft. Sky clear
 no wind. mileage 64302. Noted several ground squirrels (Petalions)
 area greasewood, Artemisia, Gutierrezia. At 64306 is
 Separation Creek to east masses of several species but soil
 mainly bare & rocky.

63421
 63422
 63423
 63424
 63425
 63426
 63427
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* Left Landers 12:45, 85° F, 29 humid, at 63421. north of
 town a road well striped skunk, Wilson Phalarope,
 Brewers blackbird, sparrow, magpie; 64473 magpie, first
 one on trip. The slopes of Wind River are unscarred at
 present and they should be maintained as such.

Left Camp at 9:10 AM, temp 58, humid 50, wind 2-3 mph, light rain
 in wind. (Total record wind speed 10 mph)
 over ground. (Total record wind speed 10 mph)
 (Total record wind speed 10 mph)

Lamont 64321 and 8
 64344 Cooper Creek and set, antelope. Since camp have noted 3 mourning doves, 8 horned lark, 1 crow and an unidentified bird. Few jackrabbit road kills. One nighthawk in air. 64348 cliffs to E with 3 whetwash areas as if associated with eagle nest. 64358 Jeffrey City, 1 foot or less high
 10:30 A.M. Start bird census at Jeffrey City. Area Artemisia, high few grasses, greasewood in lowlands & disturbed soil areas.
 64363 hummingbird, small bird like sparrow?; 64368 Ice Slough crossing of damp Carex, grasses etc. redtail heavy chased by marsh hawk, 2 mourning doves, several small birds. Main route has been uplands where birds are rare. 64369 sagehen road kill. 64376 Cliff willow 64377 river at Sweetwater Station. redtail hawk. now back to uplands of Artemisia 64372 jackrabbit road kill, 64373 large ♂ antelope, single; jackrabbit road kill. 64381 rabbit road kill; 64374 jackrabbit road kill, cliff swallow at bridge 64376 3 jackrabbit road kill, one sagehen. 64383 jackrabbit road kill, 8 antelope 64385 top steep grade, jackrabbit road kill; 64385 antelope. 64391 (5,600ft) crossing creek in bottom of canyon now ascending E slope, ^{and canyon} of Artemisia. 64393 jackrabbit road kill; 64395 road kill jackrabbit; 64399 sagehen road kill; 64408 mourning dove. 64409 mourning dove. (creek bottom); 64410 Little Popo Agie river & grass valley. redwing blackbird; 64412 junco 287-28. End of complete census of Artemisia plains and slopes. Beyond is a series of rivers, grass valleys alternating with Artemisia slopes. Valleys with ^{dark} green bulrush and alkaline soils. 64420 Landers 11:45 A.M. * Arrived Pilgrim Creek Camp, ⁶⁴⁵⁸⁰ Telos 3:30 P.M. Canada Jay, Clark Nutcracker, at camp, also hairy woodpecker.

Pilgrim Creek Camp, Teton Natl Park., Wyoming
 Aug 10, 1965

At 7:30 A.M. Temp 57, humid 54, 6,800ft., sky clearing to blue. Last night visited Jenny & string lake. Mileage leaving camp 64613. at Colyton Colter Bay took photos 650810-1 family, bay & boats; 650810-2 boat, 650810-3 children at edge of bay; 650810-4 ^{morning Peak} road. At NE end Jackson Lake photo 640810-5 of Annette & moon in background. Birds in area: rosew, oregon junco, white Cr. sparrow, Clark Crow, Canada jay, *Tamiasciurus hudsonicus*, *Eutamias amoenus*; hairy woodpecker, olive sided flycatcher.

gulls.

Lewis River Falls at mileage 64650, 10:00 A.M. Here photos 650810-15 of falls, 650810-16 of falls, 650810-17 fall and Mary & Annette. A water ouzel fed its young which was larger than adult.

West Thumb at 64662 - 11:00 A.M. tree & northern green swallow in area.

Few miles E of Old Faithful photos 650810-18 of reflection of trees in lake. Photo 650810-19 also of reflection. Photo 650810-19A of bear.

at Old Faithful 2 photos 650810-20 and 650810-21 of the Geyser. Beyond photo 650810-22 of Morning Glory pool showing algal growth.

at midway geyser three photos of pools and algae nos 650810-23 to 650810-24. Photo 650810-24A of Elk.

at Lower Geyser area 2 photos 650810-25 & 650810-26.

at Yellowstone Canyon (Grand view) 650810-27 family, 650810-28^{and 28A} Osprey nest, 650810-29 directly down into Canyon, 650810-30^{and 30A, 30B, 30C, + 30D.} lower falls. From another location above falls photos 650810-31 & 650810-32. Ospreys in area as well as white throated swifts.

Between Canyon Village and Fishing Bridge photographed meandering creek, 650810-33 & 650810-34. Just beyond photo 650810-35 of broad river valley grass & sedge meadow with pelicans & Canada geese on river. Arrived 64747 ^{Pelican Creek} Fishing Bridge Camp. Birds & mammals in area new to list. Calif & ring-billed gull, mallard duck, white crowned sparrow (roosting in sedges & vegetation at contact between valley marsh & sedge hill), Canada jay, Clark's nutcracker, mt. chickadee, night hawk, 2 moose, audubon warbler, downy woodpecker.

Pelican Creek
Fishing Bridge Camp (East of marshy creek), Yellowstone
National Park mileage 64747

Aug. 11, 1965

Brown bear raided refuge Pan, see lot of next door Cooper (20 feet away) and our table in front of camp. Cooper in area chasing bears out of their camp about every hour of the night. Left at 8:25 A.M. First stop artist Point where photos 650811-1 & 650811-2 telephotos of lower falls. Photos 650811-3 & 650811-4 of general views.

From N side of Upper Falls photos 650811-6 to 650811-12 of falls and above, one of which include Chris + Polly. Mileage here 64768.

A few miles beyond divide W of Washburn mountain were three different brown bears along road. In this same area a raven was flying down the road at 35 miles per hour, following exactly the course of the road for 2 1/2 miles. It finally joined another raven. at 64781 mileage 2 photos 650811-13 + 650811-14 of mt Washburn + area.

Photo 650811-15 of many at Caliente Point among large conifer trees

Arrived mammoth 1:30 at 64811. Photos 650811-16 to 650811-30 of springs. Nos 650811-31 of Pally + barns. Left 2:00. North entrance of park at Gardiner at 2:20 P.M. at 64817.

Arrived Lewis and Clark Caverns camping ground at 5:30 P.M. at 7:45 P.M. 13 turkey vultures sailed East about 1000 feet overhead. At this time the sun had left clouds but was skimming on a jet plane flying west. The birds sailed straight forward without circling and in a variety of formations. Occasional one would flap its wings. This is unusual because turkey vultures most frequently circle in flight. Wings were kept almost motionless, mileage 64955

Lewis and Clark Caverns, Montana 5,280 ft.

Aug 12, 1965

Green-tailed towhee at camp. Also young red-tailed hawk calling from tree on top of hill to N, 2 western tanager, 1 rock wren, flock mt. chickadees, an audubon warbler and pine siskin, group Clark nutcrackers. Left 7:51 A.M. temp 70, humid. 40. In Beaverhead Canyon noted 2 mourning doves + 1 kingfisher, western kingbird, magpie. Arrived Whitehall 64973 at 8:25 A.M. Bird Census from here: 90% cultivated ^{dry juniper} other sagebrush slopes: magpie, magpie, mourning dove, bank swallow, 64978 at Big Peppertone Creek, Eng. sp. End census juniper 10-91, mileage 64983. The census has been across valley. now entering ponderosa pine covered slopes and a continuation of above census. (sage, juniper, cottonwood in creek, ponderosa on higher slopes, junipers perfectly shaped ♀♂ Douglas fir increasing, mountain to mahogany. + many large rocks.

few open now but still no herds at mileage 64988. Entering ^{10:00}
 Deerlodge Nat Forest 64989. 6,200 ft elev. Continental divide
 6418 ft. mileage 64993. No birds since beginning of census.
 Thompson Park 64998 End of mountain census. Continue
 census to Butte. Moggia at 64999 photo 650812-1 of
 Cadon, Pally and Grand Hotel sign. Cabin 80 yrs old. Crow,
 end of bird census at 65006; Butte outskirt just beyond. Left Butte
 1200 at 65015 mileage. Rain between Butte + Missouli, first
 dark clouds, lightning and heavy rain, then long period of light rain
 and overcast and the heavy rain ~~end~~ followed by blue skies. Arrived
 Missouli 3:00 P.M., mileage 65146. From Missouli 10A to N + West.
 74°F at 4:00 P.M. On east side of valley the kind of rock
 and substrate control growth of ponderosa pine. This condition
 extends west as far, at least, as ^{Perma} ~~Spokane~~. Flicker here.
 nearing Perma country & river reminds one of the Columbia
 River near the Deels. River lined with beautiful stand
 of sedges, green and delicate texture. From approx 40 miles
 up river from Bull Creek Camp Grounds, there were approx
 1 sparrow hawk per 2 miles. One area of 1/10 mile there
 were 9 birds, more birds than seen since Laurell. Arrived
 Bull Creek ^{River} Camp 7:30 P.M. at 65299 mileage. Best camp
 to date. Mule deer crossed road 5 miles E of camp.

Bull Creek Camp, Clark Fork, ^{River} Montana (elev. approx. 2200 ft.)

Aug. 13, 1965

up at 7:30 A.M., temp 56°F, humid 49. Birds in area: 3 raven,
 cliff swallows feeding continuously at water on creek, 3 ring-billed
 gulls, chickadee, robin, sharpshinned hawk hunted in upper
 level of conifer trees, chipmunk, Tamiasciurus. Left camp
 10:00. Temp 56°F, humid 52. 65311 Idaho border
 10:25. Visited Margorie Nordew in Spokane at Sacred Heart
 nursing ^{med.} school. Her address is 949 E 43rd St. Nancy (Dr
 Robert D. Cunningham of phone HA 6 2015
 Left 5:00 at 65445, Arrived Pasco 8:00 at 65609, Camped
 Columbia Park.

Pasco, Washington (elev. approx 400 ft.)

Aug 14, 1965

at 7:30 A.M. temp 59°F, humid 44, day clear. Killdeer, Eng sparrow &
 red shafted flicker only birds in area. Left 9:00 A.M. gopher
 active at camp. Purchase katays, plates, bacon, bread, stoves, potatoes
 gas for stove, coffee, broom.

Bird census from 65896 11:30 artemesia flats (can see Hood mt). Three Mile Canyon turnoff 65898. 65899 Nighthawk; End census at John Day Dam (under construction) at 65741. (birds along river not included in census). Before census and beyond noted several flocks of Brewers blackbirds at mayhull 2 photos 650814-1 + 650814-2 of Stonehenge near Hood River photo 650814-3 of log raft in river. On road high on cliffs 2 photos up river 650814-4 + 650814-5. Arrived Vancouver 6:00 P.M. at 65871 mileage. The entire Columbia River Gorge up to Pasco has been modified by man. Talus slopes at base of river cliffs have been completely removed for road construction. Early man may be unmeasured at base of these exposed cliffs, perhaps in cones. Now to Clara Vaughan at 219 W 40th St. arriving at 6:00 P.M. Left 10:30 P.M. and camped at Paradise Point Camp Ground.

Paradise Point State Park, Washington
Aug 15, 1965

Left 9:20 A.M. for Seattle. Mileage 65872. Arrived Saltwater Camp Grounds 1:30 at 66039. Gulls swam this afternoon. Photos 650815-1 and 650815-2 of Chris, Polly & Annette in creek at camp. Coopers hawk at camp. Gulls only birds at shore. Crowds of people are literally carrying away the beach and its marine inhabitants. Temp. at 7:00 P.M. 66°F, humid 50 and elevation near sea level.

Saltwater State Park, Washington
Aug 16, 1965

At 8:00 A.M. temp 54°F, humid 48%. Day clear. Coopers hawk, song sparrow and black capped chickadee in camp. Gulls only along beach. (3) Continued to Seattle (Photos 650816-1 to 6 at needle. Photo (7) at Edmonds Ferry. Arrive Mohe in P.M.

Port Townsend, Washington

Aug 17, 1965

From Max Culbertson's ^{Bee} residence (Van Buren & Lincoln) visited several nearby beaches. at Fort Flagler noted a long-tailed jaeger + a harbor seal. Photo 650817-1 of at P. Townsend

Aug 18, 1965

visited other beaches. Photos 650818-1 + 650818-2 of Mary Ann + the blue door at the Bee's residence. 650818-13 + 14 of Church in P. Townsend

Aug 19, 1965

Left for La Push and Realto Beach. 77 log trucks between Port Angeles + turn off to La Push. All full. Bell at Sappho.

Mora Camp, Washington (National Park)

Aug 20, 1965

Mileage 66346. Rained all last night, foggy until noon. Today walked from Realto Beach north to point to tidal pools. Enroute took 18 photographs of various subjects. 650820-1^{camp} to 650820-18. Birds observed were: band-tailed pigeon, double crested cormorant, spotted sandpiper, 2 species of gulls, 8 black oyster catchers, seesters, harbour seal (2), sandpipers (westerns?), ^{winter} house wren, fish crow, nighthawk, common crow, varied Thrush. Followed Beach trail #2 and found a cove with sand only. Bat flying in evening. Visited fishing boat fleet at La Push. Indians degraded and are taken advantage of. Raven & Crow in area

Aug 21, 1965

Temp 10:00 AM 60°F, humid 64 per cent. Two photos 650821-1 and 650821-2 of camp and family. Departed 10:40 A.M. Mileage 66375. Arrived Hoh River Camp 1:00 P.M. Covered Moss Forest & Rwa Forest trails. Took photos 650821-11 to 650821-20. Left for beach 3:45 P.M. Mil. 66424 at Hoh Camp. most interesting road in National Forest. Nat'l Park abuses their areas by roads & cutting. Dusky grouse where Hoh road contacts main highway. at Kalaloch camp, swam in ocean and photos 650821-11 to 650821-20;

Kalaloch Camp Washington (National Park)

Aug 22, 1965

Temp 10:00 AM 60°F, humid. 64 per cent. At beach noted Double crested cormorant, western sandpiper, sanderling, western gull, common tern, surf scoter, ^{white} wing scoter whale. Left camp 11:00 AM mil. 66468. Followed 101 to Astoria. ^{petrel in bay} About halfway 2 striped skunk road kills, nothing before or after (skunks). arrived Megler 3:00 P.M. at 66625. Left on ferry at 4:20 P.M. Arrived Cannon Beach. Ecola Park outstanding for observing marine birds 3 mile deer fed on slopes. Birds: double crested cormorant, western gull, glaucous wing gull, surf & white winged scoter, black oystercatcher, goldfinch, stellar jays, western sandpipers. Arrived Evergreen Trailer at 9:00 P.M. mileage 66692. Camp owner said that if it ^{camp} was intended that we stay in one place we would be a vegetable.

Rock-a-way, Washington (Evergreen Trailer Camp)

Aug 23, 1965

Left 9:30 AM for Crater Lake. 4 photos at Seal Rock State Park of Ocean & family. 650823-1 to 650823-8, the last one with a helicopter in view. At Sea Lion Cove noted 50 sea lions. Arrived Florence 3:30, mileage 66862. Photo 650823-9 of Polly on stump just N of Coos Bay. Moving sand in background. 2 photos of crags, no. 650823-10, 650823-11 of sea lions rocks showing sea lions and great blue heron. Sea lions calling vociferously, one dead sea lion on beach. Arrived Bandon 7:00 PM and camped first point south of Bandon. 1 photo, 650823-20 of sunset mil. 66970

Bandon, Washington

Aug. 24, 1965

Left 8:00 for Crater Lake. Chris and Polly walked up to main ^{Bandon} point north. 1 photo 650824-9 from main point. temp 64 humid. 66. Arrived 2:45 PM Crater Lake National Park. Took 5 photos, 650824-10 to 650824-15 of clark crow, goldenmantled chipmunk, family and general view. Left at 4:30. Mileage - 67200. In Fort Klamath area, aspen trees unusually large. Arrived Bly recreation area 7:30 PM. Mileage 67300. Some birds in area were western tanager, many robins, song sparrow, thrush, magpie, marsh hawk, chipmunk. (First meadowlark & mourning dove at Winston, no other seen to W along coastal area) (12 Turkey vultures singles between Winston & Bly).

Bly Recreational Area, Oregon

Aug. 25, 1965

Left 9:00 AM. temp 54, humid ^{at Lakeview noted 52 Canadian geese} 62 elevation 5000 ft. Rain all last night. Census from Adel on at 11:30 67378, temp 62, humid 32. at 67380 a golden eagle fed on a dike. 23 mallards swam 50 feet away. 67381 sparrow hawk, 8 cliff swallows annoying. 67382 2 clark sparrows, 1 coot. 1 turkey vulture. 67383 mow turning S on other side of valley. at 67389 now turning to E up canyon. Valley before of artemisia, sedges etc. end of census. Since end of last census have seen 2 flocks of horned larks (3 + 12) to base of mt at 62405. no birds up guide to top at 67409 (Doherty Pass). see country desert with artemisia & flowering rabbit brush. Butterflies approx 1 per 20 miles. (yeelan)

From pass east a high desert plateau 4,200 ft., vegetation of sage about 10 inches high & sparse which is quite different than desert of lowlands before grade. 67414 28 horned larks. 67415 1 horned lark, sage higher in draws & on some exposures, few juncos (isolated) here but absent elsewhere. 67416 Harney Co line, 1 horned lark, Nevada line 67418 at 12:30. Continuing census, Photo 650824-1 of sky. 67429 horned lark. 67432 mourning dove. 67435 mourning dove, 67438 magpie 5,000 ft elevation, area artemisia, Chrysolophus etc; 67446 shrike. 67449 lava flow and sky to N (Photo 650824-2) Photo 650824-3 of clouds to S. 67464 Photo 650824-4 of valley & clouds to S. 67466 Denis junction. Now to S & end of census. 67476 Photo 650824-5 of ridge & clouds, a mourning dove here & only bird since Denis junction. 67482 first roven since Bly. Northern Nevada is indeed an undeveloped area without signs of habitation, road scars or man made influences. 67484 6 roven & 1 horned lark. Some dry farming in this valley. 67486 2 horned larks, 67488 1 horned lark. 67496 2 turkey vultures. Complete census since Denis turn off. 67497 8 roven. elev 4250 ft., considerable Chrysolophus in valley. 67499 Leonard turn off. 67507 Photo 650824-6 of distant mt. and greasewood flats of white soils. 67511 first rabbit kill since Denis 67512 5 horned larks. 67513 12 horned larks, area greasewood & short ~~sage~~ sage. 67520 roven⁽²⁾, 1 horned lark. End of straight road and junction of highway 95 at mileage 67537. 67540 first meadow lark since Bly 67544 pass into next valley, unusual strange odor of artemisia 67546 Paradise Valley junction. Photos 650824-8-9 of fir nw of Winnemucca on hillside (observatory), Artemisia to base and chert grass slopes to top. Winnemucca at 3:40 P.M. at 67573. End of census. From here to Elko noted a few mourning doves Arrived Elko 7:30 P.M. Between Winnemucca and Elko recorded selected notes (all magpies & roven). 67581 magpie, 67522 magpie, 67630 Battle Mt., 67639 roven, 67640 magpie, 67642 magpie, 67657 magpie, 67678 roven, sundown and end of census. Arrived Elko 67712.

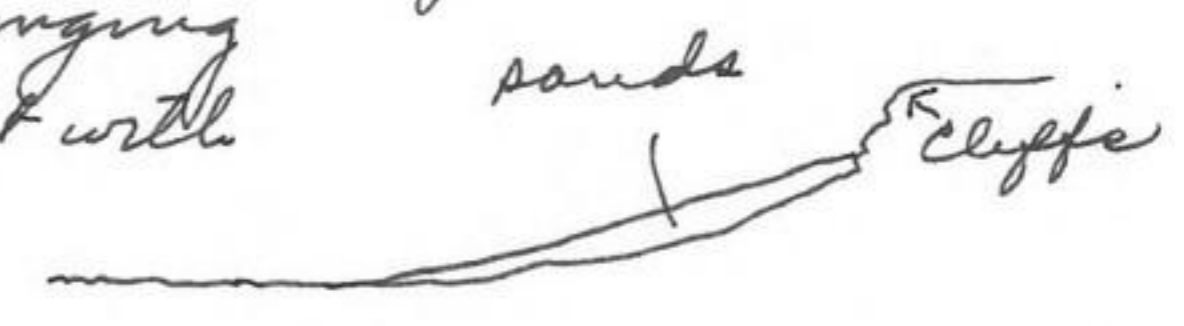
Elko, Nevada

Aug 26, 1965

Temp 6:00 38°F. Magpie at camp at City Park. Left 6:55 A.M. Will record magpies to east. 67714 magpie, 67725 3 magpies,

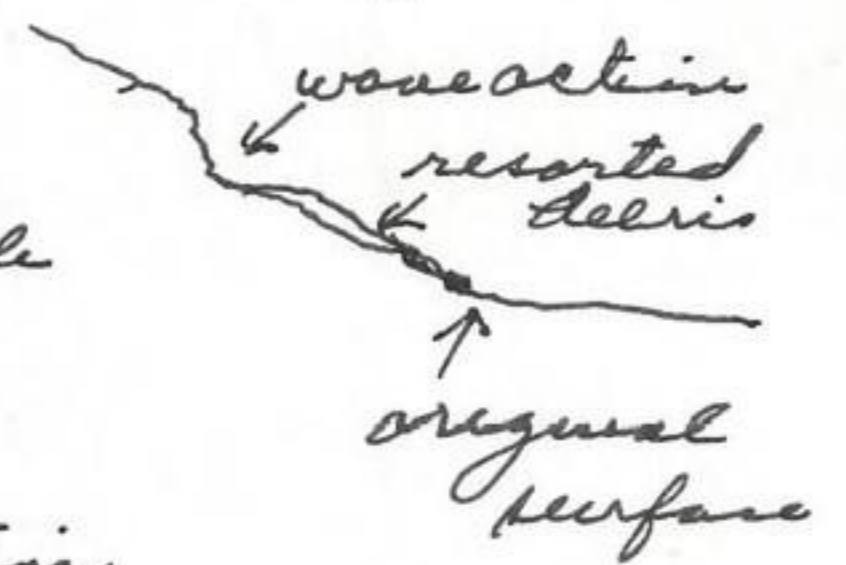
67758 great horned owl, 21 inches total length at Starr Valley turnoff; 67765 Coyote. alive in road, crossed back and forth three times and then ran down road 30 feet as we approached, left road & travelled up hill. arrived Wells at 67766 at 8:00 A.M. Left Wells 8:35 A.M. East of wells considerable prunyon & juniper. 67791 Piquet Pass at 6,967 ft. 9:10 A.M; Pinyon forest increasing E of E lks and almost absent west of lks across state. 67809 2 turkey vultures. Silver Pass at 67809; 67822⁽³⁾ raven; 67831 Wendover, 10:00 A.M.

across the state of Nevada noted 4 snakes killed on road, about size of rattler, two of which were within 2 miles of each other. The N.W part of Nevada, in desert region, has a disparity of birds and least influenced by man. Cliff erosion may be due to sand bringing winds into more direct contact with sands cliffs. Moving sands must have been an important factor in the erosion of Great Basin topography.



at 67874 mileage (Knolls). There has not been a single bird noted between here & Wendover. all flats inhospitable to birds. Country E of Knolls more typically desert vegetation & some relief in topography. Lake Bonneville terrace has had minor influence on side of mt. On low hills without drainage above and of rock, the beach is a weak line. The higher the drainage the more obliteration of the shoreline.

The removed rock of slope is deposited below shoreline and covers original rough surface of slope (rocky slopes). On many slopes the level is a tufa layer on the original slope



of sidehill. 67908 first bird (a swallow) since Wendover. 67913 Tempie, 11:50; 67925 swallows; 67930 Grantville. no birds other than those listed above between Wendover & here. Will keep complete census from here to Lehi via Tooele route, 12:05 (census not includes city environs of Grantville. 67932 at junction 112 to 5. 67940 2 redstarts, Tooele 67941 (no census thru city & outskirts that might influence desert community life). 67938 Stackton, 67954 junction 73 to Lehi; 67956 jackrabbit road kill; 67962 flycatcher-like bird; 67965 3 horned larks; 67968 3 horned larks; 67971 Forest turnoff and

Utah Co line + horned lark; 67973 horned lark; 67976
 Camp + layd or Fairfield; 67981 Cedar Fort; 67982 jackrabbit
 road kill; 67992 meadowlark; 67994 Jordan River, Brewer
 blackbird, Eng sp., redwing blackbird. 67996 outskirts of Lehi,
 and end of census; 1:30 P.M.; Arrived Provo 2:00 P.M. 68085
 mileage.

Provo, Utah Co., Utah

Aug 27, 1965

Took several photos: 650827-1 of James Robert Bee,
 James Robert Jensen, Greg Estes, Richard Hemphill.
 Photo 650827-2 of Greg Estes, James R. Bee & Richard
 Hemphill. 650827-3 of James R Jensen. Photo 650827-4
 of James Robert Bee with summer's growth of hair and
 whiskers. This afternoon drove to Mirror Lake in
 the Uintas. At the Trial Lake caught several lake
 trout. Camped at Mirror Lake. Only small fingerlings
 here.

Mirror Lake, Uinta Mts., Utah

Aug 28, 1965

Photo 650828-1 of camp and party. Photo 650828-2 of
 Mirror Lake from camp. Drove to divide and climbed
 Bald Mt. Took several photos on mt. Photo 650828-3
 of base of Agazzi Agassi. Photo 650828-4 of Hayden Peak.
 Photo 650828-5 of Granddaddy Lake (telophoto). Photo
 650828-6 Mirror Lake. Photo 650828-7 of pass, a dome
 mt & Granddaddy Lake Basin beyond. Photo 650828-8
 of Mirror Lake Basin, Hayden & Agassi in background.
 Photo 650828-9 of Richard Hemphill, James R. Bee & Greg
 Estes. Photo 650828-10 lichen rocks & basin to W of
 Bald Mt. Photo 650828-11 of group on E side Bald Mt
 near top. Photo 650828-12 of group near top Bald Mt
 with Mirror Lake Basin in background. Photo 650828-13
 of group with basin W of Bald Mt in background. Photo
 650828-14 James R. Bee on W slope Bald Mt. Photo 650828-
 15 Richard Hemphill among gumbolts. Photo 650827-16
 of S slope Bald Mt showing snowslide track and bent
 over conifers. Photo 650828-17 base Mt Bald & J.R. Bee.
 Photo 650828-18 fishermen at Trial Lake. Photo
 650828-19 of creek below Trial Lake. Photo 650828-20 ibid.
 Photo 650828-21 of Bald Mt from Trial Lake. Route shown.

Provo, Utah Co., Utah

Sept 3, 1965

Left Provo 10:00 A.M. at mileage 68408. Visited David Evans' and family at Orem, leaving at 11:00 A.M. As in previous census will keep complete record of magpies and, unless specified as complete census, only noteworthy observations. Will follow Provo River to Bald Mt at Mirror Lake, thence N to Evonston, thence E on 80 + 30. High wind on Deer Creek Reservoir (white caps) crowding green-yellow masses shoreward. First ² magpies at 68444; 68446 - 5 magpies, 68454 7 magpies 68455 1 magpie; 68456 1 magpie and last one toward Mirror Lake. Arrive pass of Provo River - Mirror Lake at 1:30 P.M. (base of Bald Mt) and immediately gained trail. Snow & hail in air and continued at intervals along trail as each cloud mass passed over. Rain & hail starts at high mts to west. Wind increases just before, during and at end of storm and then sunshine and calm. Arrived shoulder (base of last rounded top at 2:30 P.M. noted 3 cony & heard 2 others. One chipmunk near top above timber line among moss & lichen covered boulders. No mammals or birds. Some large trees among Krumholtz, as if from previous climate mild. Took 8 photographs along trail as follows:

- 650903-1 Mt. Baldy, above timberline, Mt. Timpani in extreme distance
 650903-2 Mt. Baldy, " " " Mary Pauline, Annette P. & Annette C.
 650903-3 Mt. Baldy to E, glacial eroded mt., Granddaddy in distance
 650903-4 Ibid.
 650903-5 Base Mt. Baldy, Mary P., Annette P., Annette C.

Return to base of trail at 3:00 P.M. and continued N. via highway. 68495 entering Duchesne Co just beyond divide 68500 entering Summit Co.; 68522 state line. at 3:40 P.M. Between summit & state line noted only 2 small birds & 1 sparrow hawk & these near state line. 68528 2 photos 650903-6 & 650903-7 of green fields and thistles in background. 68533 1 magpie; 68537 Sulphur Creek & 1 magpie; 68538 Bear River & 1 magpie. Brewer blackbird the dominant bird in valley. (3 groups 80 birds each). One flicker (9)

68547 Evanston. One sparrow hawk between here & state line toward Uintas. Arrived 4:30 P.M. 68548 2 magpies; 68588 Lymn at 5:30 P.M.; 68595 Smith Fork River; ~~at 6:10 P.M.~~ Little America at ⁶⁸6:19; Left 6:45 P.M. End of census 7:00 P.M. because of darkness at 68627. Camped at Green River (west side) at 7:30, mileage 68639. Sheriff notified us that the Fontenelle Reservoir ^{dam} was seriously damaged and that we would have to move to higher ground. Pulled tent & crossed river to East side and camp on high ground E of Green River (6,320 ft.) at mileage 68648. Organized by 9:30 P.M.

2 mi. E Green River, Wyoming
Sept. 4, 1965

Left 8:35 A.M. at 68651. Will follow Highway 30-80 all across Wyoming. Begin rabbit census to Rowles from Elk St. exit at Rock Springs, junction 187 & 80-30; mileage 68660. 8:55 A.M. (complete census). 68661 raven; 68662 Cottontail; 68665 Bafter exit; 68667 3 sparrow size birds; 68668 Swainson hawk; 68671 ^{some} Thrasher?; 68673 ^{ground} ~~ground~~ feeding on edge of road; 68669 small bird; 68677 ^{entirely} ~~ground~~?; 68688 Point of Rocks; 68688 cottontail road kill; 68692 jackrabbit road kill; 68693 jackrabbit road kill; 68696 jackrabbit road kill; 68697 Red Hill Road exit; 68705 Patrick Draw Road exit; 68706 jackrabbit road kill; 68709 jackrabbit road kill; 68711 Table Rock; 68721 thrasher-like bird; 68724 2 sparrow size birds; 68726 Red Desert; 68728 mockingbird; 68729 2 horned larks; 68732 small bird. (census of butterflies for 10 miles) Starting 68730) 68730 butterfly; 68731 butterfly; 68732 butterfly; 68733 Wainsetter exit; 68736 butterfly & bird; 68737 butterfly; 68739 butterfly; 68740 butterfly & end of butterfly census, all flying ^{and small brown} S across road; 68740 jackrabbit road kill; 68743 small bird; 68746 Continental Divide; 68747 jackrabbit road kill; 68748 Bagge ^{ferruginous} exit; ~~red-tail hawk~~ & rabbit road kill; 68753 jackrabbit road kill; 68760 jackrabbit road kill; have noticed that Artemisia and Chrysothamnus have ranker growth on lee side of snow fences; 68762 Carbon County; 68764 jackrabbit road kill; 68768 hodge road kill; 68777 Rowles (will continue complete census); 68785 Sinclair; 68787 12 Brewer's blackbirds; 68794 North Platte; brown-headed butterfly still flying S at about same frequency as census farther back in Wyoming.

This highway is not the new proposed one that cuts across
 to Laramie (30-287), 68800 junction to Saratoga ^{will}
 68809 jackrabbit road kill; 68810 jack rabbit road kill;
 68815 jackrabbit rd kill; 68818 Hanna, 68819 jackrabbit
 rd. kill; 68823 jackrabbit road kill; (birds rare);
 68825 4 jackrabbit kills in same spot. 68828 jackrabbit
 rd kill. 68832 jackrabbit rd ^{kill} & small bird. 68832 jack
 rabbit road kill; 68835 2 antelope, 1 jack rabbit rd kill.
 68837 4 antelope; 68839 medicine bow; 68842 swallow;
 68844 13 returning blackbirds; 68846 Albany Co., the first
 antelope noted above were associated with the first cattle
 noted; 68848 jack rabbit road kill, 2 Brewers blackbirds.
 The rabbits are recarded if remains are recognizable and
 in some case may be several days old or more; country
 short grass, overgrazed and some small artemisia; road
 right-of-way with high grasses and other vegetation in
 contrast to grazed area; no cultivation. 68850 jackrabbit
 road kill; 68853 striped skunk road kill; 68854 marsh
 hawk associated with several small lakes and valley of
 meadow sedges and grasses; 68855 Garrett Rd (?) exit;
 68857 4 antelope; 68859 Rock River; 68859 Rock Creek valley
 of native grass; 68861 jack rabbit road kill, passing by a
 log. back with juniper and ponderosa pine ⁱⁿ and an isolated
 position, few ducks in an adjoining lake to E; 68864
 one sparrow size & one thrasher size bird; 68864 small bird;
 68865 jack rabbit road kill; 68870 Look out (a R.R. locality);
 68872 jack rabbit road kill; three large lakes with water
 about same kind color as sand and at a distance appear
 as a dried lake bed; 68873 Cooper Lake; 68875 black-
 necked stilt; 68879 Bosler; 68880 9 male red-wing black-
 birds; 68880 jack rabbit road kill; 68882 marsh hawk;
 part of highway follows creek and grassy pastures of this
 Laramie plains; 68885 Lake; 68898 approaching commercial
 outskirts of Laramie; 68901 center of Laramie on main high-
 way, time 1:30 P.M., will continue E over medicine bow range;
 lower slope of canyon below conifers a consociates of bluff
 rose and as pure a stand as I have seen; some aspen
 among conifers changing to yellow colors. 68912 Top of
 divide (new road being constructed to E to eliminate
 high point); 68918 jack rabbit road kill; 68919 jackrabbit
 road kill; 68921 jack rabbit road kill; 68923 jackrabbit

The new 4 lane highway on the E slopes of Medicine Bow
 has completely defaced this unusual scenic slope. Road
 is constructed so that one cannot see the outstanding
 slope to the N. Engineers should have an individual
 on their board to interpret the scenic values of a road;
 68928 jackrabbit road kill; 68929 Remount spit road;
 68932 Herriman Road spit; 68933 Cliffrose on slopes equivalent
 to those on west side of range and extend onto prairie
 via eroded canyon slopes; 68932 jackrabbit road kill;
 there have been many instances where rabbits have been
 killed on overpasses and cloverleafs as if rabbits were
 confused on steep slopes versus flat terrain; 68943 jack
 rabbit road kill; 68944 jack rabbit road kill; small bird,
 small (1 1/2") reddish brown butterfly crossing road to
 S in same frequency as across Wyoming; Temp 80°F;
 68947 2 jack rabbit road kills; 68948 jack rabbit road kill;
 68949 rabbit road kill; 68953 Cheyenne at railroad station
 on highway 30; 2:45 P.M.; country west of Cheyenne grazing
 white & is farm and reactivation; area immediately E
 as much as 90%. 68963 redwing blackbird; 68965 Swallow.
 68973 Helldale turnoff; 68980 bird Burne; no bird, ^{or rabbit kill} since
 68965; 68982 muddy Creek; 68987 jackrabbit road kill; 68990
 one jackrabbit & one cottontail road kill; 68994 jackrabbit
 road kill; 68997 Pine Bluffs; these bluffs should be studied
 for relict species; 68998 State Line; 68999 jack rabbit road
 kill; 69001 Swainson hawk; 69005 3 sparrowlike birds;
 69008 Bushnell; 69010 sparrow size bird; 69011 2 mourning
 doves and first ones noted since Green River Wyoming;
 69011 raccoon road kill; 69013 small bird; 69017 2
 swallows; 69024 Kimball, 4:25 P.M.; 69027 jackrabbit
 road kill; 69027 jack rabbit road kill; 69028 jack rabbit
 road kill; 69030 jack rabbit road kill; 69031 Dip? (name);
 69032 jack rabbit road kill; 69034 jack rabbit road kill.
 69036 jack rabbit road kill. 69038 jack rabbit road kill;
 69039 3 mourning doves; 69039 1 mourning dove; 2 mourning
 doves; 4 small birds; 69041 Potter; 69044 passing by
 hog-back, conifer covered; 69046 5 mourning doves; 69047
 mourning doves; 69048 2 mourning doves, 69048 1 mourning
 dove; 69050 mourning dove; 2 mourning doves; 2 mourning
 doves; 69062 Sidney, 5:25 P.M.; 69063 jack rabbit road kill;
 69070 jackrabbit road kill; 69072 rabbit road kill; 69073

107
 104
 106
 racoon road kill; 69074 Squirrel?; 69077 rabbit road kill;
 69079 8 red wing blackbirds; 69080 jack rabbit road kill;
 69081 Lodgepole, 5:45 P.M.; 69082 2 mourning doves, 1 red wing
 blackbird; 69083 first meadowlark since ^{leaving} Green River Wyoming;
 69085 meadowlark; 69089 2 mourning doves; 69092 Chapell;
 69094 jack rabbit road kill; 69096 lark hunting?; 69098 striped
 skunk road kill; 69099 rabbit road kill; 69103 sundown
 at 6:12 P.M.; 69115 120 mourning doves in one flock
 associated with wind break trees; 69118 95 mourning doves
 in one flock; Arrived Ogallala 69135 at 7:00 P.M. continued
 n to Mc Conaughy Lake where we camped near dam site.

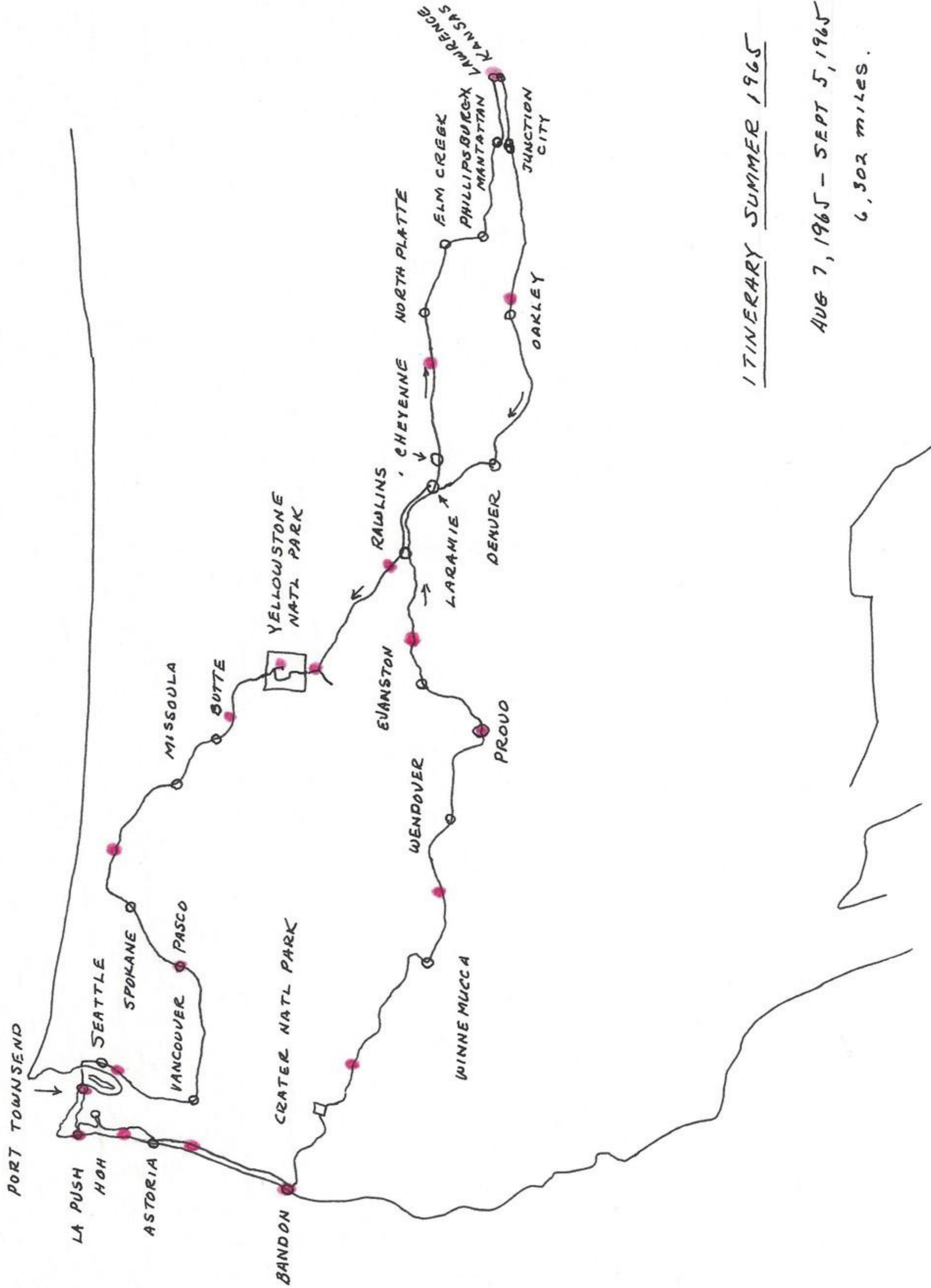
Mc Conaughy Lake, Keith Co., Wyoming
 Sept 5 1965

Left lake at 7:30 A.M., mileage 69153, temp 43°F and sky
 with turbulent clouds completely overcast, some area with
 dark blue thunder clouds, rained lightly while breaking
 camp; Continued to Ogallala and there mileage 69160
 7:30 A.M. 69165 three mourning doves (will keep complete
 census today); 69166 first bluejay; 69168 mourning dove;
 69170 Rascal; 69178 mourning dove; 69180 2 mourning doves;
 69183 Popton; 69187 3 meadowlarks; 69188 1 meadowlark,
 2 mourning doves; 69189 meadowlark; 69191 mourning dove;
 69191 mourning dove; 69193 mourning dove; 69193 striped
 skunk road kill; 69196 rabbit road kill; 69197 Sutherland;
 69198 mourning dove; 69199 rabbit road kill; 69204 Hershey;
 mourning dove; 69219 N. Platte, 8:50 A.M., left 9:30 A.M.
 69225 2 meadowlarks; 69230 meadowlark; 69233 Maxwell;
 69234 sparrow hawk; 69235 Crossing Platte River to highway 80;
 69230 mourning dove; 69245 jack rabbit road kill; 69246 mourning
 dove; 69247 mourning dove; 69249 mourning dove; 69250 mourning
 dove; 69258 mourning dove; 69260 mourning dove; 69263
 meadowlark; 69264 mourning dove; 69266 Forester's tern; 69268
 golden eagle (?) slow flopping of wings and alternating glide
 and wing beat; barrow-pit lakes all along route, no ducks
 or other birds using these new lakes; 69271 Cozad spit; 69241
 approx 400 red wing blackbirds in one flock, 2 mourning
 doves; 69280 Dark Road spit; 69285 4 red wing blackbirds;
 69286 Lepington spit; 69290 magpie?; 69292 mourning dove;
 69296 mourning dove; 69299 Overton spit, 11:00 A.M.; 69307 red-
 headed woodpecker; 69308 Elm Creek, 11:10 A.M.; 69314 junction 80-183

69315 crossing Platte River, braided river system with islands covered with willows, good source for sands & dunes (now covered) to S; 69316 mourning dove; 69317 sand dunes, ^{stabilized} starting from river and continue S several miles; 69317 mourning dove and swallows; 69323 marsh hawk ^(live) and rabbit road kill; 69324 mourning dove; 1 meadowlark; 69325 redwing blackbird; 69325 mourning dove; skies with clouds like woven basket ~~and~~ and different from nebraska skies; 69325 barn swallow; 69331 mourning dove, barn swallow; 69333 Holdredge, 12:00; 69334 W. Kingbird; 69335 2 mourning doves, 4 grackles(?); 69336 rabbit road kill; 69338 mourning dove; 69340 meadowlark; 69341 barn swallows, Eng sparrow frequently seen at farm house but not recorded in census, starting fewer than Eng sparrows; 69345 Swainson hawk, Swainson hawk; 69359 Alma, highway 183; 69361 Republican River, no ducks on reservoir; 69362 swallow; 69365 mourning dove; 69366 2 mourning doves; 69366 Prairie dog creek and sparrow hawk; 69367 Kansas state line, 12:30 ^P M; 69368 3 swallows; 69369 cottontail road kill + 2 mourning doves; 69373 swallow; 69373 2 mourning doves, 1 swainson hawk, 1 sparrow hawk, and 52 red-wing blackbirds, associated with farm & rattle yards; 69374 sparrow hawk; 69375 barn swallow; 69376 Swainson hawk; 69377 8 mourning doves in one group; 69379 2 mourning doves; 69379 red-headed woodpecker, associated with wooded stream; 69380 mourning dove and Swainson hawk; 69383 mourning dove; 69383 mourning dove; 69385 Swainson hawk; 69387 Phillipshurg (middle of town) 69391 Deer Creek, mourning dove, red-headed woodpecker, mourning dove; 69392 loggerhead shrike; 69394 Glade, now to East; 69395 yellow shafted flicker & swallows; 69396 mourning dove, same kind of sky all over Kansas as far as travelled; 69397 2 shrikes; 69398 Baltimore Oriole; 69398 mourning dove; 69398 3 meadowlarks, barn swallow, 2 mourning doves; 69399 Swainson hawk, mourning dove; 69399 shrike; 69402 Swainson hawk; 69403 Swainson hawk; 69403 mourning dove; 69403 mourning dove; 69404 32 Franklin gulls; 69405 Kirwin; 69406 83 red-winged blackbirds; 69408 entering Smith Co; 69408 Sparrow hawk; 9 red winged blackbirds; 69409 3 red winged blackbirds, 1 meadowlark; 69410 claudel exit; 69411 80 red winged blackbirds; 69411 Swainson hawk; 69413 meadowlark; 69414 mourning dove; 69414 ring necked pheasant.

69416⁴ Cedar; 69417 Deer Creek, 2 cowbirds; 69418 mourning dove;
 69419 2 mourning doves; 69419 sparrow hawk road kill;
 69420 1 sparrow hawk, 1 Swainson hawk, 1 mourning dove;
 69421 Gaylord, 1 yellow shafted woodpecker, mourning dove;
 mourning dove, swallow, 69423 17 mourning doves in one
 group; 69425 mourning dove; 69425 junction 286 + 9⁷ now
 going S; 69428 Harlan; 69429 mourning dove; 69433 Portia;
 69434ⁿ Salomon River; 2 mourning doves; 69436 4 mourning
 doves; 69436 mourning dove, 1 mourning dove, 1 mourning
 dove, swallows, barn swallow; 69437 junction 24, meadow
 lark; 69438 3 mourning doves, swallow; 69440 60-80 mourn-
 ing doves in one group on telephone lines; 69442 mourning
 dove; 69443ⁿ Salmon ^{River} Creek, 2 mourning doves; 69446
 middle of Downs; 69447 mourning dove; 69448 mourning
 dove, mourning dove; 69449 mourning dove, striped skunk
 road kill; 69450 2 mourning doves, 4 mourning doves, 1
 mourning dove; 69452 mourning dove, sky from close
 weave texture to horizontal layers of straight lines;
 69453 Cowker City, 2 mourning doves, 1 mourning dove;
 69454 3 sparrows, 69456 mourning dove; 69458 meadow
 lark; 69459 mourning dove; 69460 Glen Elder; 69462 mourn-
 ing dove; 69463 mourning dove, 3 mourning doves, mourning
 dove, all Kansas is green and considerable yellow from
 sunflowers and yellow flowers; 69463 Swainson hawk;
 69465 7 red wing blackbirds, 2 mourning doves, 2 Swainson
 hawks on poles 300 feet apart; 69467 2 mourning doves;
 69468 2 mourning doves, striped skunk road kill; 69472
 mourning dove, mourning dove, 69473 loggerhead shrike;
 69473 Beloit 2:30 P.M.; 69478 13 lined ground squirrel; 69480
 Swainson hawk & loggerhead shrike; 69486 mourning dove,
 sparrow size bird, swallow; 69487 2 mourning doves; 69488
 Swainson hawk, 2 mourning doves, mourning dove; 69489
 meadowlark and striped skunk road kill; 69490 mourning
 dove; 69490 Glassco turn-off, 4 mourning doves; 69493
 Swainson hawk; 69494 red-tailed hawk, mourning dove;
 69496 mourning dove; 69496 4 mourning doves; 69499 3 mourning
 doves; 69500 mourning dove; 69501 mourning dove; 69502 blue
 jay; 69503 4 mourning doves; 69508 mourning dove; 69511
 rabbit road kill; 69513 2 marsh hawks associated with
 cultivated fields; 69514 Swainson hawk; 69525 42 red-
 winged blackbirds; 69530 3 mourning doves; 69533 mourning

dove; 69539 mourning dove; 69540 5 mourning doves; 69541
 2 mourning doves; 69543 3 swallows; 69544 mourning dove;
 69545 2 mourning doves; 69545⁴ 2 mourning doves. 69546
 4 mourning doves; 69547 5 mourning doves; 69548 3 mourning
 doves; 69548 3 mourning doves, 3 mourning doves, 1 mourning
 doves; 69549 3 mourning doves; 3 swallows; 69552 2 mourn-
 ing doves; 69557 2 mourning doves; 69563 swallow, 2
 flocks 500 each of redwings (and others); 69564 another
 large flock redwings, 800; 69564 mourning doves; rd 177-24;
 69565 western kingbird, mourning dove; 69566 3 mourning doves;
 69566 3 mourning doves; 69567 mourning doves; 69568
 mourning dove; 69568 2 mourning doves; 69569 mourning
 doves, mourning dove; 69569 2 mourning doves; 69570 red-
 headed woodpecker. 69571 2 mourning doves, 2 mourning
 doves, mourning dove; 69572 Tuttle Creek dam, end of
 census until E of Manhattan; one group of 400 red-wing
 blackbirds (possibly cowbirds, grackles included) between
 dam + Manhattan; 69578 Manhattan at on highway
 24; 69579 2 mourning doves (continuing census from
 Manhattan); 69580 Blue River bridge on highway 24;
 69583 mourning dove; (sky overcast and census should
 be concluded because of fading lights but will continue,
 realizing this discrepancy); 69585 at 5:30 P.M. 69595
 approx 5,000 swallows over corn field, feeding and
 moving progressively N; there were 48 mourning doves
 between Manhattan and Belvue on highway 24; will
 continue on to Topeka. St Mary 69608 at 6:00 P.M.
 58 mourning doves from Belvue to St. Marys. at 69613
 another aggregation of swallows (approx 10,000) feeding
 over corn field. other corn field in area but this one
 being hunted for insects. The ~~area~~^{birds in} approx 3 x 1 block
 in extent, 6:00 P.M.; 69622 Silver Lake, no mourning
 doves between St. Mary + Silver Lake and probably due
 to lateness of day; 69633 junction 172-24 (N. Topeka), 3
 mourning doves since Silver Lake; Arrived Lawrence
 at mileage 69666 at 7:15 P.M. No mourning doves between
 Topeka + Lawrence on highway 24 because of late twilight.
 miles travelled on trip 6,302. 414 gallons of gas used
 or approx 16 $\frac{1}{2}$ miles per gallon. Cost of trip approx \$500.00
 187.00 of which was for appx operation of car (gas, oil, lub. etc)



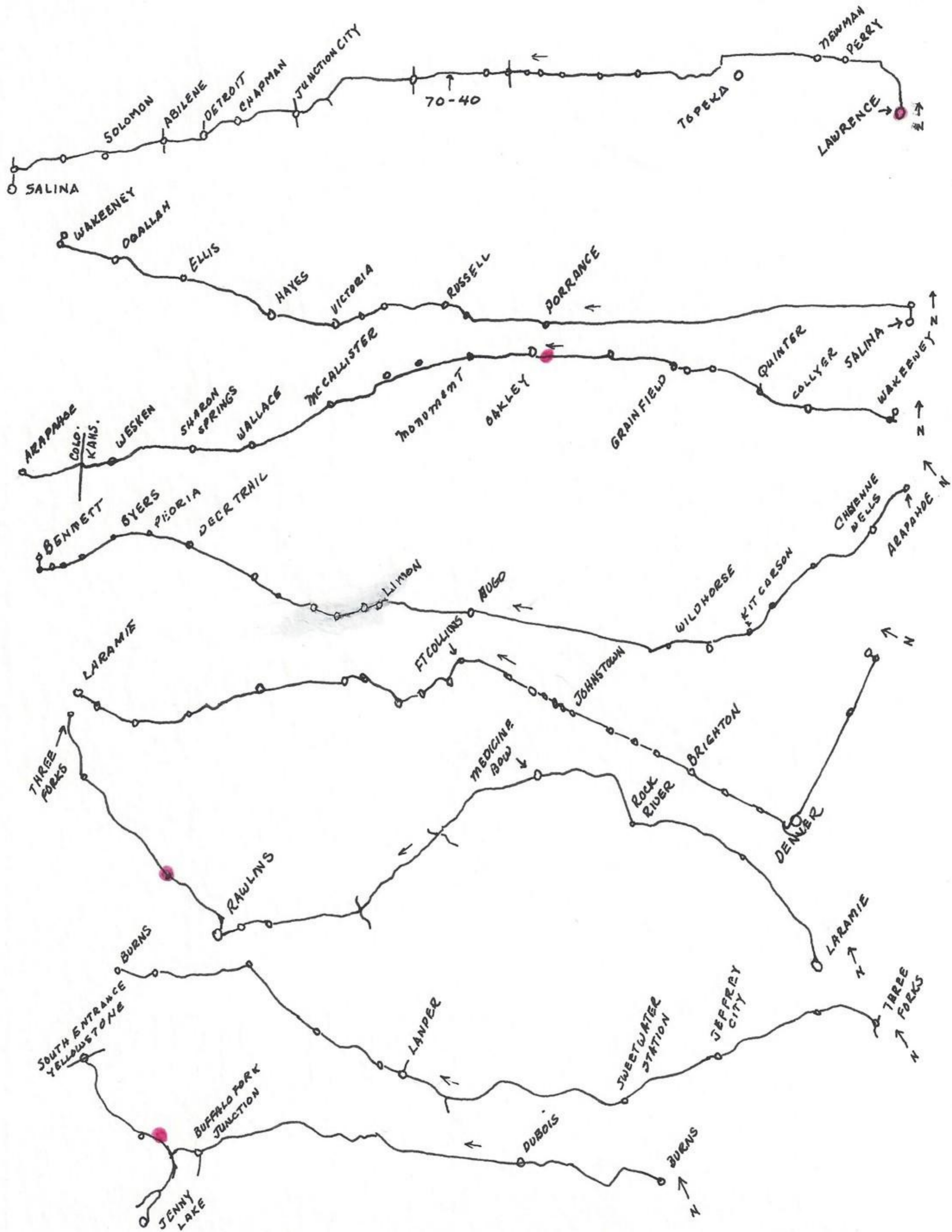
ITINERARY SUMMER 1965

AUG 7, 1965 - SEPT 5, 1965

6,302 miles.

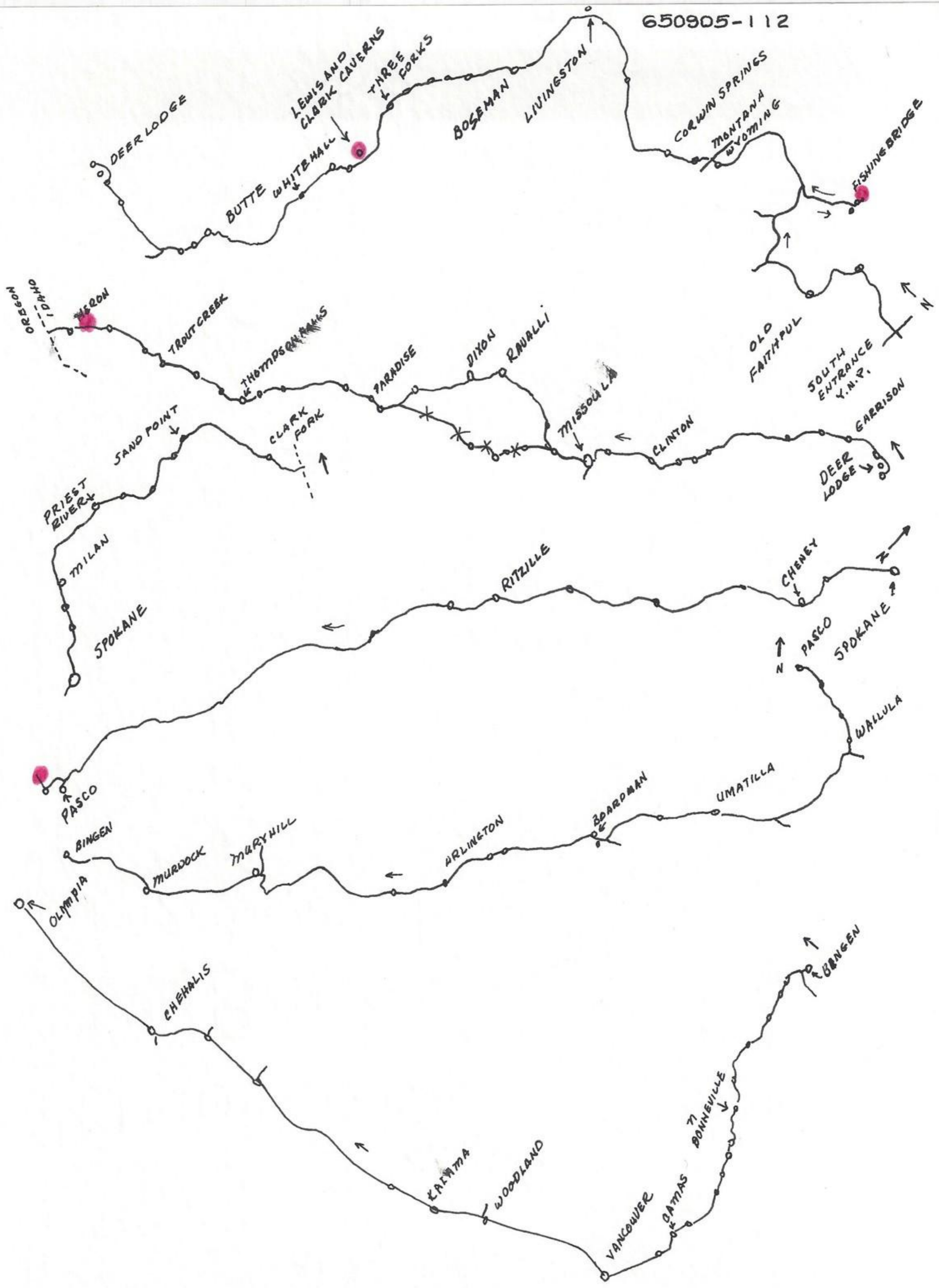
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DETAILED ITINERARY FOR NOTE REFERENCE.



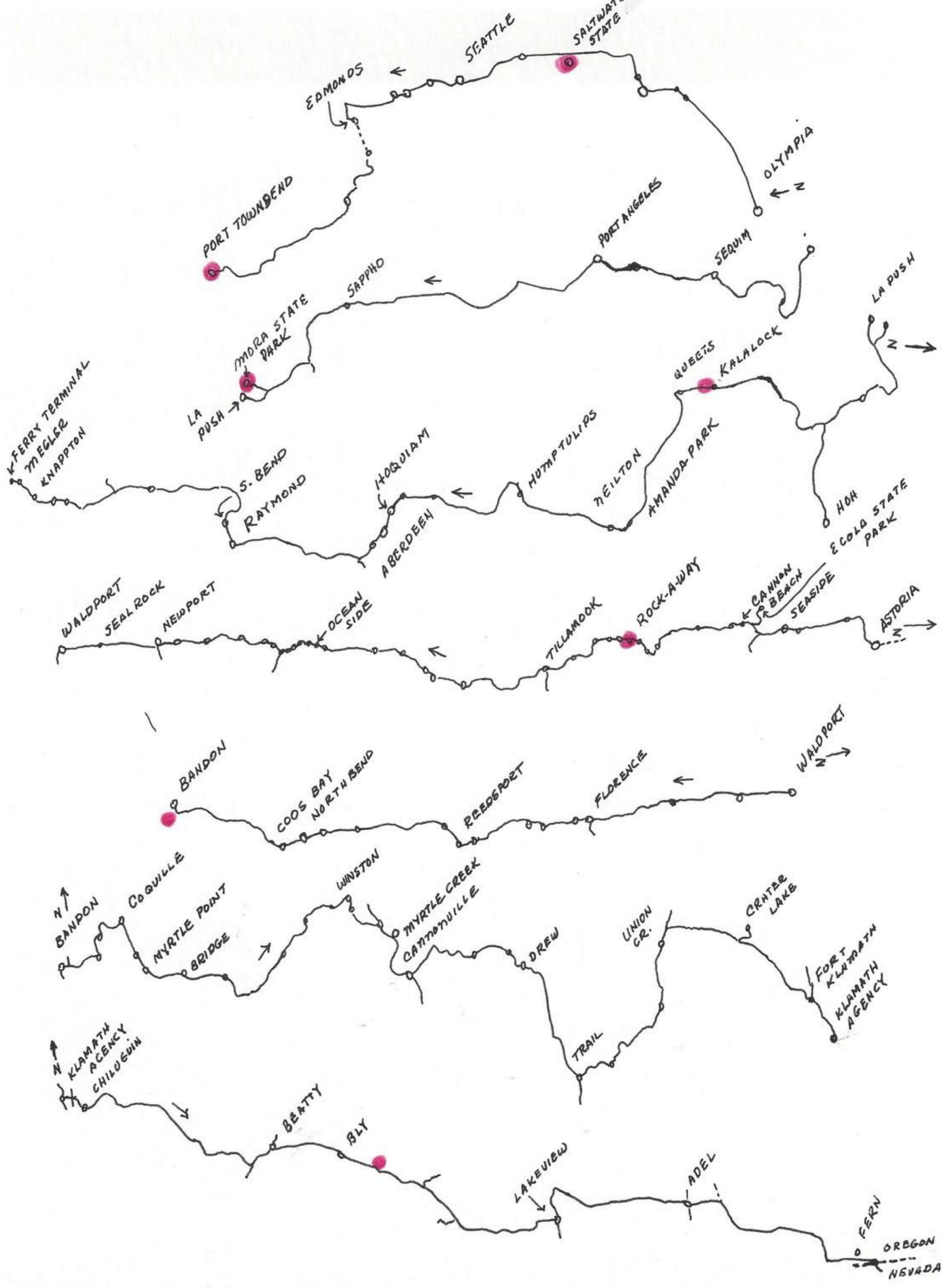
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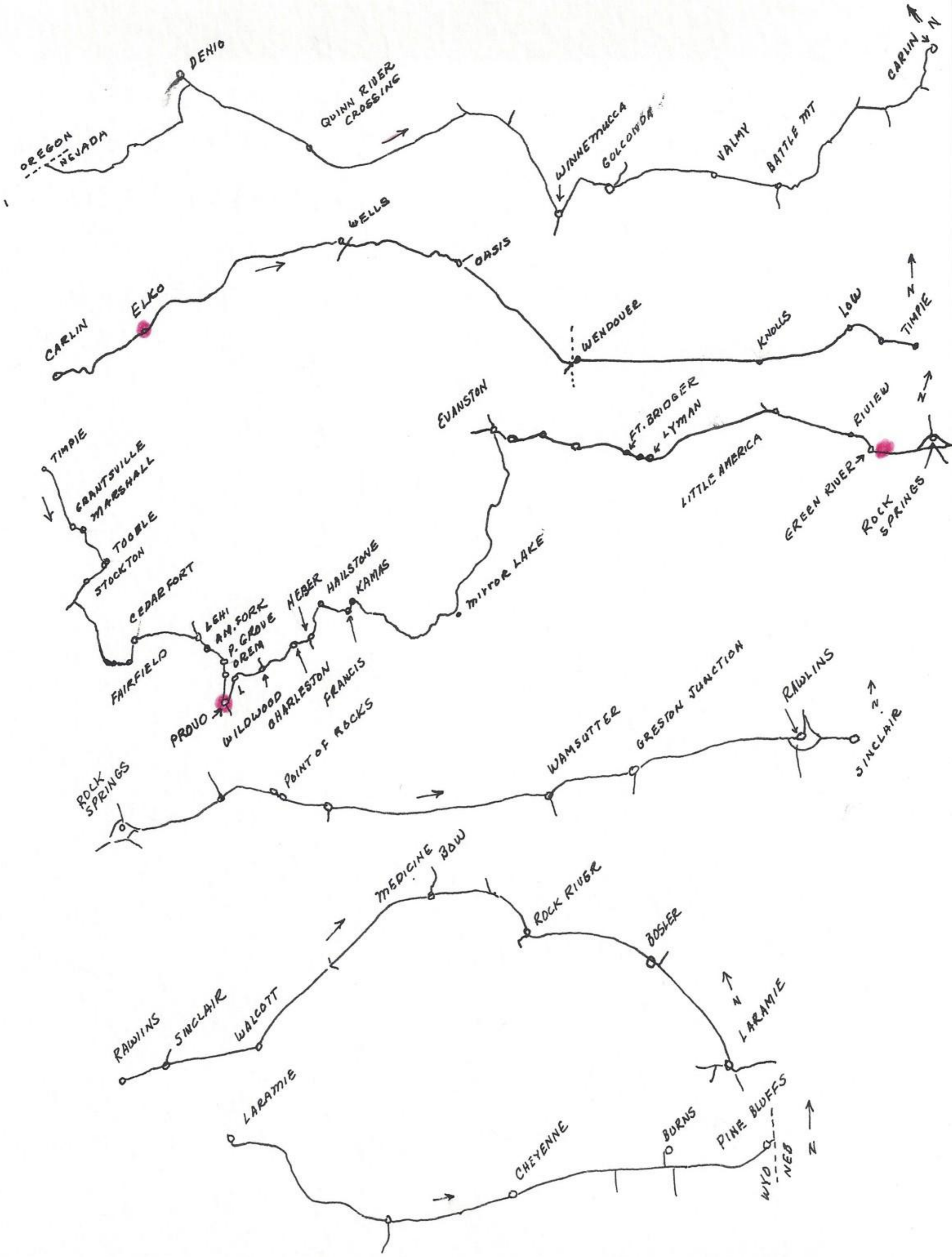


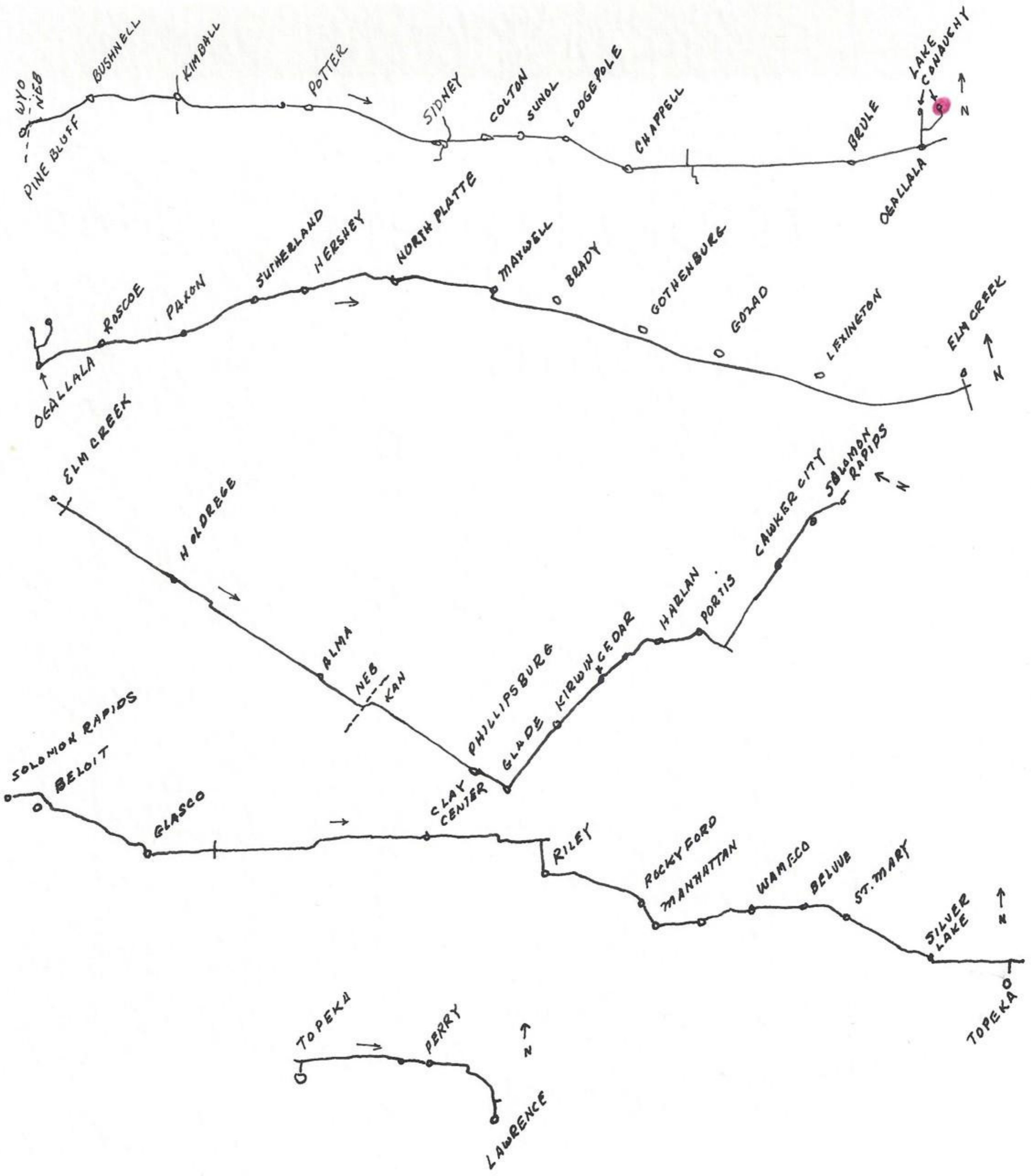
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In visiting several National Parks this summer and on previous trips, I have come to the following conclusions:

1. National Parks, national monuments, wilderness areas are improperly managed.
2. From the above areas eliminate all roads, cars, boats, fishing, trail hiking, horseback riding, campsites, museums, administration and maintenance buildings, in other words all human artifacts except those employed to present the people to the area values.
3. Enjoyment of the areas by non-participation.
4. ^{Place} Recreational areas beyond buffer area of park including forms of physical participation (camping, hiking, skiing, hunting, fishing, etc.)
5. All items taken into areas are returned to outside area and this without exception. ^{foreign} Trail + road material now all thru park.
6. Visiting of area by reservation, if required.
7. Reserve areas, ^{or refugia} as absolutely inviolate to human trespass until man understands how to handle primitive conditions, some areas on a permanent basis.
8. Discontinue all control of wildlife, fires or insect depredations except as may be caused by man. Control exotic forms of interfering drastically with native community. Thus maintenance is ^{practically} ~~entirely~~ eliminated.
9. Fence entire area between buffer area & park. In the final analysis the success of an area depends on degree we keep original areas natural or near so in both North & South America. In other words, leave timber area for propagating timber and prairie area as grasslands etc.
10. Have planning by biologists and not by engineers.
11. Have research areas where research is conducted on maintaining natural balance, not for basic research which can be accomplished outside of area. Interference from research has a profound effect on both animal and plant community.
12. Access to representative communities, scenic features in area by single track monorail with minimum height and width, each unit housing from 1 to family size. Individual or group compartments with all necessary supplies (air conditioning, bed, food, toilet, etc). Monorail cabins, to be pulled in groups, by scheduled trip and planned to be least conspicuous in the community. Run underground if necessary. One group of

car will never be seen by another group. Cars adjusted to different heights can be attained (to accommodate snow height or vegetation height). It is anticipated that future, ^{commercial} travel will be without ground contact but this form should not be employed as it will interfere with animal-plant community.

Routes should follow one side of valley or canyon only.

Every other canyon should be held inviolate to routes.

13. All educational knowledge about area should be given prior to entering area by museums etc located outside of park, preferably by universities, elementary and other educational institutions as regular class work.

Created a division in a university for ^{patterning} philosophical, instructional procedures and bring together a library for each area under construction.

Complete ^{original} apectoral record of areas of park not accessible to man. Aerial photos both vertical and oblique, ^{of} all the area and such photographs continued at periodic intervals.

Original natural condition of park can never be preserved or maintained because of change of surrounding areas + natural succession.

Some general remarks on birds and mammals ^{on trip} are:

1. High speed road have either eliminated most birds and mammals from adjacent areas either by killing the local population or disturbing them to the point where they leave the area. The disparity of wild life, however, may a result of general decline in birds + mammals as a result of being in a low life or because of poisons etc. This scarcity is just unbelievable!

2. Census of birds + mammals from a fast moving car is unsatisfactory. Many factors must be taken into consideration, speed, interference of cars, time of day, whether or not telephone or utility lines or fence posts are along the road, whether country is grazed, cultivated or near natural, whether a car or truck has previously passed or is preceding, weather conditions, immediate roadside vegetation etc.

3. SE Oregon + northern Nevada has a real scarcity of fauna in what would appear as undisturbed community. This area would be interesting to study.

4. The first occurrence of birds and mammals from Laurence is significant, some are as follows: W Kingbird (Oakley, Kansas), crow (State line, Kans-Colo), hummingbird (Jeffrey, Wyo), marsh hawk (Ice Slough, Wyoming); pelican (Yellowstone); Canada goose (Yellowstone); sharp shin hawk (Bull Run, Montana); Cooper's hawk (Salt-water camp, Washington); great blue heron (Common Beach, Oregon); golden eagle (Bly, Oregon, on return); coyote (Yellowstone).

Lawrence, Douglas Co., Kansas

Sept. 18, 1965

At 1620 Tennessee St. at 3:30 P.M., day clear, noted the bathing behavior of a ♀ ruby-throated hummingbird (Archilochus colubris). The bathing took place during the watering of the back yard with an automatic sprinkling system in which the water spray moved back and forth across the lawn. ^{The bird} arrived and showed interest in the water (15' high) at the highest point on the arc of spray. The bird, on the second pass of the water, rested on a dead limb of a tree as the water passed. It flew beyond the reach of the spray but return again to the dead limb where it remained until the water again passed by a partially wetted the bird. This exposure occurred 3 times, after which it flew to a blackwalnut tree and alighted on one of the leaflets of the compound leaf, ^{15 feet from ground} a leaf which was wetted each time the cycle of water passed by, and dragged first the right wing and then the left wing over the wet surface of the leaf. As the water approached, it left and alighted on a limb of the walnut tree beyond the influence of the water and shook its ~~body~~ body and vibrated its wings. After approx. 10 seconds it returned to the leaflet (another one near the first one) and again lowered its body onto the leaflet, spread and ~~dragged~~ dragged its wings (one at a time) over the wet surface. It also spread its tail on the leaflet and rubbed its head and side of neck on the wet surface, after which it flew beyond the watered area (20' away) and shook its body, vibrated its wing, but close to its body, and then preened its wing & tail with its bill. This same performance was repeated a third time on a new leaflet, but in the area where water had soaked the leaf, and again the feathers were preened. After 3 more minutes after the last preening, it left the area.

Sept. 22, 1965

Enroute to Univ of Kansas noted a migration of monarch butterflies flying S, on S side of hill, at tree height, at 8:00 A.M. Approx 8 butterflies per 100 feet. This evening at 5:30 P.M. a shower passed over campus and after passing noted hundreds of night hawks (15 per acre) and chimney swifts (20 per acre), all flying and hunting insects to the west. Chimney swifts still associated with certain buildings and maintaining usual numbers despite of cool rainy weather of last week.

Lawrence, Douglas Co., Kansas

Sept 23, 1965

address of Arturo Jiménez G.
Alvaro Obregón 405 Norte
Monterrey, Nuevo León
Mexico Tel. 3-22-75

Sept 24, 1965

Heard a startling call like a chechen (roasterlike crow) for the first time.

Lawrence, Douglas Co., Kansas

Oct 6, 1965

Chimney swifts still in area in usual numbers.

Oct 10, 1965

Noted only one chimney swift in air this evening.

Clinton area (Robert Peterson farm), Douglas Co., Kansas

Oct 10, 1965

This morning visited Robert Peterson Sr to ask for permission for mariner troop to camp on his property (at Lake). He informed me of the following history. The ridge ^S of his house was named the 'red snake' by Indians of the area, because of the twisting nature of the ridge. The ridge, now in grass, was at one time covered with trees as is the condition W of this area beyond road. The Indians were with long braided hair. The highest point on this ridge is the second highest point in Douglas Co. The stone house W of his area is 105 years old and includes a stone building used as a snake house. The Calvary used this house at one time. An excavation on E end of ridge beyond the reservoir tank was used for clay bricks and still is identified as an excavation. The spring S of the ridge has always been flowing, in late summer, underground. Peterson predicts that with cool summer & excessive rains that the winter will be mild and then in spring we will have flooding waters. On this date (Oct 10) area dry. 15 deer in area. At artificial lake he pointed out the road on E side of lake which is the original road to LeCompton. He remembers open and covered wagons passing along this same identical road. The area of the lake was a surface mine for coal which was carried by wagon to the railroad tracks in the Wakarusa River Valley to the S. This R.R. went to Coaville. Present road follows old R.R. tracks in

many places. An old building (log) N Clinton was a station as is a building just E of the proposed down set where the road is a Y at Wabarus bridge crossing. At lake noted 8 red headed woodpeckers. The following information is taken word for words from a tape recorder of the voice of Mr Peterson as we drove around his farm. "This was swamp here (Wabarus valley flood plain S of his farm) we put this dike in along base of hill so that when it rained it would not form a lake in our fields. As you would go that way (E and S) it was so bad that there was a railroad bridge across it at the intersection (where road from rattlesnake hill joins main EW road in Wabarus valley) and they fished there. Now these old timers told me that they sat on the bridge and catch fish so you can see how badly it was down there. A lot of people don't realize how bad it was down there. Swamp grass grew here and you can see some growing along the road where the sign is, you'd see some there. Well, a man would ride there on a horse and you would not see the horse but you would just see the man. Swamp grass is not good for anything, you know. The ducks stayed here all summer long. When we go by the house I tell you what the old ^{fellow} man told me. There is a window in the south and he had a big old telescope which you pull out you know and he would look out of the window and look down to the swamp and they would see the ducks & geese here and that's where they hunted. The muskrat and otter were here too, there are beaver here now. There is a beaver dam on the Wabarus down there and when I was down there you could walk across it. Now there's the swamp grass right there. It was all over this swamp. It is rare you see mallards around here but teal stay around here all summer. They stay down on that one there, people don't bother it too much and a few stay down there below our house on that little pond and nobody is around it much. This is rattlesnake hill. Well, I wish we could bring back more marsh land. We ~~sure~~ ^{sure} made a mistake, didn't we. I was just talking to Mr. Wultzberger, the conservation man that died not long ago and he said, I said, what would we do if we know what we know now and taken charge of it as it you know, as it was first, and he said well, were making mistakes now and don't know it and probably make more

serious mistakes, we've made a lot of mistakes in conservation, you know, and plowed up the hells, this field was plowed and it takes years and years to get it back into grass, in fact it never is the same as it was, well that's the way it goes. The balance between the old buffalo and the grass was just right and it took care of itself. There's the house where the fellow had the telescope, now this house is the oldest house around here. This old barn was built before the Civil War and is really an old timer, there is no nails in it. It was put together, you know, with pegs. There was quite an old barn there where the rocks are. - well, I read an article in the Journal World that in the old country the people are proud of the old buildings and over here we think of urban renewal, you know, and are tearing down right and left. The biggest mistake we made here is when they tore down that Governor Robinson Place. I wish I had bought that thing I would have gone in debt for that thing, my that was a right. It had a dungeon in the basement, a jail down there, for unruly slaves. That would have been a really something. Just a hole in the basement, would put them in there with big steel doors and a fireplace in every room, it was three stories high and enormous big. It was really a sight. It was east of LeCompton way upon the hill. It was called the Woodruff place and do you know they tore it down. It slowly deteriorated. From there you could see the river. They say that steamboats would dock down there and the lumber - window frames were brought from St. Louis on a steamer and let out there at the bottom of the hill and they hauled them up the hill. Boy it was really something. Somebody must have some pictures of that house. It was a sight to go thru it, but the owner let it deteriorate. They heated it with fireplaces and had slaves and of course cut the wood ^{and brought it in} and it was quite a job to heat a big place like that. Dr Kennedy, the old old doctor, he is the head of the historical society, he was a ^{Captain} ~~Captain~~ at K.V and at Haskell. I was plowing over here not long ago, over its been 10 years ago, I plowed up a coupon bill, so it is there (historical society) but we've got no place to display it and then I plowed up a dozen grape stalks

you know what they are, they are about the size of golf balls and made out of cast iron and they would put all those in a cannon and fire it and they would spread all out like a shot gun. But this cannon ball, it was there and the grape shot all are all in the museum but they are all packed in boxes as we have no place to show them like a museum. But I was plowing and I just happened to look back and there was a cannon ball. Well, I just happened to turn around to see something and I said what in the world is this thing. I thought it was a hedge ball but ~~it~~ ^{got out and it} was an iron ball. Then in a little further ^{step} I looked a little closer, but they think that it was on a calico cavalry that was going thru there and it fell off because there were not any battles out here. Are you going west from here? If you do show them the log cabin where the train used to stop. They usually follow thru here to town ^{by the old deserted road} and come out by the Pioneer Cemetery. (in regard to marmar troop) Well they can come back again next week. We would be glad to have them, we would be tickled to death, cause its a shame that it just sits there and it don't cause us a bit of trouble. "We're glad to have you" end of tape.

Today noted an unusual number of wasps all over the country wherever there was water and trees.

Lawrence, Douglas Co., Kansas

Oct 12, 1965

Last night temp 33°F. Leaves predominantly green and yellow with some maple leaves in maximum reds. Walnut in both full leaf or partly bare. No chimney swifts since Oct. 11.

Oct 14, 1965

Early this morning with rain. Sudden change of yellow in foliage. Other trees coming into brilliant maximum color.

1 2/10 mi N and 1 1/2 mi. E Lawrence (P.O.), Douglas Co., Kansas

Oct 23, 1965

Hunted ducks at Sandpet Lakes (Lotus Lake) on first morning. Counted 38 ducks between 6:45 A.M. and 9:30 A.M. including 9 bluewing teal, 12 scaup, 3 pintails, 8 shovellers, 2 great blue herons, 2 bitterns (one of which was darker), 18 am. coot,

redwings, few grackles, 4 killdeer but no other shorebirds.
Approx 10 ducks killed of the 38.

Oct. 24, 1965

Second morning of hunting. No ducks in flight between 6:45 and 10:00 A.M. On Bass Lake (see Sept 21, 1963 for identification of lakes) noted 4 bluewings & 1 shorebird feeding at edge. Two left area and 2 were shot. 16 Am Coots feed in W end of Bass Lake. They flew up & down lake and 8 were shot by 2 hunters. A coot population can be decimated in one flight across these lakes (2 hunters this A.M.). A group of snow & blue geese, ^{flew 53 up.} in this arrangement: 2 snows, 2 blues, 2 snows, 2 blues, 1 snow, 1 blue, 6 snows, 2 blues, 4 snows, 3 blues. They were high & calling. One great blue heron, 1 bittern, 1 kingfisher, 2 pied-billed grebes, 1 killdeer, small groups redwings, larger group of redwings & grackles 30-100 in each group also in area. no shorebirds noted except killdeer. One goldfinch in group of 8 solicited from adult by following, calling and vibrating its wings. No swallows.

Oct 24

In evening, James Robert Bee & I hunted all Sandpit Lakes from 1 hr before sundown to sundown. No ducks in area. One Canada goose flew N and was 200 feet above ground. 14 Am Coot in area, 2 pied bill greases. Approx 2000 redwings (small groups) come into marsh for night. Sandpit lakes filled to maximum and water extends to dike on all sides, inundating shrubs, grasses and small trees.

Lawrence, Douglas Co., Kansas

Oct 25, 1965

First slate-colored juncos in area and generally distributed on campus.

Kaw River (Lawrence to Eudora), Douglas Co., Kansas

Oct 30, 1965

James R Bee and I started on horse trip at bridge at Lawrence at 9:05 P.M. Water unusually high for this time of year. Day with some high clouds and promise of a cloudy

SW. windy day. Temp in 60's. Will keep complete record of birds observed. Slate colored junco along bank at about one per hundred feet. 9:30 AM spotted sandpiper, chickadee + downy woodpecker in trees. 9:40 great horned owl flew N across river to trees, 9:40 red-tail hawk circling over trees where horned owl alighted; 9:45 passing over under-water pipeline with water geysers 1 1/2 foot high; 9:47 great horned owl left trees on S side and flew down river for about 7/10 miles and alighted in tree. While over water about 10 feet high; 9:50 passing under high power utility lines; 2 crows to N + jays to south. Junco still common in area; 9:54 mouth of drainage from S, a great blue heron was resting ^{on one leg} on overhanging limb, ^{10' high} and ~~with~~ allowed canoe to pass under (directly) without being disturbed from its sleep. 9:56 Cooper hawk flying down river with 30 goldfinch in pursuit; 10:00 red-tail circling on N side river, light colored; 2 crows calling; 10:05 red tail + 2 crows, the red tail black; 10:08 red tail and kingfisher (the red tails are not duplicates); 10:15 2 pipits + group of goldfinches on bank of river; 3 great blue herons + 14 ~~of~~ blue wing teal passed by; killdeer, sand blowing on sandbars but waves not high; 10:23 Capsize Point, 1 dark red-tail here, bank receding; usual aggregate of horned larks and other small birds on sandbar to N; 10:36 Channel to E; 10:45 major creek from N and now turning to S; 1 red-tail; one group of Cicada-like calls to S on point; 11:00 S end of large island; where wind hits cottonwood trees the leaves are gone, other cottonwoods green + yellow + 50% leaves gone, willows green + yellow and only about 5% leaves gone; some cottonwoods brilliant yellows; 11:10 creek from E; 11:15 beaver + racoon tracks on sand; 11:30 end of bend and now to NE, great blue heron at bend; fewer birds + especially redtail; oak trees mainly red + yellow, mainly red + a few still green on side of valley to N; 11:55 deer tracks along edge of river; 12:00 holes of beaver in bank and show active beaver in area. no frogs so far; 12:13 great blue heron; arrive Eudora bridge 12:30 P.M. no ducks observed along entire route except on group of teal mentioned earlier. 8 fish jumped out of water, others active. No swallows. Banks of river being reformed from last high waters. Approx 12 duck hunting blinds between Lawrence + Eudora, none used today.

Lawrence, Douglas Co., Kansas

Nov. 1, 1965

The following considerations relate to house and lot now on property of the Bromsick Scout Camp:

1. The purchase of house and property must be considered strictly a personal and private non-commercial investment for providing a place to live with objective of reconstituting and maintaining the house and its adjacent grounds in, as nearly as possible, the original condition of the pre-1900 period, including in its construction and furnishing, authentic materials that are still available for that period. Such a reconstruction would qualify as a historical site of the earliest Lawrence architecture, furnishing and landscape. The said property only could be resold to the Boy Scouts of America.

2. The purchaser of said property would agree to donate and manage a small museum to be built on adjacent Boy Scout property and devoted to training Boy Scouts in the field of natural history. This museum would house scientific study collections of mammals, birds, reptiles, amphibians, fish, invertebrates and plants for study and facilities for the scouts to actually participate in the investigation of the biology of the proposed Clinton Reservoir area. A library would be available for reference work.

3. The purchaser would recommend a policy and accept the responsibility of the management of wildlife and plant communities of the area, with approval of the scout board.

4. General recommendations:

- a. Acquire access property to lake (Clinton Reservoir),
- b. Localize administration building, boat houses, mess hall, work shops and ancillary buildings at site of future boat docks.
- c. Build no roads beyond administration area
- d. Acquire upper drainage of all parts of camp and purchase ridge to NE of area.
- e. Establish agreement with government to maintain a buffer area of native plants + animals surrounding the camp area.

1620 Tennessee St., Lawrence, Douglas Co., Kansas

Nov. 1, 1965

at 5:30 A.M. (about daybreak) heard a single flock of snow geese (could be snows, blues, or both) passing south overhead, they were calling.

Lawrence, Douglas Co., Kansas

Nov. 5, 1965

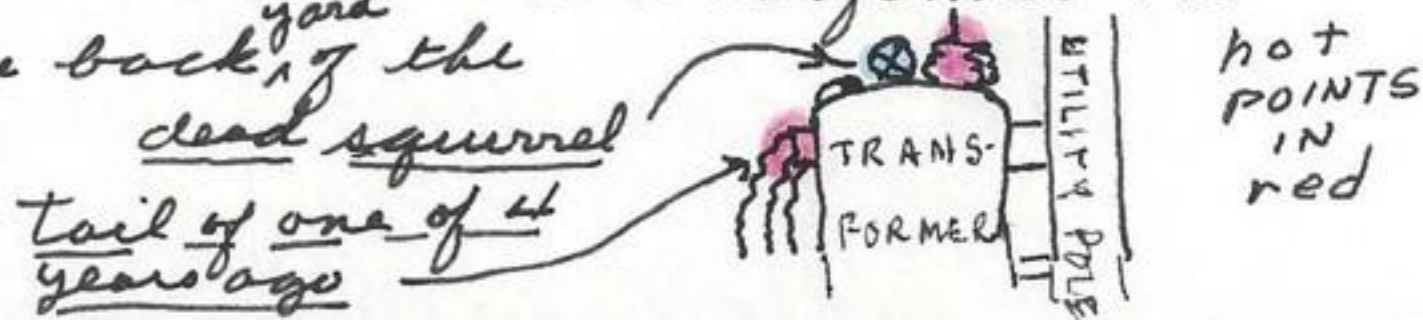
The appearance of trees in Lawrence (overlooking the valley from Mt. Oread) is one of a rich golden brown yellow color, mainly of the elm trees. Some patches of bright yellow but most beyond maximum color. Most of the upper limits of tree in exposed situations are bare of leaves because of wind action. Some elm trees are completely bare, others still green (mainly yellowish green). Most maples beyond maximum color but some in maximum brilliance. Oaks with leaves a deep red. Some not reaching full color, others beyond full color. This year is one of slower and sustaining color of trees. Brown creeper, junco, chickadees and kinglets in area and have been for several days. Noted a *Sciurus carolinensis* chase a *Sciurus niger*, calling vigorously as it ran up and down the tree in close pursuit.

Nov. 9, 1965

Last night temp. to 28°F which was the first cold spell this season (up to now the temp has always been relatively high). Observed the bobtailed fox squirrel at noon today. This is the squirrel that I have been observing the last 3 or 4 years (see previous notes on this particular squirrel) in the same area of 1620 Tennessee, specifically in about 1/4 acre in back of our home. Today it was on the bird feeder and sunning itself with head drawn down toward front legs. This squirrel shows signs of aging. The hind legs seemed to be larger than other squirrels of this same species and moves more like a rabbit than a squirrel. It fed, at one time, on ^{old} succulent food (peas?) which it found on the ground. At intervals it would move food toward its nose and smell it before continuing eating.

Nov. 11, 1965

A fox squirrel (*Sciurus niger*), one of 5 or 6 inhabiting our back yard, was electrocuted this A.M. on an electrical transformer on a utility pole that runs through the back ^{yard} of the house. The bob-tailed squirrel lost its tail on some transformer about 4 years ago.



Potters Lake, Univ. Kansas, Lawrence, Douglas Co., Kansas

Dec 19, 1965

For the last 2 1/2 weeks a small grebe has been noticed, on several occasions between 8:00 A.M. and 5:00 A.M. This evening at late twilight (20 minutes before lights were too dim to distinguish the eyes of a bird at 20 feet), a pied-billed grebe left a 3'x10' patch of cattails on the west side of the lake. My first impression was a carp leaving a splash and movement of the cattails. At eight feet lakeward, the grebe surfaced and remained for 2 minutes, I, remaining absolutely still on the edge of the bank and 20 feet from the bird. For the next 3 minutes it inspected me, never closer than 8 feet from shore, nor moving beyond 4 feet from where it emerged. It defecated twice. In the next 5 minutes it submerged 5 times, gradually lowering its body in the water before quietly diving each time, surfacing not over 8 feet away, either up or down shoreline from its original position. It was evident that this grebe was interested in returning to its night resting place in the vegetation. Finally it dove and in 34 seconds surfaced lakeward some 40 feet from the rushes. It remained there for 12 seconds before diving and in 35 seconds swimming under water surfaced in the center of the 3'x10' patch of cattails where it remained motionless until I approached when it quietly left under water and resurfaced about 8 feet lakeward as was the case in the initial contact with the bird. This grebe tolerates two white domestic ^{geese} ~~geese~~, which show a curiosity for the grebe, to come within not closer than 6 inches before diving.

Lawrence, Douglas Co., Kansas

Dec 19, 1965

A red-breasted nuthatch came to our feeding station this afternoon at 1620 Tennessee.