

JOURNAL 1977

JAMES W. BEE

1977

Las Vegas, Nevada

Jan. 1, 1977

min. temp last night 27°F. Left 63308.5 at 9:00 A.M.
 Sky clear, ^{of clouds} but heavy pollution throughout valley. 2 Brewers
 blackbirds at camp. 63335.0 photo ⁷⁷⁰¹⁰¹⁻¹ from just above Hoover
 Dam shooting down canyon. Pollution even in this area as
 well as all along the route from Las Vegas. 407.2 2 raven.
 many times raven are following highways as if searching
 for road kills or trash along side of road. 44.3 2 raven
 on post near rabbit rd. hill. 63398.0 2 golden eagles on top of
 utility pole and separated by approx. 5 feet. They were
 approx. 150 feet from road and although we stopped the
 car and examined them with field glasses, they did not
 leave. Junction 68-93 is mile 63402.7. Kingman at
 63407.0. 2 ravens at rabbit rd. hill at 08:2 at 12:00 o'clock.
 443.6 sparrow hawk. 46.5 some saguaro in area. 514.3
 Meade Lake turnoff. 516.2 photo ⁷⁷⁰¹⁰¹⁻² of Joshua tree and clouds
 that have been developing in area as part of a storm track
 in area. Has rained occasionally from Las Vegas on and snow
 on tops of mts in this desert area. 550.2 sparrow hawk.
 Arrive Donna Ranch Trailer Park at about 5:15 at mileage
 63620.9. The most impressive thing today were the
 Joshua trees along the parkway on highway 93 which we followed
 today. Stayed in trailer and visited Mel and Si. who have a
 large trailer in this camp. They have been here for the last
 7 years.

10712 E Apache Trail, C-17, Apache Junction, Arizona

Jan. 2, 1977

This morning we drove to Saguaro Lake. At the
 N end of the lake took photo 770102-1 of lake
 with sailboats in foreground. From road
 north of lake took two photos of Saguaro Lake with typical
 vegetation in foregrounds. Nos 770102-2 and 770102-3. Further
 down the road toward Phoenix made photo 770102-4 of cottonwood still
 in yellow fall colors and a saguaro. Goldfield mts in background. These
 mountains make a good background for photographing the saguaros
 in this canyon below Saguaro Lake. Photo 770102-5 of Mel and Si
 Evans behind an aberrant saguaro in main canyon below Saguaro Lake

Photo 770102-6 of mel and Si and saguaros in canyon below Saguaro Lake along Saguaro Lake Road. Photo 770102-7 of mel, Si and Annette along a pair of large saguaros. The larger ones are in the canyon valley but extend to top of mountains. There are many young from 2 to 4 feet high. These saguaros are protected by law and cannot be defaced or dug up without severe penalty.

Photo 770102-8 mel & Si and saguaros. Photo of mel, Si and Annette and large saguaros no 770102-9 Photo 770102-10 of Close up of mel and Si. The following four photos nos 770102-11, 770102-12, 770102-13 and 770102-14 are of saguaros with Goldfield mountains in the background, and all approx. 3 mi. down canyon from Saguaro Lake on Saguaro Lake Road. ^{roadrunner in area} Returned to mel & Si home just west of Apache Junction. I am impressed with the vulnerability of the placement of residential homes on the broad alluvial fans of the Phoenix area. About every 100-200 feet along most any roads in the area show drainage gullies that have formed. The great alluvial fans and can again produce floods if proper rains patterns occur in the area. There are many saguaros in the residential areas and many people have incorporated them into their ^{residential} landscape. This noon drove to Phoenix and mel & Si treated Annette and I to a meal at their favorite restaurant, then we drove over to where Mark Major and his wife (mel's sister) lives. which is a retirement home near Phoenix. This afternoon left Apache Junction for Tucson via highway 80-89, thence to Cullidge, thence to Casa Grande Ruins national monument where we camped at museum with permission of ranger. Ruins sheltered by massive roof. Outer walls of fence and houses almost reduced to a mound but stabilized with cement of the same color as the adobe material used.

Casa Grande Ruins National Monument, Pinal Co., Arizona

Jan 3, 1977 ^{mockingbird in area. Starling using holes in saguaros}
 Min temp last night. 45°F. Cloudy sky this morning and rained 2 or 3 times last night. 785.0 Martin Avenue in Cullidge and now going south. Starling in small groups and one would believe that is the common bird in the whole country. Cottonfield common along side of road. 86.5 sparrow hawk. 86.9 ^{mourning doves} two-sparrow hawks
 The mesquite is the Honey mesquite. 87.7 3 mourning doves. 88.1 200 common grackles, 88.7 mourning dove. 90.7 junction 287. Country very flat and is into plowed fields, small shrub (sagebrush type) or ^{green} fields. 99.1 2 mourning doves. 8000 highway 93. 02.2 highway 10. 08.6 raven. 14.5 3 raven. Mt. Lemon has snow about 1/2 way down slopes and densely covered with clouds. 32.0 approx.

2000 (mixed flock) of ^{cottails} grackles, redwings, cowbirds. 37.1 meadowlark.
 56.3 2 raven. Continued thru Tucson to Saguaro National Monument
 east of Tucson and drove the circuit road at the W entrance.
 The distant view of residential areas, especially to the N deprecate
 this area. Took the following photos in this monument.
 770103-1 of close-up of arms of a large saguaro. no. 770103-2
 of same tree with Annette at base of tree. Toward SE end of loop.
 photo 770103-3 of Annette at outcrop of augen gneiss formed below
 the surface of the ground and subsequently exposed by erosion.
 Photo 770103-4 Another view of the gneiss in same area. Photo
 770103-5 of teddy bear cholla, saguaro, ~~ocotillo~~ ocotillo and good
 outcropping of augen gneiss in the middle background. The
 clouds are typical of the storm clouds that have been develop-
 ing in Arizona + New Mexico in the current storm track across
 this area 770103-6 another shot in same area as above (SE
 corner of loop) of teddy-bear cholla, saguaro and augen gneiss.
 Plants in the area are: saguaro on all slopes but prefer more
 gentle slopes, blue palo verde shrub, yellow palo verde, mesquite,
 creosote, ocotillo, prickly pear, hackberry, barrel cactus, teddy
 bear cholla as well as other kinds, acacia tree, noted also a
 curved billed thrasher and a brown towhee. Creosote grows
 on flat areas, is more evenly spaced and with generally bare
 soils between. Some cholla associated with the creosote bush
 in this situation. 906.8 Houghlum Road and Interstate 10
 and now going east at 1:20 P.M. 906.9 roadrunner along
 side of road. 24.3 3 raven chasing each other. all cut
 thru ridges show outwash conglomerates. The century plant
 is beginning to appear whereas the vegetation and cacti
 of the Tucson area are disappearing, the saguaro some miles
 back. 639 27.5 Cochise Co. line. 38.0 San Pedro River
 Cottonwoods without leaves and general tone of trees in dis-
 tance is whitish 43.4 Photo 770103-7 of clouds to N. This
 kind of low clouds have been characteristic of clouds over
 the mountains all the way from Las Vegas to here. Skies to S
 + west are free of clouds, mountain areas are shrouded. 44.5
 Sibyl Road. 50.7 passing over a ^{low broad} pass of a mountain
 range and surface is covered with large 1 to 2 story boulders
 of granite. 72.4 18 crows together. 78.0 2 meadowlarks.
 82.6 1 mi W of Safford in a broad valley of yucca. 84.1
 underpass of 666 to N. 85.6 20 meadowlark, Valley is highly
 overgrazed and surface is rocky. 87.7 U.S. 666 and second

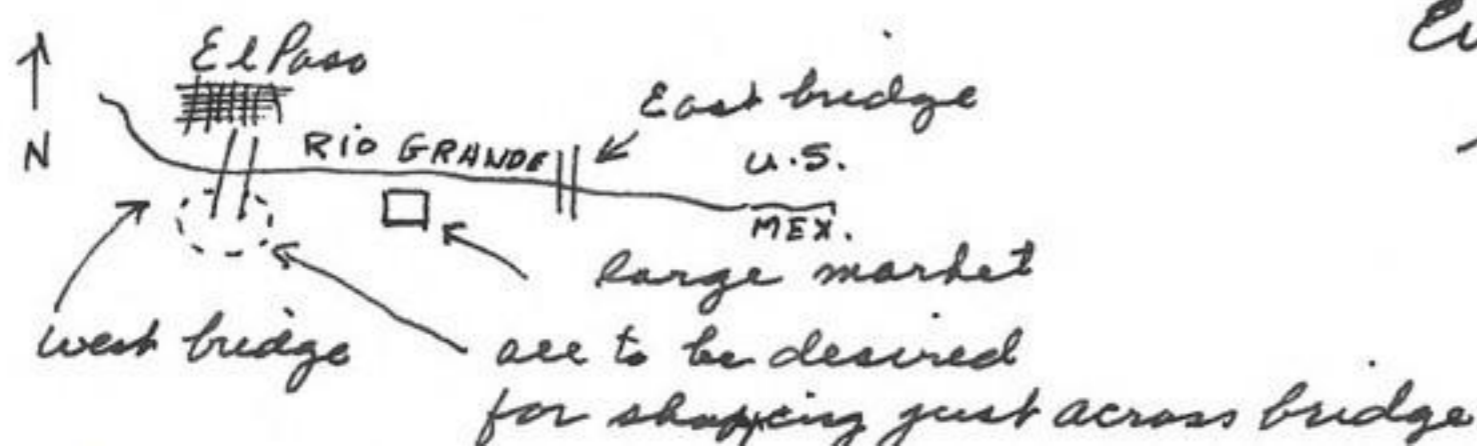
to E. 89.3 marsh hawk. 64003.4 marsh hawk. 11.4
 marsh hawk. 10.2 Cochise Ave at San Simon. 13.3 San
 Simon River. Cottonwood with yellow leaves and whitish in
 general appearance and are different than our cottonwood in
 Lawrence. Creosote are about 2 1/2 to 4' high with rocky
 soils between, as usual for this area. 64022.9 New Mexico
 State line at 3:40 P.M. Creosote mainly upper slopes of fens,
 but on other side creosote down into valley and finally replaced
 by grass and small shrubs. 30.5 striped skunk
 road kill. 45.5 Lordsburg at exit 22. 54.0 2 roven
 63.7 increase in number of yucca after an interval of very
 few. 74.3 ^{Am.} roughleg hawk. 75.4 4 Am. roughlegs on 4
 consecutive utility poles along side of road. Yucca seem to have
 5 or 6 inflorescence stalks per base which is noticeably more
 than those first observed in Arizona coming this way. 77.4
 Luna County line. 94.5 6 meadowlarks. 64104.5
 Deming. 64160.0 at 7:30 P.M. arrived at Los Cruces at a
 KOA Camp on west side of valley on benchland. Lights in
 this valley are brilliant and clear at night and remind me of
 the view from Mary's barn in Provo overlooking the city at night.

Los Cruces, Dona Ana Co., New Mexico.

Jan. 4, 1977

Min. temp last night 34° F. Sun up at 7:15 A.M. Sky almost
 clear with some clouds over mountains. 32.0 striped skunk
 road kill. now travelling on road west of Rio Grande. To S.
 trees are without leaves in this area. Valley mainly pecan
 groves and open cottonfields. Most of the houses are either
 stucco, stucco over adobe, adobe or brick. There are no
 houses made of wood. The old ^{Mexican} plaza of Mesilla is being reconstituted
 and when finished will recreate an original Mexican plaza and
 market place which should be a great tourist attraction, especially
 if they pattern it after the market places over the border in Mexico.
 Slopes above valley are in creosote. Striped skunk road kill.
 Continued S on this W road to El Paso. There are two bridges
 across the Rio Grande, one strictly for car traffic and the one about
 3 mi. W that crosses S from middle of El Paso is used mainly for
 walk but also cars. The latter we used (2x to cross) to cross into

Ciudad Juárez where we shopped
 in the immediate vicinity of the S
 end of the bridge.



at Ciudad Juárez we purchased several small items:

770104-1 glass penguin, 220 mm high of white & blue glass, \$4.00

770104-2 glass bee 270 mm long of varied colored glass, \$4.00

Both of the above were made at a glass factory just 1 block east of the main street at about the 3rd block down. This glass factory should be visited when in Ciudad Juárez.

770104-3 a lump of blue glass, 500 mm wide, \$30.00.

We also purchased a wool blanket and a wool poncho. *Fur opal* \$30.00
~~Like~~ one 7ire opal = \$180.00. There were no real fur opals:

Returned to El Paso and continued E on highway 62 at 2:10 P.M. Succession up slopes are

a foot high shrub, then 2 foot high scrub, then yucca, then creosote bush. These creosote bushes go up flat canyons into the mountains. At 245.9 active sand dunes to S of road.

Above creosote on slopes in a small, sparsely arranged shrub. mts mainly bare. 53.4 marsh hawk in a most unlikely spot.

60.2 5 horned larks. 67.6 a dark colored cholla concentrated in swales. 72.0 horned lark, 81.3 meadowlark, 93.4

150 horned larks. 95.8 40 horned larks. 96.5 20 meadowlarks but no cultivation in area. 96.6 120 horned

larks. most country in low shrubs (creosote?), yucca growing in isolated spots and surrounded by bare soils which the creosote had not invaded but otherwise surrounded the yucca.

391.5 marsh hawk. 315.4 first alkaline lake, ^{no veg but white & dry} 16.9 redtail.

26.5 mourning dove. 30.3 ^{mountains} bucks and 2 doe mule deer. 335.2

Information at Guadalupe National Park. 45.3 marsh hawk.

2 deer along fence line, black pelage that matches the vegetation.

45.3 marsh hawk. 46.2 ♂ & ♀ mule deer. 367.4 whites city at

Carlsbad Caverns. Unhooked trailer and drove to Caverns but

closed so returned. Enroute back to Whites City ^{at twilight} did not see deer

or any other kind of mammal or bird but about a dozen white

moths. Mileage at Whites City on return 64383.0.

Carlsbad Caverns, Eddy Co., New Mexico

Jan 5, 1977

min. temp 32°F. Left Whites City and drove to Carlsbad Caverns via Walnut Canyon some 7 miles distance. At the Visitor Center we took an elevator down some 750' and then hiked the 1 1/4 mi trip around the circumference of the Big Room which includes the Dome Room, Bellinghous Room, Hall of Giants, Giant Dome, Fairyland, Temple of the Sun, Breast of Venus, Lower Cave View, Totem Pole, Mirror Lake, Bottomless Pit, Gypsum Bed, Crystal Spring Dome

Rock of Ages, Twin Domes Junco white Tunnel. After returning to surface checked the entrance to the cave which, on a trail, leads down to lunchroom and connects with Big Room. I would recommend this trip via natural low entrance route and include the entire 3-mile trail. From the Visitor Center watched a golden eagle circle w along the south slope of ridge. Returned to Whites City and hooked up trailer. Road runner at camp. Left at 64 399.3 at 11:50 A.M. Will follow 285, S. Temp still 32°F. ♂ mule deer on outskirts of Whites City, actually in what you would call the city limits. 404.6 point where the Guadalupe Ridge contacts the valley on its E dip. At 06.6 turnoff E to Black River Village on highway 396. 06.6 ten meadowlarks. 07.1 golden eagle on top of telephone pole to right. 07.9 mourning dove, creosote about 2 feet high. 10.4 ten meadowlarks. 10.6 phainopepla?, did not see in flight but looks like a dark cardinal. 10.9 9 junco, 12 meadowlarks. 12.6 redtail. 13.7 13 Gambel's quail, flock of 18 horned larks. 18.0 4 meadowlark, some cottonfields. 18.6 sparrow hawk. 19.2 redtail. 21.2 shrike 21.0 meadowlark. Mesquite like bushes getting taller. 22.6 highway 285 South. 26.3 5 meadowlarks. 28.9 marsh hawk and hunting the sides of the highway. 31.3 sp. hawk. 32.2 Dark redtail, ^{was kept mt time today} 35.2 redtail, 200 horned lark. 38.9 Texas line. 43.7 redtail. 46.0 sp hawk. 52.0 marsh hawk hunting right-of-way along road. 53.2 Orca. Vegetation low creosote, 2 feet high. 56.5 scaled quail, 65.7 sp. hawk at turn of road. 85.0 shrike, 86.5 redtail, dark phase. It appears that villages have higher brush than natural areas. 94.9 meadowlark. 97.6 first playa lake SE of Pecos, redtail 97.9 redtail. This area is becoming more sandy and more grass. 98.3 sp. hawk. 98.7 redtail. 500.5 redtail. 00.1 shrike. 01.7 8 meadowlarks. 06.8 shrike. 09.4 5 meadowlarks. 10.7 sp. hawk. 18.2 10 nests in higher shrubs which line the road but not native fields. Country still in 2 foot high ^{and greener} creosote. 20.8 redtail. most on utility poles, this one on small tree. 22.8 red-shafted flicker. 22.0 meadowlark. 30.5 redtail. 33.1 shrike. 34.0 redtail. many of these are dark. 42.7 Cardinal, shrike 46.2 5 city limits of Fort Stockton. Continuing on 285 highway. at 4:00 P.M mt. time. 48.5 redtail. 51.0 shrike. 51.2 shrike. 52.2 redtail, 8 meadowlarks. 57.0 striped skunk road kill. 60.0 25 mourning doves. 61.0 shrike. 63.4 redtail. now in small juniper and lechuguilla yucca (curved blades). temperature 38°F. at 4:20 P.M. 65.3 shrike. juniper scrublike.

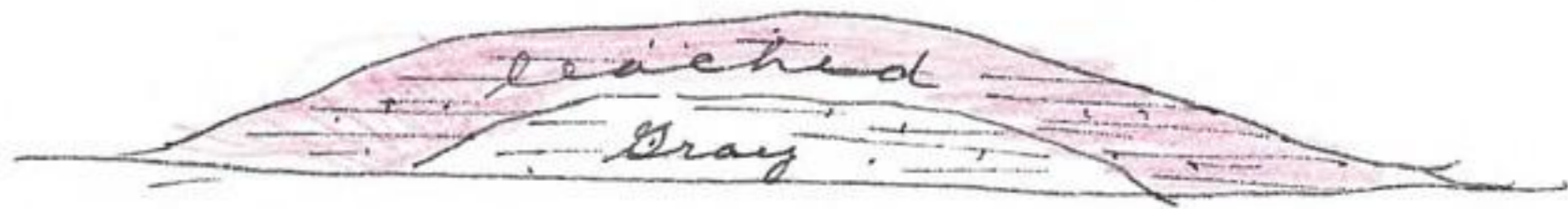
69.7 freshly killed ^{mule} deer. 71.8 shrike. 87.0 shrike. 64600.0 too dark (5:00 P.M.) ^{mt. time} for census. 07.1 road kill mule deer and 50' beyond a redtail road kill. Blueish haze in valley 64609.0 Sanderson. River beds are a white sandy gravel. 658.0 most ridges are anticlines and this has been the condition in many other road cuts. Continued on 90 to Langtry along the Rio Grande where we camped near the Judge ^{Ray} Bean Saloon and Museum.

Langtry, Val Verde Co., Texas

Jan. 6, 1977

This A.M. drove over to Rio Grande and took photo of Annette and river in distance no 770106-1. Continued E on 90. Rd. cuts show

leaching of rocks with centers gray and above, conforming to outline of surface and light yellowish color produced by ^{water} leaching and solar rays.



Continued to Pecos bridge and from S side of bridge on east side took photo ^{to SW} 770106-2 of the Pecos canyon now in water backed up by Amistad Dam on the Rio Grande. Mileage here 64690.1. meadowlark. On N road cut of road leading E from Pecos Bridge just before the road reaches uplands made photo 770106-3 of an old solution cone now filled with a stratified clay. Wall smooth. S side of road shows the continuation of the cone cut by the new road. meadowlark. 92.6 meadowlark

99.1 striped skunk road kill. Collected a beaver tail cactus no 770106-4 from side of road, ^{but roots too shallow and did not take} and two small ones nos 770106-5 and 770106-6, the latter from sandy ledge of a railroad cut. This cut had been wind eroded by the train and had produced a variable erosional pattern of solid rock layers and eroded layers of sand. These two cacti were the only ones located after 1/2 hr search and were in oddily placed position away from grazing areas. 64702.1 Comstock. 09.6 striped skunk road kill, some small birds have been observed but not recorded but these rare.

21.0 bridge across a reservoir. 8 Cools and a great blue heron. 21.6 sp hawk. 26.4 shrike. 39.6 cardinal. 40.3 100 Brewer blackbirds. 41.2 80 Brewer blackbirds 44.8 mockingbird. The dominant nest in trees is a cradle shaped oriole nest. The cactus wren oriole of western Texas and which occurs there about 2 per mile is not represented here. 47.4 redtail at bridge. 48.2 meadowlark. 51.9 first turkey vulture. 52.8 meadowlark. 54.0 striped skunk road kill and redtail hawk feeding on the skunk.

mistletoe common. 2 meadowlarks, 2 redtails, black vulture.
 56.3 dark redtail. 58.2 sp. hawk along edge of road (meadow) 58.4
 sp. hawk. 58.7 2 meadowlarks. 60.1 redtail hawk. 63.8 3
 meadowlarks. There is a thick leaved shrub that looks like
 mutton fat. Ponds are clear and have a lot of algae. 67.4
 sp. hawk. 67.4 3 mourning doves, sp. hawk. Now getting into
 agricultural area. 68.7 sp. hawk, boat-tailed grackle. 70.3
 Quemado, 71.1 sp. hawk. 4 meadowlarks. 72.0 black
 vulture. 72.3 sp. hawk. 73.4 sp. hawk at Normandy. 74.5
 2 mourning doves, armadillo road kill. 79.8 mockingbird, 3
 meadowlarks. 82.4 meadowlark. 84.7 sp. hawk. 2 meadowlarks.
 86.3 boat-tail grackle. 89.8 Eagle Pass. 99.9 Aplomada falcon?
 802.2 Turkey vulture. 04.2 2 meadowlarks 05.0 redtail hawk,
 dark phase. 06.7 meadowlark. 10.7 2 marsh hawks in grass field,
 one sparrow hawk, 2 meadowlarks. 64 814.7 first Harris hawk
 and can easily be identified by rapid wing beat, meadowlark,
 2 meadowlarks. 16.3 raccoon road kill. 18.8 meadowlark. more large
 evergreen trees now but localized along canals. 20.1 shrike, trees
 getting larger (mesquite). 20.6 3 meadowlarks, sp. hawks. 4
 meadowlarks, meadowlark. 25.0 2 Harris hawks and 5 meadowlarks.
 25.3 4 meadowlarks, 5 meadowlarks, Harris hawk, marsh hawk,
 sp. hawk. 26.5 sp. hawk. 28.0 sp. hawk. 28.5 Harris hawk,
 2 meadowlarks, Harris hawk. 29.7 3 meadowlarks, 33.8
 Carrizo Springs. 35.4 sp. hawk. 36.2 sp. hawk, shrike. 38.8
 shrike. 38.9 redtail. 41.8 Asherton. 43.0 mockingbird.
 44.0 sp. hawk, shrike. 44.7 2 meadowlarks, shrike. 48.0 marsh
 hawk. 50.6 sp. hawk, shrike. Collected a beavertail cactus no
 770106-7, soils damp, water in roadside borrow pits. 52.9 sp. hawk.
 53.0 Catarina. 54.3 shrike, shrike. now on uplands. Shrubs
 lower and highest ones along fence lines along sides of the road. 56.4
 shrike. 59.9 sp. hawk. ~~60.7~~ 60.7 sp. hawk, redtail. 61.7 sp. hawk.
 62.3 sp. hawk. 63.5 sp. hawk, meadowlark. 66.5 sp. hawk. 70.2
 fewer birds on uplands than bottomlands. 76.1 junction 44 E.
 85.9 sp. hawk. 87.7 sp. hawk. 88.0 Encinal at 3:30 P.M. 90.4 sp.
 hawk. 92.4 sp. hawk. 93.0 beaver tail cacti common and shrubs higher
 and continuous stretches of it. 96.7 turkey vulture. 99.8 sp. hawk.
 901.2 meadowlark 04.3 3 Harris hawks on posts within 30' of each
 other, Turkey vulture. 09.9 Harris hawk, Harris hawk. 12.0
 sage thrasher. 12.9 3 meadowlarks, shrike, sp. hawk. 13.4
 kingfisher 15.1 Harris hawk, shrike. 16.7 peccary, 8 Brewer
 blackbirds. 18.2 Black Creek. 18.6 12 Brewer blackbirds, 2
 shrikes. 20.0 shrike. 22.7 marsh hawk, 2 shrikes, sp. hawk.

24.9 shrike. 24.8 redtail, sp. hawk, shrike. 25.8 sp. hawk, marsh hawk
 26.5 sp. hawk. There have been a few groups of starling. 27.4
 redtail. 28.0 Harris hawk, shrike. 29.0 meadowlark. 29.6 sp. hawk.
 30.1 shrike. 31.7 redtail, shrike. 32.0 59 junction 33.4 redtail.
 42.7 sp. hawk. 43.4 Harris hawk. 44.0 Harris hawk, shrike. 45.9
 golden eagle circling above. 46.7 shrike. 47.4 a sign says 13 miles
 to San Diego. 48.1 redtail. 51.0 Harris hawk (time now 4:55 P.M.
 Central time). 52.3 Harris hawk. 52.4 redtail. more cultivation
 along area. 56.2 sp. hawk. 56.6 sp. hawk, meadowlark. 57.6
 shrike. 59.6 San Diego Creek. 64.9 60.0 San Diego, middle of
 Town. 62.6 sp. hawk. 64.0 sp. hawk. 64.7 redtail. 67.1 Harris hawk,
 shrike. 68.5 sp. hawk. 73.3 kingfisher. 73.5 redtail, 8 meadowlarks,
 yellow-shafted? flicker. 74.2 redtail. 74.7 junction 359-44,
 striped skunk road kill. 75.4 redtail, meadowlark, shrike. 76.3
 3 meadowlark. 76.8 redtail, sp. hawk. 77.4 sp. hawk 77.7 redtail
 77.8 striped skunk road kill, redtail. 80.0 14 meadowlarks.
 80.6 redtail, 8 meadowlarks, meadowlarks. 82.4 redtail, meadowlark,
 8 meadowlarks, meadowlark, meadowlark, road-kill meadowlark.
 83.7 2 meadowlarks, 2 mourning doves. 84.2 12 meadowlarks, 1
 mourning dove, 5 meadowlarks, 5 mourning doves. 84.7 redtail,
 2 mourning doves. 85.0 mourning dove, mourning dove 85.6 redtail,
 mourning dove. 86.0 mourning dove, meadowlark. 86.2 redtail,
 meadowlark. 86.9 mourning dove, shrike. 88.3 great blue heron,
 89.0 sp. hawk. 89.7 3 meadowlarks, 89.9 sp. hawk, 8 mourning
 doves. 91.0 4 mourning doves, mourning dove. 92.3 meadowlark.
 93.0 sun now on horizon. at 5:50 P.M. A small sparrow occasionally
 flies across the road. (1 per mile)
 94.6 2 mourning doves, mourning dove.
 95.9 Robstown City limits, continuing on 44 highway and end of
 census because of darkness. 97.5 highway 77 at 5:55 P.M. Continued
 toward Corpus Christi and drove over 358 highway (Padre Island Drive)
 to Padre Island and thence to right to first ^{Nueces County} State Park on the
 beach.

Nueces County Park, Nueces Co., Texas (on Padre Island)

Jan. 7, 1977

This morning observed only 4 kinds of birds in area: black-headed gull,
 sandpiper, willet and least tern? Fisherman says jet stream 5 this
 year and storms cannot pass it and as a result they have not seen
 the sun in 2 months and it has been raining and cold the whole time.
 whereas in ordinary winters there are hundreds of fishermen here
 and usually dressed in short sleeves & shorts, this winter there
 are practically no one fishing and those that are wear down coats &
 hoods

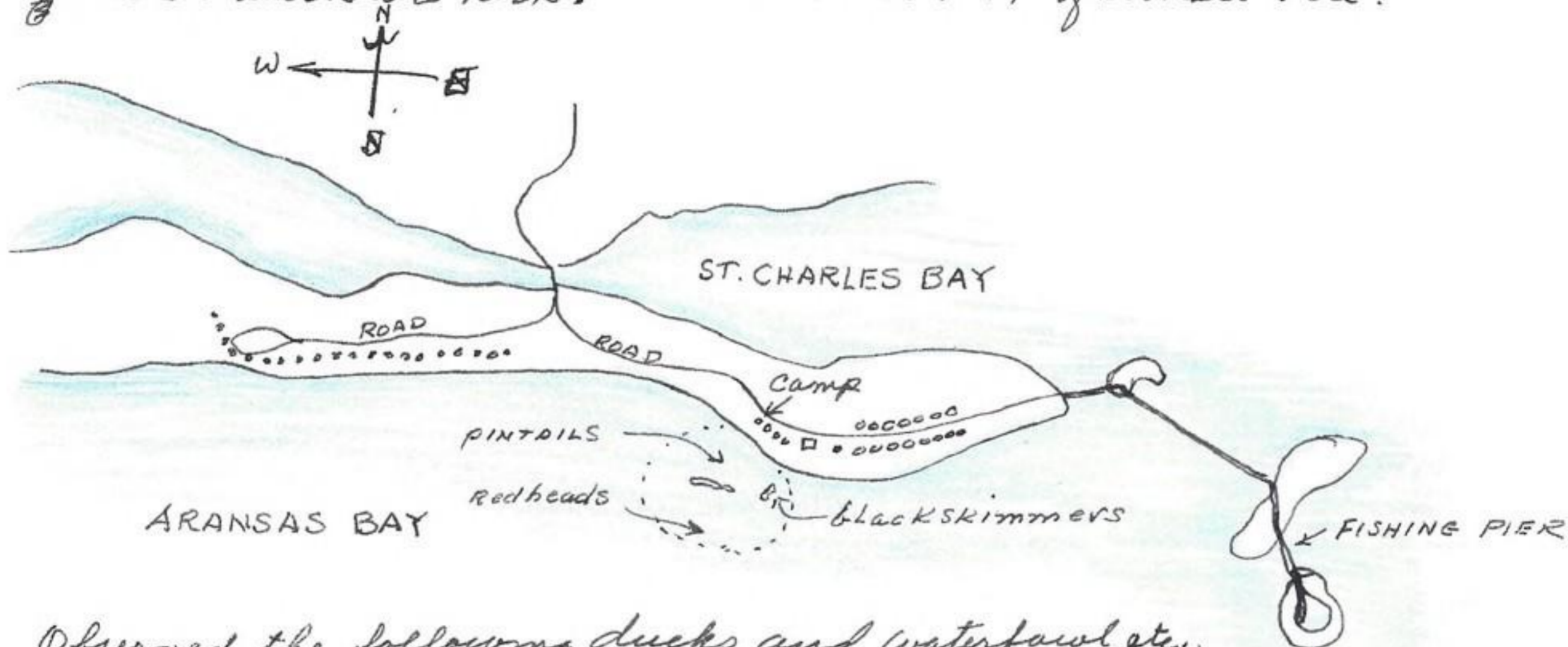
This would account for drought in Kansas as rains cannot reach the country to the north. Took several pictures of surf from pier. The muddy waters are from rains that enter the gulf and move w along the shore. The water is clear beyond. The surf here is not the usual crested surf but a sharp overturn of water with a flat crest thus:

These photos are:

770107-1 to 770107-8. ^{Photo 770107-9 of Annette and laughing gulls + a willet.}
 Left camp with trailer and followed beach on sand some 80-90 feet from edge of water and will keep complete census of birds observed from the County Park to the rock jetty that intercepts the beach to the east (where one must leave beach and go inland along canal to cross over by bridge. Mileage can be checked from maps. ^{laughing} black-headed gull, 3 sanderling, 3 sanderlings, willet, herring gull, sanderling, 4 sanderling, 4 sanderling, ring-billed gull, herring gull, cormorant flying just 5 beyond the breakers, ^{laughing gull} black-headed gull, willet, ^{laughing} black-headed gull, sanderling, willet, ring-bill gull, black-bellied plover, ring-bill gull, 2 sanderling, dunlin?, willet, willet, 2 herring gulls, willet, sanderling, sanderling, least tern, sanderling, sanderling, willet, black-bellied plover, laughing gull, willet, laughing gull, willet, laughing gull, 3 ring-billed gulls, 3 ringbills & willet, willet, willet, ring-bill, black-bellied plover, ringbill, b. b. plover, willet, sanderling, sanderling, sanderling, 2 ring-bills, sanderling, sanderling, laughing gull, 3 sanderlings, laughing gulls, 2 ring-billed gulls, willet, laughing gull, laughing gull, willet, sanderling, ring-billed gull, ring-billed gull, sanderling, ring-billed gull, "ring-billed gull, willet, 3 laughing gull, sanderling, 7 laughing gulls, ring-billed gull, 4 laughing gulls, 2 ring-billed gulls, sanderling, laughing gull, sanderling, laughing gull, 4 ring-billed gulls, willet, 3 laughing gulls, willet, ring-billed gull, sanderling, laughing gull, sanderling, willet, 2 sanderling, laughing gull, great blue heron, willet, sanderling, laughing gull, willet, sanderling, laughing gull, willet, sanderling, willet, sanderling, sanderling, willet, willet, sanderling, sanderling, sanderling, Caspian tern, cormorant over breakers, photo 770107-~~10~~¹¹ of 12 willet, this is the position of most shorebirds along the beach. sanderling, sanderling, sanderling, ring-billed gull, willet, sanderling, sanderling, sanderling, 2 herring gulls, ring-billed gull, ring-billed gull, 2 black skimmers, 2 Caspian terns, sanderling, 4 sanderling, ring-billed gull, 2 sanderling, ring-bill gull, willet, sanderling, ruddy turnstone, sanderling, willet, 4 sanderling, 3 sanderling, 2 sanderling, sanderling, sanderling, sanderling, sanderling, willet, sanderling, sanderling,

at point where jetty contacts highway 53 noted 33 black skimmers and 22 Royal terns resting at edge of water along open bay of Canal about 100 S of bridge. Also 13 avocet and 1 killdeer. 40.9 bridge over this canal. Continuing E on 53. Considerable gopher activity on stabilized sand dunes and much standing water along road and meadows from excessive rains. Many ponds but no ducks that one usually finds associated with the more permanent ponds. 46.3 sp. hawk. 46.4 sp. hawk. 47.4 sp. hawk. 47.6 meadowlark. 48.6 water on road from flooding rains, 8 coat. snowy egret. 53.9 Ferry at Aransas Port. (did not keep complete census except raptors from mileage 48.6 to 53.9 at Port Aransas At the ferry terminal at Aransas Port observed 18 white pelicans feeding in the immediate vicinity of the ferry as if profiting from the churning waters of the ferry boat. 32 cormorant also in same area and for same purpose, ^{also 6 ring-billed gulls + 12 laughing gulls.} when crossing noted 4 porpoise about 150' from the boat. This complex of birds and mammals ^{has} does not changed from year to year. Continued on and at 56.3 3 turkey vultures. Good areas for shore birds. 56.9 sp. hawk and 8 roseate spoonbills along causeway. 58.3 sp. hawk. 66.5 2 sparrowhawks 5 feet of each other, 68.4 sp. hawk, Kingfisher. 69.4 2 black vultures, ^{turkey} 5 vulture 70.0 2 meadowlarks. 70.8 Kingfisher. 71.9 sp. hawk. Birds along Rockport beaches more numerous than at Padre Island. 65078.4 along bay at Rockport (Connie ^{Hager wildlife refuge} ~~sanctuary~~) checked the duck population of wintering birds with 60x scope. This sanctuary has always been a highlight in the Texas coast area where birds unafraid can be viewed at 20-30 feet. The variety is outstanding. Photo, ⁽⁷⁷⁰¹⁰⁷⁻¹⁴⁾ of a red-breasted merganser, ^{representative population of} taken with telophoto. Will count and identify, ^{ducks and} waterfowl with the sweep of the scope including natural groups as far as possible: curlew, killdeer, 8 dowitchers, 4 coat, 3 pintails, 13 coat, 5 redheads, 3 canvasbacks, 2 canvasbacks, 4 redheads, pintail, 2 canvasbacks, 5 canvasbacks, 8 coats, 2 baldpate, 1 great blue heron, 2 gadwals, 7 redheads, pintail, 4 coat, 1 canvas back, 8 bufflehead, 1 pied billed grebe, 1 ring-billed gull, 12 dowitchers, 1 spoonbill, Forrester tern. (curlew sinks bill into mud as far as nostrils), Least tern, ^{greater} yellowlegs (pintails last to leave edge of lake and first to return when disturbed) Louisiana Heron, ^{ducks passing as flocks of seagulls} redhead, redhead, Canvasback, redhead, redhead, redhead, redhead, redhead, redhead, baldpate, redhead, redhead, redhead, Canvasback, redhead, redhead, redhead, baldpate, redhead,

Continued E and at Fulton, ^{70.0 miles} checked a sail boat made of cement no 770107-15. marina has many fishing boats converted to pleasure craft. Photo 770107-16 of sailboats & fishing boats here. Trees in area are live oak, shrike. Continued E and camped on Goose Island State Park. no 770107-17 of sunset here.



Observed the following ducks and waterfowl etc., in area, particularly in area SW of camp.

redtail, shrike, sp. hawk, pintail, coot, reddish egret, mottled godwit, black skimmers, ^{reddish} turnstones, goldeneye, ground dove, great blue heron, night heron, sanderling. This evening between 8:30 P.M. & 9:00 P.M. walked out on pier. Observed 8 great blue herons, 5 black-crowned night herons and 3 sanderling, all feeding around shores of small islands crossed by pier. No fisherman because of cold weather.

Goose Island State Park, Calhoun Co., Texas.

Jan 8, 1977

This morning 80 pelicans and 300 double crested cormorant played leap frog for approx 1/2 mile starting SE of fishing pier and flying SW, thence S into middle of bay. They continued this behavior for at least 1/2 hour. An airplane motor driven boat crossed their area and they, as well as everything else in the bay left or changed positions. These boats should be ~~banned from~~ ^{prohibited from use on} any body of water, or better, completely declared illegal. In the above reaction between the cormorants and pelicans, it was the pelicans that were robbing the cormorants of fish. In the immediate area are five skimmers on near shore sandbar, light duntchers, 4 killdeer, 3 sanderling, 8 ruddy turnstones, 12 Brewer blackbirds, 8 pintails, 30 redheads, 1 pelican, 8 laughing gulls, 5 ring-billed gulls, 5 meadowlarks, reddish egret (this heron is a slow and is very active in contrast to Louisiana heron. It will run 3 or 4 feet then fly up 2 or 3 feet then land in water. It repeats this behavior up & down the shoreline,

9 goldeneye ducks, (the pelican on sandbar has broken wing), 10 marbled godwit (touch end of bill with water, then preen feathers with moistened tip of bill), 6 western willet, 3 Forrester's tern, These birds were all observed at one ^{moment in} time. The composition changed from slightly from time to time. This area is the best one of any area of Goose Island. There are more birds in St. Charles Bay on N side of island but the birds there are pintails & coots. Marbled godwit has trouble preening upper breast, ^{& lower neck} feathers because of length of bill. Sanderling are still chasing each other. Other observations in same area are: ruddy turnstones actively turn stones and shells over to capture invertebrates beneath. Meadowlark fed in exactly the same area of beach and like the turnstones, turned rocks and shells over as well as fragments of dead vegetation on the beach. Green-wing teal arrived & fed with pintails, redheads remain farther out in bay. 3 red-breasted mergansers swam by. Wilson snipe fed along edge of shore in water. Caspian tern alighted on sandbar, The ruddy turnstones have been working the same area of beach 25' x 30' for the last hour, turning over shells & plant debris. min temp last night 74°F. Mosquitos in brushy area on E side of Goose Island but not on W side. Snowy egret in area. Coot and pintails near shore and the larger flocks of redheads and goldeneyes farther out in bay. Laughing gulls displaced sanderling to get at food captured by sanderling. Fair lesser scaup only ones observed this morning, marbled godwit flight with bill and feet, Bill black near tip & pinkish toward head. Water pipit and myrtle warbler and a small sparrow on beach. A single long-billed curlew alighted on the off shore bar and when 12 other long-billed curlew passed over the one on the beach crouched low and called. The 12 alighted in water on main beach & fed. Water quiet this A.M. and now with slight undulation and associated with slight rain. no wind. A redhead will occasionally turn over on its side and at a distance looks like a canvas back. A long-billed curlew had captured some sort of animal and 2 laughing gulls displaced it. 2 long billed dowitchers fed in area. Laughing gulls will sometimes leave beach and fly up 5 or 6 feet high and then drop down to beach again. At 11:30 A.M. 8 porpoise swam in bay approx. 1/10 mi out from shore in area inhabited by redheads. These porpoise seemed to be fishing or hunting as one forged straight ahead at a high speed with water flying on both sides as if pursuit of its prey, others churned the water in restricted areas all in shallow water. At this same time 2 oyster catchers arrived from the west. The porpoise made at least 10 passes

among ducks. Left Goose Island at mileage 650930.0 at 12:00. As we passed over bridge off the island noted 8 dowitchers in isolated pool. ^{one mockingbird also.} 80% coot & 20% pintail here, may be other kinds of ducks. The trees in area are large live oak and the grass is elephant grass? at the boat ramp at bridge noted a sandpiper and 2 common egrets. ~~The~~ Fishermen were catching 6 or seven kinds of fish averaging 1 foot in length. at whopping crane boat tours noted 12 pelican at marina. Mileage here 95.5. 95.7 sparrow hawk on highway 35 going NE. The area has had so much rain that fields are flooded and water on ^{edge of} road in many places. 96.5 Kingfisher, Common egret, many ducks, 15 snowy egrets, 4 meadowlarks. 97.7 sparrow hawk. 98.4 2 mourning doves. 98.8 common egret. 65100.1 meadowlark, rain all morning. Snowy egret. Ponds numerous & ducks. 02.4 every flat to right, shrike. Elephant grass is sparsely distributed and is higher than the other marsh grasses. 05.2 redtail. 05.6 2 Kingfishers, some ponds without ducks. 06.4 sp. hawk. 07.0 sp. hawk. 07.1 sp. hawk. 07.8 redtail. 07.7 snowy egret, egret on telephone line, cultivated field have standing water. 08.3 Common egret, sp. hawk. 08.8 shrike, meadowlark. 09.0 turnoff to refuge. 09.6 shrike. 10.6 shrike, 4 meadowlark. 11.0 4 meadowlark, meadowlark. 11.6 now E. 10.6 2 meadowlarks. 10.7 2 meadowlarks. 16.0 2 meadowlarks. The road right of way is the only vegetation in area, all fields are plowed. 17.5 6 meadowlarks, boat tailed grackle. 17.6 3 snowy egrets. 18.0 meadowlark. 18.7 meadowlark, shrike 19.0 Orwell, (for gas) 6 meadowlarks. 5000 mixed flock of boat-tail grackles, common grackles, Brewer blackbirds, redwings and cowbirds and maybe rusty blackbirds all within the small village of Orwell. 21.7 turnoff to Aransas Refuge, Kingfisher, meadowlark, shrike. 22.0 shrike, killdeer, 2 shrikes, sp. hawk. 23.7 pond to left at turn with 4 snowy egrets, 4 boat-tail grackles but no ducks. Fog moving in westerly 1/10 mile 26.6 shrike 27.6 Aransas Refuge Park Entrance. water over road. 28.0 start census in Park at Visitor Center. 3 coot, Coot, shrike, Louisiana heron, 28.9 to left, 5 roseate spoonbills, 17 pintails, 2 baldpate, 1 laughing gull, 2 great blue heron, 20 pintails, great blue heron, Forster tern, Turkey vulture and about 20 other ducks to the west, 5 Steller jay, Steller jay. Elephant is dominant grass and now is reddish brown. Inland ponds sterile 30.2 water on road. most recent rains in areas

of green grass. 30.5 Common egret. 30.7 Mockingbird. 31.0
 8 white tailed deer one of which was a big buck. 4 meadowlarks.
 The deer and meadowlarks were in the experimental area of
 burning. 31.1 4 deer, gophers numerous on islands of soil.
 2 robins. 31.4 5000 Common grackles, 8 robins, robin, robin.
 31.5 2 deer, 2 robins. 31.6 12 eastern robins. 31.7 raccoon
 walking along side of road, 8 robins. 31.9 Jones Lake, no birds.
 bluejay. (2:15 P.M). 32.4. Hog Lake, some duck. 32.9 bluejay
 32.6 Visited observation tower. Not the usual birds observed
 on previous visits, mainly fewer in number and kinds,
 Louisiana heron, avocet, some ducks, ⁸⁰ pelican, 8 great blue heron,
 8 deer E across bay, 12 turkeys, The fog was too dense to see
 much beyond 2/10 of a mile and as a result did not see
 the whooping cranes. Returned and took big tree hiking trail,
 and observed, one bluejay, coot, ring-necked ducks, 3 vulture,
 red-billed grebe, small greenish flycatcher, sparrow hawk,
 returned. Feral pigs have almost completely plowed the soils
 beneath the trees (live oak). At 32.9 at 3:40 P.M started
 on the oneway loop road back to visitors Center. 33.0 cardinal,
 2 robins, and some smaller sparrow size birds, shrike. Cormorant,
 5 coot. 33.2 5 turkey vultures, Common egret. 33.4 turkey
 vulture. 34.0 turkey vulture. 34.1 turkey vulture. 34.2 redtail.
 Talked to ranger who said there has been increase ~~sightings~~ sightings
 of the mountain lion, the coyote is in good numbers and hybridizes
 with the red wolf and it is difficult to tell the difference between
 them in the field, deer (white-tail) 3500 and have benefited from
~~burning~~ burning management, whooping cranes now using burnt over areas,
 peccary common. 38.5 meadowlark, robin, 38.8 turkey vulture
 39.0 Common egret. 39.9 meadowlark. 40.3 shrike. 40.8 turkey
 vulture. 41.0 6 robins. 41.2 mockingbird. 41.9 end of trail.
 mockingbird and 4 meadowlarks. 4:35 P.M, usual ducks as
 observed ~~common~~ ^{ing} in, 2 meadowlarks, 2 deer & 2 great blue herons,
 44.0 gates at 4:40 P.M. Entire trip thru refuge in fog with visibility
 approx. 2/10 miles yellow-shafted flicker at gates. From here on
 will not keep complete census except raptors. 46.4 sp. hawk
 47.8 sp. hawk. 48.8 10 snowy egrets along road side and surrounded
 by cultivated fields. 49.6 sp. hawk. 60.0 Guadalupe River fall.
 64.5 Victoria Barge Canal. Several large flocks of blackbirds
 moving toward the gulf. One group of approx. 100 snowy egrets.
 65.8 sp. hawk. (along 81 N toward Victoria). 87.6 redtail 87.8 redtail.
 68.6 sp. hawk. 69.0 redtail. 72.4 sp. hawk. 72.8 sp. hawk.

75.9 Bloomington at 5:30 P.M. and getting to dark for census.
Continued N and camped just beyond Bloomington.

31 mi. N Bloomington, Victoria Co., Texas
~~near Bloomington~~ ~~Victoria Co.~~ ~~Texas~~
Jan 9, 1977

min temp last night 32° F. Rained most of the night. Left 8:35 A.M.
6.5 207.0. 5 turkey vultures, shrike, mockingbird, 12 common grackles.
07.7 2 turkey vultures. 08.0 turkey vulture, shrike, meadowlark.
area is savanna and live oak islands, the trees about 25' in height.
09.3 junction highway ~~93 and~~ 682. 11.2 mourning dove. Trees have
a heavy base and trunk and then taper off very abruptly at top.
14.6 5 turkey vultures, 3 black vulture. 15.7 Brushy Creek mainly
sandy. Tree getting higher. 16.2 5 black vultures in tree, one
turkey vulture sailing above. 17.2 intersection highway 111, and
77. 19.6 sp. hawk. 20.1 crow, 500 starting. * 20.2 4 crows.
Ponds and fields flooded but streams seem to have normal water
flow. 21.7 turkey vulture. 21.9 one turkey vulture feeding on a
road kill and 3 circling above. 90% of trees are leafless.
22.5 4 crows at road kill, turkey vulture above. 25.5 3 crows
26.6 2 crows. Now 80% trees green. 27.1 2 black vultures.
27.6 crow, turkey vulture. 28.4 25 turkey vultures. 29.8 crow,
mockingbird. 23.6 turkey vulture. 31.1 3 turkey vultures,
turkey vulture. 31.8 3 crows, turkey vulture. Vultures prefer
areas of solid trees and savannas, shrike. 33.0 turkey vulture
at striped skunk road kill, yellow-shafted woodpecker. 33.8
~~Hallettsville~~ ~~at~~ ~~the~~ ~~city~~ ~~limits~~. 37.3 sp. hawk. 38.1 meadowlark.
40.1 5 robins, 20 robins, 3 meadowlarks, 80 starling. 40.7 turkey
vulture. 41.0 marsh hawk. 41.9 8 meadowlarks. 42.3 3
turkey vultures. 43.7 3 turkey vultures. 44.2 2 turkey vultures,
crow. 45.9 5 crows 46.3 meadowlark. 47.1 crow 48.8
Navidad River. 49.9 5 crows at road kill. 5 turkey vultures
sailing directly above. 49.8 5 crows at armadillo road kill,
2 turkey vultures above. 50.4 4 crows, robin. 51.5 turkey vulture
54.5 left interchange highway 10. ^{at 10:50 A.M.} North of Schulenburg country more
open and grazing fields. Sky clear except high Cirrus and storm clouds
dissipating. 57.3 2 crows. 58.1 turkey vulture, sp. hawk. 59.3
turkey vulture. 59.9 meadowlark. 61.0 many of the houses here
have 2 front doors, some ponds have ducks (wild). 62.9 sp. hawk.
64.0 sp. hawk. 64.9 meadowlark, more juncos, 65.0 meadowlark.
67.3 turkey vulture. 69.4 Colorado River after dropping down off
hill. Trees without leaves, sparrow hawk. There are two kinds

of oak - live oak with green leaves and an oak with dead dry leaves.
 winds from NW. white pine? beginning. 73.3 sp. hawk. 74.1 2
 meadowlarks and crows. Definitely an increase in juniper and
 live oak. 75.7 definitely in good pine forests with many young
 pines throughout forest. 79.0 turkey vulture. 78.3 2 black vulture
 and 2 turkey vultures eating a road kill, 8 robins. 79.5 3 crows.
 Flock of about 80 ducks flying overhead. 80.5 turkey vulture
 by road kill and remained on road while we passed, shrike. 81.2
 Wards, killdeer. 84.7 four meadowlarks. 85.3 80 blackbirds
 85.6 8 meadowlarks. now out of pine forest 86.4 pond to ^{right} left
 with great blue heron and 2 pied billed grebes. Soils plowed
 show small rock texture and reddish. 88.1 turkey vulture.
 Small ponds are full of water, 89.2 sp. hawk. 90.0 turkey
 vulture. 90.6 middle of the town of Giddings 91.6 sp hawk. 92.1
 12 meadowlarks. 93.7 4000 grackles and other kinds of blackbirds.
 95.5 15 meadowlarks and 12 goldfinch. There have been some
 small unidentified birds but these have been few in number.
 96.7 2 meadowlarks. 97.0 9 meadowlarks. 97.6 800 grackles etc.
 mourning dove. 99.0 turkey vulture. Some oaks with fall colors
 but most of them bare of leaves. 65303.2 sp. hawk, meadowlark.
 05.5 15 turkey vultures, 2 meadowlarks, turkey vulture. 07.3
 magnolia like trees, sp. hawk, 1000 starling. 10.0 6 meadowlarks.
 11.0 shrike, killdeer. 40 blackbirds. 15.3 12 meadowlarks. 18.2
 7 blackbirds. Smoke horizontal out of chimney stacks. 20.7
 sp. hawk. 21.4 shrike. 22.8 25 turkey vultures on ground
 in field. Live oak and junipers, less than 50' high. 23.7 sp. hawk.
 24.4 5 meadowlarks, 25.0 redtail. 25.6 turkey vulture. 28.4
 Turkey vulture, 8 goldfinch. 30.2, 4 crows 31.9 turkey vulture.
 34.4 turkey vulture. 38.3 sp. hawk, turkey vulture. 37.8 now
 on highway 36-77. 38.9 2 meadowlarks. 39.1 east end of Little
 River. 40.2 shrike, 41.3 Cameron, (12:50^{P.M.}, Temp. 29°F), mockingbird.
 42.3 armadillo road kill, mourning dove, 8 blackbirds 44.0 meadow-
 like flying 38 P.M. along side of bar. 44.7 turkey vulture, 3 meadow-
 larks. 45.5 shrike. 46.3 5 meadowlarks, 2 meadowlark - 47.2 redtail,
 meadowlark. 47.9 meadowlark, although cold and windy, there
 is no evidence of snow, now more open plains like western Kansas,
 trees along fence rows, some cottonfields. Agave still present, some
 brushland. Trees in general are decreasing in size from 5 to 7,
 49.7 meadowlark. 50.0¹⁸ meadowlark stretched along the highway.
 50.6 5 meadowlark, meadowlark. 51.1 meadowlark. 52.0 sp. hawk,
 redtail, 2 meadowlarks, 3 crows. 53.6 4 meadowlarks 55.3 5
 meadowlarks, giant cone, area of flat river bottoms and rolling uplands.

57.0 Rosebud at 1:10 P.M. 58.1 2 meadowlarks, 4 meadowlarks, 58.6
 3 meadowlarks. 59.4 Cottonwood Creek. 59.7 great blue heron.
 Topography from S to N as if old ocean beaches, 2 meadowlarks. 61.0 4 meadowlarks.
 64.2 Killdeer. 65.1 striped skunk rd. Kill, crow. 67.2 2 meadow-
 larks. 67.0 turkey vulture, 3 mourning doves. 69.5 Killdeer.
 70.3 redtail hawk. 71.4 turkey vulture. 72.0 first snow and
 on north exposures, ^{and on shoulders of road} meadowlark and 2 crows. 76.1 2 meadowlarks
 77.1 2 Killdeer. 77.5 sp. hawk. 78.1 meadowlark, temp. 23°F.
 78.1 sp. hawk, snow gone. 80.2 sp. hawk. 81.7 meadowlark.
 83.7 2 meadowlarks, meadowlark. Some flocks of 20-60 starling
 but nothing like farther to the south. 88.1 definitely more snow
 on ground and ~~of~~ slush on ~~road~~ ^{localized} road. was in path of snow storm.
 89.0 4 crows 90.4 now on Interstate 35, at 1:50 P.M. 91.4 now
 technically on Interstate 35, 401.9 4 meadowlarks. 05.0
 no snow in area which proves that the storm track was thru
 waso area only. 500 starling 07.9 meadowlark. wind 20-25 P.M.
 from N. 10.6 striped skunk rd. Kill. 12.6 Hill Co. line. 14.0
 sp. hawk. Increase amount of snow up to edge of pavement.
 34.2 fields without snow but road solid ice. 36.1 meadow-
 lark. 36.5 meadowlark. 42.7 meadowlark, meadowlark. 43.7
 meadowlark. 44.1 2 meadowlarks. 46.2 2 meadowlarks.
 47.4 2 meadowlarks, few starling along side of road (10-15), flocks of
 100 or so horned larks, mourning dove. 57.5 Alvarado exit
 at 65.3 and discontinued census at 5:05 P.M. ~~6532.0~~ From beginning of
 ice on road at 34.2 to ^{the} N there was an increase in snow and
 traffic was virtually stopped. There is no provision to clear
 road or sand icy roads for this part of Texas. The farther N the
 more snow ^{and less traffic problems} and less ice as if the first storm dropped first rain +
 then farther N it turned to snow. Continued thru Fort Worth, ^(7:00 P.M.)
 thence N to a Nickerson farm N of Denton at mileage 6532.0 where
 we camped in the parking lot.

Nickerson Farm, N of Denton, Denton Co., Texas.
 Jan. 10, 1977

Last night min temp. 9°F and strong wind blew all night from W making
 trailer too cool for comfort although we had gas furnace on all night.
 Left at mileage 65532.0 at 8:30 A.M. Sky absolutely clear. Recorder
 too cold to function so missed out on record between here and the
 Oklahoma border some 34 miles to the north. — 56.2 Red River and
 frozen. 56.3 Oklahoma state line sign. 9:00 A.M. 57.4 meadowlark.

redtail. 56.8 8 crows. 59.9 crow . 62.4 crow 65.4 8 crows .
 74.4 redtail. Saw plowed up snow 1 foot high on sides of road.
 78.6 redtail 80.7 3 crows. 84.4 crow. 89.3 meadowlark. 95.6
 2 crows. 60.2.1 Murry Co. line . Green of juniper and red of
 old oak trees make a good contrast in color against the white snow.
 05.5 5 crows. more juniper on the N exposure of the range. (Arbuckles)
 13.7 2 crows, 4 crows. 19.6 redtail. 22.6 crow. 23.4 redtail.
 24.7 30 horned larks. 25.9. redtail, 26.3 2 crows . 32.4 Washatu
 River in ice. 37.0 redtail. 38.1 McClain Co., 2 redtails.
 Trailer 44° F as we travel along with furnace on full force.
 41.0 2 crows, 43.8 2 mourning doves . 47.6 sp. hawk .
 51.6 American roughleg. 54.7 first evidence of snow melting .
 57.3 redtail. 64.8 redtail. 65.2 South Canadian River.
 Great blue heron 67.6 no man at 12:00. ^{temp 24° F 8 inches snow} Visited
 Grace for an hour or two and then left at 2:40 P.M. 70.9
 sparrow hawk. 72.8 redtail, crow. 78.1 meadowlark. 87.2,
 N Canadian River. 702.5 Crow. Oaks retain leaves longer
 here than to the south in Texas, Crow. 02.7 Crow. 04.2
 Crow. 05.4 crow, meadowlark. 07.7 sp. hawk. 08.0 2
 Crows. 08.4 redtail, 2 crows. 09.8 2 redtail 1 foot apart
 in tree; Crow. 10.7 redtail. 11.7 2 crows. 12.0 10 crow.
 13.4 4 crows. 14.3 crow. 16.8 yellow-shafted flicker. 18.5
 Am. roughleg. 18.9 crow, meadowlark. 21.3 2 meadowlark.
 23.4 3 meadowlarks, 24.3 redtail. 24.9 4 crows. 27.4 2
 meadowlarks. 27.9 Cimarron River in ice. 28.0 Payne Co.
 31.0 2 meadowlarks. 34.8 2 meadowlarks. 35.2 redtail,
 2 meadowlarks. more grasslands than trees now, Stillwater
 turnoff, Cloudless all day. 39.4 15 meadowlarks. 40.1
 Noble Co. 40.7 2 meadowlarks. 42.1 road kill meadowlark.
 redtail. 42.7 meadowlark. 45.1 redtail. 50.0 4 meadowlarks.
 51.6 redtail. 52.2 meadowlark 52.8 5 meadowlarks. 53.1
 2 meadowlarks. 53.3 Black Bear Cr., 3 meadowlarks 54.8
 8 meadowlarks. 55.9 2 meadowlarks. 56.3 2 meadowlarks .
 57.0 2 meadowlarks. 58.2 ^{am.} roughleg, 7 meadowlarks. 58.5
 redtail. 59.0 redtail. 5 inches of snow on ground. 60.3
 meadowlark, 61.2 2 redtails. 62.1 Red Rock Creek, 62.9 redtail,
 meadowlark. 63.6 8 meadowlarks, 1 road kill meadowlark. 64.1
 5 meadowlarks, 3 meadowlarks, 64.8 redtail. 65.0 meadowlark.
 65.9 Am roughleg. 66.9 5 meadowlarks 69.9 redtail, 70.4 ^{Ray Co.,} ~~Kay~~
 71.4 5 meadowlarks, 3 horned larks. 72.3 6 meadowlark 73.4 am
 roughleg. 76.0 2 redtails. 8 horned larks. 80.0 12 horned lark
 82.8 redtail 85.2 meadowlark. 85.2 2 meadowlarks. 89.7 redtail.

- 92.1 Chickasaw River, frozen. 95.6 40 horned larks. 97.7 2 meadowlarks, 3 horned larks, 12 horned larks. 98.8. Kansas St. Line 5:23 P.M. (65798.8 at line). Sun about 10 minutes from setting. 99.8 20 horned larks. 800.0 12 horned larks. 01.7 3 horned larks.
- 02.2 4 horned larks. 05.0 redtail. 07.8 end of census, sun-down at 5:37 P.M. Temp is expected to go to 0 in ^{Wichita,} ~~Wichita,~~
- 12.0 2000 starling and other blackbirds, heading E, in linear flocks. ^{coyote crossed turnpike in Lawrence at intersection of between Kansas & Iowa streets.} Arrived home at Lawrence at 6:00 P.M. at 10:30 P.M.

Perry Reservoir, Jefferson Co., Kansas

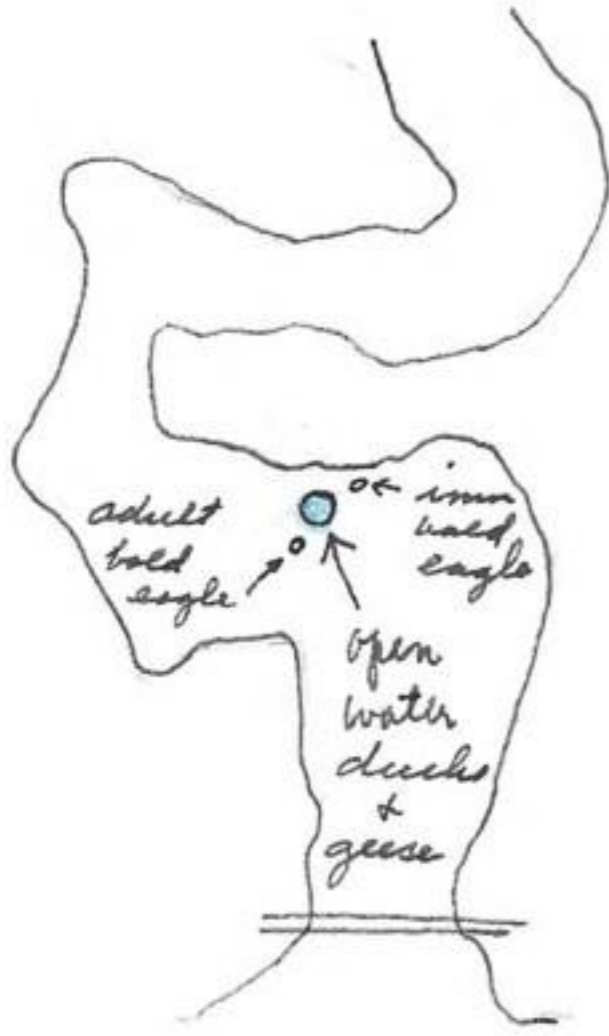
Jan 12, 1977

Left 66012.0 at 9:15 A.M. Sky clear, wind from E. Temp 6°F
 13.9 2 juncos, starling. 15.3 Lake View Courtyard, lake in ice and
 snow and lower than first last observed. 16.1 6 juncos. 19.0
 base of hill, juncos. 20.3 cardinal. Kaw River completely in
 ice or snow with just occasionally a channel 12' wide and
 150 long as representing the river course. Reminds one of a
 meandering stream in a meadow. 20.9 cardinal, 3 bluejays,
 5 juncos. 20.0 12 tree sparrows. 21.2 bluejay, juncos. 22.0
 Leecompton Rd, 3 meadowlarks. 22.7 E end Leecompton bridge.
 River bed entirely in white snow with just occasionally indication
 of ice. One adult and one juvenile bald eagle in trees ^{on N side river} 1/2
 distance from bridge to mouth of Delaware River, sitting 1/2 way up
 trees. No water in area. 25.6 hooping passed thru Perry and
 now at Delaware bridge. River in ice and snow and no water
 exposed, junco. 26.0 2 cardinals, 12 tree sparrows, 6 juncos.
 mourning dove. 26.3 3 mourning doves, 3 meadowlarks.
 27.6 highway 24, 3 meadowlarks. These meadowlarks are resting
 on bellies on pavement and will permit car to pass within 4 feet
 without leaving. 27.9 8 meadowlarks, 3 tree sparrows. 28.1 2
 meadowlarks, 28.5 4 trees sp. 28.8. 2 meadowlarks. 29.0
 Thompsonville. 29.3 cardinal. 29.7 now N. 29.9 2 bluejay.
 3 tree sparrows. 30.5 Overlook. Lake entirely sealed with ice
 covered with snow with some fracture system evident. No
 ducks, gulls, geese or any other birds in area. This is the
 first time this area has ^{not} been occupied by ducks & geese.
 31.2 W end dam now north. 31.8 yellow-shafted flicker,
 33.4 7 bobwhites. 33.8 drifts too deep for car and returning
 same way. 38.3 W end dam. Red-bellied woodpecker. Blue
 haze now limiting vision to 1/2 mile and just developing. 887.8 ft.
 approx height of water ^(ice) at outlet gate. Below spillway in ^{restricted area of} open
 water are 9 eeat, but no ducks. No evidence of ice heave along
 base of dam. At marina are 3 sailboats frozen in bay. ^{seven} ~~seven~~
 bobwhites in open field of snow. [Record from here on to Leecompton
 did not record so have entered information by recollection.] At
 Big Slough bridge found ice covered with snow in all directions and
 no ducks or waterbirds of any kind. Between here and Old Town
 Park near ^{E of} Ozawie observed approx. 5 crows, 1 sparrow hawk,
 4 meadowlarks, 3 bluejays, 3 groups sparrows (7-12-6), 20 juncos
 in groups of (1-8-4-7). At Old Town Park (lower one) no ducks
 and all in ice and snow, no ice heave. From top of upper

Old Town Park can see an open spot in lake filled with ducks and geese and 2 bald eagles just S of Paradise Point. Will check more closely at Paradise Point. Between Old Town Park and ^{4 corners.} Paradise

Point gates observed 3 crows, 1 sp. hawk, 4 meadowlarks, 3 bluejays tree sparrows in groups of (4-22-4), 250 lowlands in one flock, 18 juncos, 3 cardinals, 4 crows, 8 ^{Harris} sparrows, 1 bluebird, 3 meadowlarks and 26 tree sparrows.

From west slope of first hill on road across Paradise Point checked ducks & geese in open water: This is the only open water on the Perry Reservoir and has been made or rather maintained by the water fowl. The water is approx. 120' in diameter and 1/10 mile from shore.



It rests in the center of 5 recessional ponds with an original diameter of approx. 350 feet, now in ice except the final pond. 820 Canada



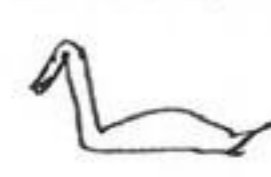
geese, and 3 snow geese, one of which was a bluegoose, and 3,000 mallards packed the pond. While watching the pond the immature

eagle left to N across the Paradise peninsula while the adult left to the S. The water was a greenish color. Gradually the ^{3/4 of} geese pulled themselves onto edge of ice and rested on bellies, 5 or 6 remained standing and alert or preening feathers. The mallards were similarly arranged. The snow geese remained together. 2 crows visited the area but remained no closer than 20' from the pond. While watching these ducks and geese between 11:00 AM & 1:00 P.M. only 8 other mallards arrived and no birds left the pond or flew from one part of pond to another. No other eagle or hawk activity in area except the original 2 eagles. A redtail circled peninsula to N.

On Paradise Point noted tracks of deer, coyote, rabbits and bobwhite 2 fox squirrels fed on buds ⁱⁿ trees. Left Paradise Point at 1:00 P.M. and returned to Leecompton where I corrected malfunction of recorder at point where lower river road leaves the main highway. 80.4 starting 81.3 meadowlark, 81.6 meadowlark, juncos. 83.7 fox sparrow, 84.5 7 juncos 85.6 sp. hawk. 86.7 meadowlark. 87.1 Conewey Lake View. 88.6 Farmer's turnpike and Kasold. Continued E to 69.9 where I took photo 770112-1 of the pollution from Kansas Power and Light Co. (first on reel). Arrived 402 Yorkshue at 090.6. The last few days have been extremely cold with temperatures -15°F ~~this~~ on Jan 11. All rivers and ponds are frozen.

Perry Reservoir, Jefferson Co., Kansas
~~my~~ ~~sum~~, ~~John~~ ~~in~~, ~~sum~~

Jan. 16, 1977

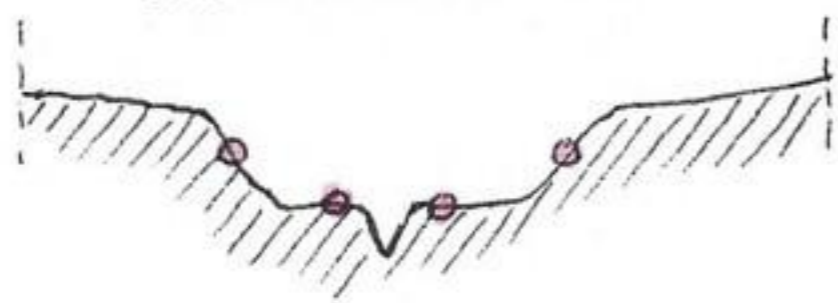
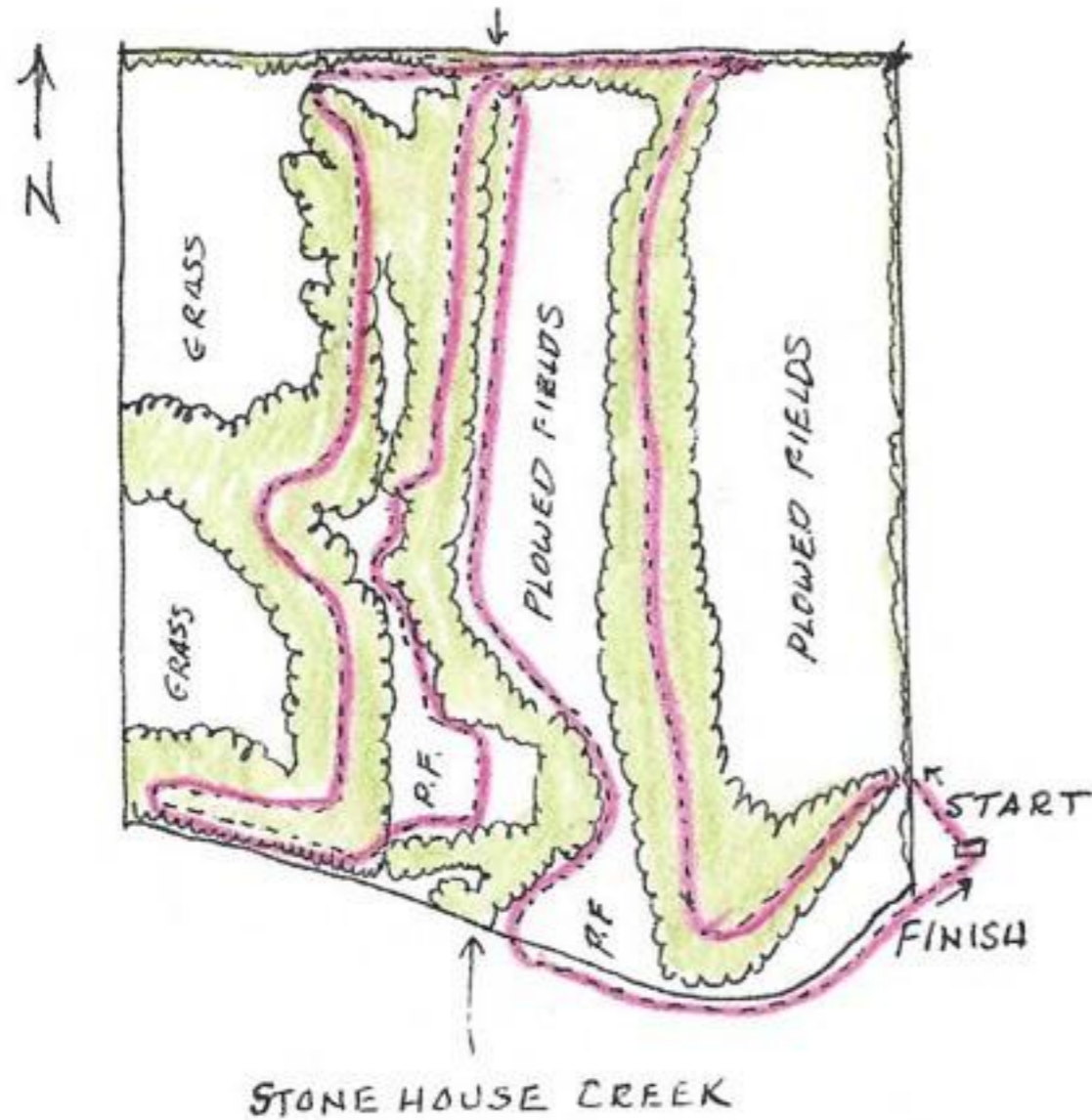
Left home (402 Yorkshire) at 66141.6 at 9:55 A.M. Sky Clear. Temp. -6°F
 42.0 meadowlark, 24 tree sparrows. 45.3 after a diversion back to
 Kasard and Peterson Rd. at 10:07 A.M. Wind from N 47.3 2 black-
 capped chickadees 47.8 Lake View Causeway. Lake still in snow
 Temp. now 0°F 51.4 base of hill on river road. 51.9 bluejay.
 52.0 single line (8' x 300') of open water, rest ice & covered with snow.
 53.0 meadowlark. 53.7 5 meadowlarks on sunny exposure of road
 cut, crow. There is definitely not the usual number of birds
 along this route. ⁵⁴ 45.1 bluejay. 54.4 2 meadowlarks and 1 slate-
 colored junco. 54.5 Leecompton road (County road 1029), junco.
 55.0 junco. 55.1 E end Leecompton bridge. Between bridge and
 Delaware River 150' of open steaming water 15' wide. No other open
 water and river valley covered with ice & ^{unbroken} snow. No bald eagles
 or any other waterfowl. 56.9 5 tree sparrows. 58.1 Delaware River at
 Perry. All in ice & covered with snow. 58.5 2 tree sparrows.
 58.7 marsh hawk, 20 meadowlarks along road, sparrow hawk.
 60.1 highway 24. 60.4 2 horn larks. 61.4 Thompsonville.
 61.9 bluejay, junco. 62.2 now N. 63.0 Overlook. Lake in solid
 ice and covered with uninterrupted field of snow. No ^{water} birds.
 64.4 outlet. water 30' open at exit, ramp area ice, then 710 mile
 open water in Delaware. 28 mallards in open water and most of
 them fishing for small minnows. Their necks were stretched upward
 and their heads bent down at an abrupt angle of 45° . 
 One caught a fish (could have been a dead one) and
 ate it as did other mallards. They take on the profile of a cast.
 With 60x scope there was absolutely no confusion of what was
 making-like a merganser! 65.5 cardinal, bluejay & 8 tree sparrows.
 below first curve after leaving administration area. 65.8 passing
 marina area. 3 saethboats still in ice. 66.0 3 bobwhites in open area.
 66.7 main road, cardinal, redtail. 67.5 2 juncos. 68.4 Big Slough
 bridge, 8 juncos in middle of road on bridge. 68.9 9 tree sparrows,
 12 juncos, 69.3 2 tree sparrows 70.0 Big Slough Park turnoff.
 2 juncos. 71.1 12 tree sparrows. 73.0 4 tree sparrows. There seems to be
 a definite increase in tree sparrows over last trip. This is also true
 of tree sparrows at home in Lawrence. Last week there were about
 10 English sparrows in comparison to the usual 30-50 and 15 ^{regular feeding} tree
 sparrows compared to just an occasional 1 or 2 prior to this same time
 last week. 74.3 redtail. 74.5 Little Slough Creek. 75.2 4 corners
 and continuing N to Paradise Point. 75.8 4 crows. 75.9 6
 juncos. 76.0 same group of redwings & cowbirds as previously

feeding on buds, 05.6 base ^{sell on river} valley road. temp. 0°F. Bluejay
 08.6 yellow-shafted flicker flying over open field 1/10 mi from
 forests or trees. 09.4 Lakeview Causeway bridge. now, left
 hand turn beyond to N thru fields and to end of Kasald Rd.
 Lotus in N end lake now stalks and seedhead and leaves
 and compressed flat to ground by winter snows, 10.2 photo
 Kansas Power & Light Co with smoke & steam, no 770216-1.
 10.7 meadowlark, 11.2 Kasald & Farmers Turnpike now left,
 11.4 photos 770216-2, 770216-3, 770216-4 ^{and 770216-5} of Kansas Power
 and Light Co., steam & smoke. 13.5 home. at 2:10 P.M.

James Labert Bee Ranch, SE quadrants of SW quarter Sec 29, R19E, T10S,
 Jefferson Co., Kansas

Jan 22, 1977

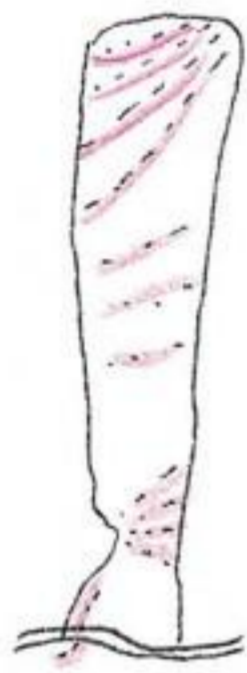
This property is 5 mi. S of Oskaloosa. The above are included



1/16 sq. mi x 3 acres. Made survey of
 mammals and birds here. Enroute
 from Lawrence observed 35 meadowlarks,
 and 2 mourning
 from Tepe Junction and junction of
 highway 59 1 mi S Oskaloosa. via county
 road N out of Midland. It is 18.2
 miles by this route from home to James'
 Ranch. It would be much shorter via
 highway 59 from Lawrence. Parked car
 at SE corner and traversed midway
 slopes of deciduous trees and edge of
 creek riparian community starting at
 12:10 A.M. Hairy woodpecker, Titmouse
 and black capped chickadee at driveway.
 Coyote tracks in snow. Entire area
 covered with a new layer of snow of last
 night. 12:16 rock pile. 2:18 wall-ledge
 Point. At this point a rabbit trail lead up and down the ridge,
 numerous rabbit tracks. At this point is a vent with steam
 issuing and free of snow, Coyote tracks. 12:22 wire fence
 woodpecker had excavated holes in a dead tree and literally
 covered the snow with chips. Coyote trail, cottontail tracks. 12:25
 first drainage at osage. Set of 3 Coyote tracks. 12:27 Old
 hackberry. 8 fox squirrel nests in immediate area, coyote
 tracks, coyote tracks. 12:30 Neotoma house, coyote tracks,
 deep hole into snow and used by fox squirrel, coyote

tracks, several large Neotoma nests, coyote track, coyote track, coyote track. 12:38 Orange orange brush coyote tracks. more fox squirrel tracks than rabbit tracks. coyote tracks, coyote tracks, coyote tracks. 12:4 large dirt mound. Coyote tracks all over mound area, and one excavation of mound. 12:44 upper ^{corner} NW field now w along fence line. Crossing fence line are: coyote, 2 coyotes, 1 coyote 2 coyotes. 12:47 corner NE middle field, black-capped chickadee, coyote, 3 squirrel tracks. 12:52 Cottonwood monarch (in gully), many rabbit and squirrel tracks at convergence of Stone Run & the lateral E creek, 2 coyote tracks, 4 rabbit tracks, 2 squirrel tracks. Rabbit tracks all along fence line to W for half way across field, then nothing beyond depth of snow 10". 3 sets of coyote tracks going up road to W. 12:58 cut cottonwood. Small bird tracks like junco & tree sparrow rare. Coyote only tracks. The truck license is 5763 DG 76. coyote track coyote track, first fox squirrel observed. coyote coyote, coyote, 1:06 wooden fence line. coyote, fox squirrel tracks. 1:12 juniper ridge, bluejay, set of small bird tracks. 1:45 dike overflow, coyote, coyote, ~~fox~~ fox sparrow, coyote, coyote, ~~fox~~ fox squirrel, coyote, squirrel, coyote (these entries refer to tracks). 1:23 trail ridge, coyote, coyote, bird tracks, coyote. 1:26 W fence line, coyote, coyote coyote. 1:30 bridge 2 coyotes, many rabbit tracks. Only one set of coyote tracks into weed field and this led to a trampled weed patch 21" in diameter as if the coyote had used this patch for protection + resting. Coyote tracks at top of deep erosional gully as well as in bottom of gully. squirrel tracks, squirrel tracks. 1:40 mouth W drainage. bird tracks, 4 sets of coyote tracks both on top + bottom of gulch. An ice below spring are six sets of coyote tracks, and 1 squirrel track. 1:48 at upper end of spring. There is a 3 1/2 foot drop of floor of gully to spring area. There are old tracks of coyotes that show thru the new cover of snow. 1:52 Walnut bridge. Only one set of coyote tracks ^{in gully} between here and Cottonwood monarch hitmouse. From NW corner middle field counted coyote tracks that I intercepted as I walked S along edge of field as new or old. The old were made before last snow.

old, old, old, old, old, old, Peromyscus, new, old, old, old, new, new, Peromyscus, two sets of fox squirrel tracks out into field for 20' then return, 8 bobwhite tracks, 6 squirrel tracks (sets) in same area as bobwhites and feeding on snow under the go snow, new, squirrel, skunk, new, squirrel, squirrel, one squirrel tunnel 1 1/2 feet thru snow to rocks placed for erosion control. 2:10 main group of g rocks for erosion control and concentrated actively here. new, 6 squirrel, skunk, 4 bobwhite, old, squirrel, old, squirrel 3 squirrel, new, squirrel, squirrel, 3 new. ~~to~~ 4 coyote new, 2 old. Between here and main road at bridge, 2 Peromyscus, 3 new. Bridge 2:15 P.M. The coyote tracks in middle field trended: Continued up road to car arriving at 2:25 P.M.



The census of this area revealed very few birds, many squirrels, fewer rabbits, many coyotes, a few Peromyscus and many woodrats. The area needs brush piles and down timber for rabbits, more grass areas along fence lines and open spaces for bird food and a water source for bobwhite and other animals requiring a good water source. It is surprising that there were no deer.

Ferry Reservoir, Jefferson Co., Kansas
 Jan 29, 1977

Left 12:00 P.M. from home at mileage 346.9. Temp. 30°F, overcast skies. wind from E. 50.1 Lake View causeway. A sparrow hawk had captured a *Segmodon hispidus* and it was all it could do to fly. It finally alighted in middle of road momentarily and then carried it again 20' before alighting. Tree sparrow in area: 50.9 18 tree sp. 51.7 downy. 53.4 12 tree sparrows. 53.7 bass hill on river road. 54.3 bluejay. Kaw still frozen solid and ^{river channel} filled with solid snow. Only a few long linear strips of open water about 2 feet wide. 54.6 tree sp. 55.4 Oakely Creek frozen & snow on top. 55.7 bluejay. 56.7 12 meadowlarks, 12 juncos, 8 tree sparrows and 10. Eng sparrow and bluejay at cattle feeding area. 56.7 Leecompton Rd. 57.4 E end Leecompton bridge. 3 adults and 1 imm bald eagle above open patch of water at the mouth of the Delaware River. They were in a large cottonwood tree by river. 30 American mergansers in open water below the tree. 60.4 Delaware River at Perry. All in ice and covered with snow, tree sp. 61.7 8 meadowlarks along edge of road. 61.4 4 meadowlarks along road. 62.4 highway 24. 62.6 4 horned larks, 2 meadowlarks 63.1 3 meadowlarks 63.7 Thompsonville, 65.1 redtail 66.1 sparrow hawk hovering above dam. 66.7 Outlet of dam. Water open to

bend but no ducks. Wind from S. 67.8 22 tree sp. 68.1
 entrance to marina, 4 crows in dead tree, 69.6 on main road,
 25 tree sparrows. 70.2 Ferguson Road. 71.1 15 tree sp, 1 bluejay.
 71.3 Big Slough Creek Bridge. One bluejay, cardinal and 8 juncos in
 middle of bridge 71.9 3 bluejay. 72.4 cardinal. 72.7 4 bobwhites
 and 15 tree sparrows. 73.4 20 juncos. 74.0 8 tree sparrow. 74.8
 Cardinal. 75.6 4 cardinals, 8 juncos, 11 tree sparrows. 76.0 40
 tree sparrows. 76.7 30 tree sp. 77.3 Little Slough budge. 9 juncos.
 77.6 6 meadowlarks. 78.1 four corners now N. 80.2 now W. 81.6
 sand point, pond of water maintained by geese and ducks still open and
 in same position as it has been when first observed. Fewer ducks +
 geese by 1/5, ^{or 600 Canada geese and 2400 mallards} Between 1:00 P.M. & 1:30 P.M. 30 mallards arrived from NE
 and alighted in pond. Redtail in field N of pond and 20 meadowlarks.
 Lake still in ice and snow. Drove down to gates of Paradise Point
 which were locked and then returned. 81.9 8 juncos. 82.0 15 juncos.
 82.2 5 tree sp. 87.5 Ozawie bridge. 88.0 Ozawie
 bridge on return toward ~~Osborne~~ ^{Albosa}, sp. hawk. 88.9 30 starling
 one flock. 91.9 Little Slough Creek bridge, ^{on highway 92} shrike, 4 crows.
 92.7 6 meadowlarks. 93.0 cardinal, 20 tree sparrows. 11 juncos.
 94.6 18 tree sparrows, 4 meadowlarks. 95.0 2 juncos. 96.6
~~Osborne~~ ^{Albosa}. 97.7 at junction 59 and 92. Pond ice to right 98.2
 20 tree sparrows, ⁴ crows. 99.6 sp. hawk. 00.2 shrike. 00.5
 4 meadowlarks, 21 tree sparrows. 00.9 30 tree sp. + 15 juncos. 01.5
 sp hawk with tree sparrow in claws, 30 tree sparrows. 02.0 15
 tree sparrows, 5 juncos 02.2 20 tree sparrow, bluejay. 02.4
 50 tree sp. 20 juncos. 02.7 now E to James Robert Bees Ranch. Left
 his place and at 4:00 P.M. returned home. 05.9 2 meadowlarks, sky
 still overcast. 06.7 2 gold finches, 4 tree sparrows. 07.2 8 tree
 sp. 08.2 redtail, redtail. 08.9 sp. hawk eating a meerkat on
 top of a ^{roadside} mail box. 11.0 meadowlark. Highest snow drifts on
 ridges along road which suggests that soils may also form as ridges
 from wind action. 12.3 30 horned larks. 12.6 meadowlark. 15.3
 6 meadowlark. ~~at 23.~~ End of census. 22.0 home at 402 Yorkline,
 Lawrence, Kansas.

Perry Reservoir, Jefferson Co., Kansas
 Feb. 2, 1977

made quick trip to Paradise Point to see if there had been any change
 in the pond of water that has been maintained by ducks and geese,
 thinking that with the extremely low temperature in the last few
 days that the pond in the ice may have frozen over. Arrived

at Sandy Point E of Paradise Point and with 60x telescope could see that the pond was still open but reduced 1/4 since last viewed (see Jan 29, 1977). The population of ducks and geese has been reduced by 1/2 (~~ca~~ 375 Canada geese and 1500 mallards). Entire Perry Reservoir except for this pond in the ice, covered with ice and ^{white} snow on top. The lake has not changed since Jan 12, 1977 at least. The open water has been reduced from 150' in diameter to approx. 120' in diameter, all geese and ducks swimming in water, none on ice bordering pond.

Helen Spencer Foresman Spencer Museum of Art, Univ. of Kansas,
Lawrence, Kansas

Feb. 3, 1977

770203-1

Photo of museum in progress of construction. Part of S + E wall not finished with rock siding and same area of roof above.

Museum Natural History, Univ. Kansas, Lawrence Kansas

Feb. 3, 1977

Photo 770203-2, 770203-3 and 770203-4 of an elk head shot by Buffalo Bill Cody in 1866 and now being prepared by Tom Soearingen of the Mus. Nat. Hist. here. The skin of head was beyond repair so he took it off and replaced with a skin from a Yellowstone animal. The newspaper was in the eye sockets and mouth was dated 1866. Buffalo Bill lived in The Leavenworth area and his elk head was given to the Historical Society there. Hair should be saved for analysis with by the scanning scope and for spectrophotometric analysis for conditions of animal in 1866.

Perry Reservoir, Jefferson Co., Kansas

Feb. 5, 1977

Left 10:00 A.M. 66829.6 mileage at 402 Yorkshire, Lawrence, Kansas. Wind from NE, Temp. 24°F. 30.0 meadowlark. sky clear, blue. Snow covering all ground except some plowed fields and certain south exposures. 32.5 3 meadowlarks, fox squirrel, 33.0 Lake View Causeway, water in ice and covered with snow. 33.9 horned lark. 35.0 3 meadowlarks, one crow. 36.5 base of hill, bluejay. River same as last 2 weeks. 37.9 bluejay. 37.6 cardinal. 38.2 Oakley Cr. frozen and snow on top. 3 meadowlarks. 38.5 gray squirrel. 39.0 bluejay. 39.5 LeCompton road. 42.2 E. end LeCompton bridge. 5
A adult bald eagles, 6 immatures and 20 American mergansers all at mouth of Delaware River. One of the subadults has considerable white on head, tail and on the body. 10:30 A.M. 45.1 Delaware River open under bridge only, all else ice covered with snow.

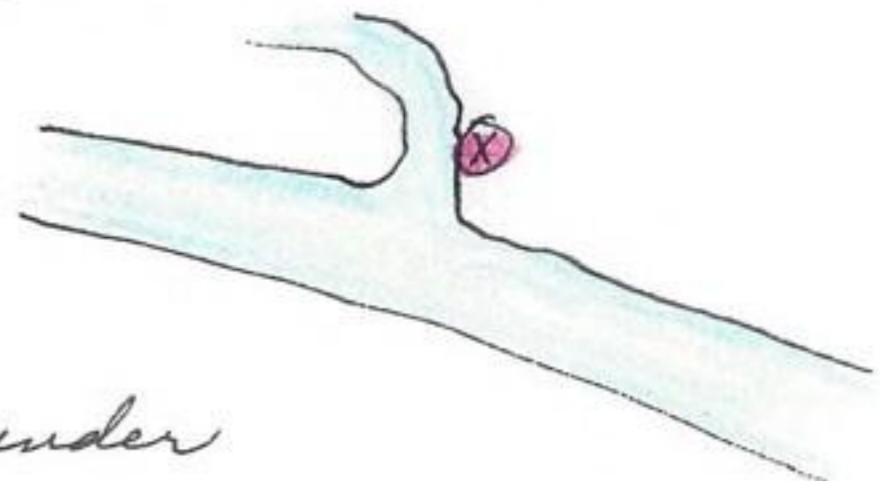
47.1 highway 24. 48.4 Thompsonville, juncos. 49.2 now N. 49.6
 3 tree sparrow. 50.0 Overlook, 2 fox squirrels. Lake now
 shows isolated saturated spot of frozen ice and along a straight
 line about 20 across lake. No open water. These clear spots are
 randomly distributed. no linear fracture lines on lake. 50.7
 W end of dam, now north. ~~51.0~~^{51.0} fox squirrel, juncos. 51.4 juncos.
 5 crows. 51.8 fox squirrel. Bypassing peninsula road.
 52.2 yellow-shafted flicker. 52.3 six white tailed deer at top
 of cut field at edge ~~in~~ weeds between forest and field. They
 moved into forest. 53.1 fox sq. 53.2 fox sq. 53.5 road at
 head of bog area. 54.0 gates. snow graded off road. Numerous
 trails leading N onto lake, either deer or coyote. Redtail. 54.8
 10 robins. 54.9 6 quail. 55.3 main rd. 56.2 robin, 56.6 fox
 sq 20 feet from trees on snow in field. 57.0 Rock Creek bridge.
 Ice covered with snow and no leads or open water. Some trails
 out on snow on lake. Photo (770205-1) from causeway to S over
 lake. 57.6 cardinal, 4 robins. 58.2 mockingbird. 59.1 bluejay.
 59.4 redtail. 60.1 2 cardinal, 7 juncos, 11 tree sparrows. 61.8
 redtail. 63.7 main road now E. 65.9 Ozawie bridge.
 67.8 4 corners now N. 69.0 juncos. 70.0 now W. From
 sandy point observed open water S of paradise Point (usual area
 maintained by waterfall) and estimated 1000 Canada geese and
 3000 mallards. From this point took 2 photos (770205-2) and
 (770205-3) of this open water with telephoto, ^{and then returned E.} 73.4 redtail. 74.0
 2 cardinals, seven juncos. Little Slough Creek in ice covered with
 snow, redtail. 77.4 robin. 77.5 5 crows. 79.1 bluejay.
 80.6 fox sq., bluejay & 8 juncos, redtail. 81.4 3 bluejays.
 81.7 Big Slough Creek. 82.6 fox sq. rd hell and yellow-shafted
 flicker. 83.5 redtail, 3 meadowlarks. 84.0 SE corner of Perry
 area. Now to outlet at S side of dam and return. 84.5 redtail
 85.5 outlet and open water to head of river 2 greenwing teal and 3
 crows. 87.1 back to SE corner and now S. at 12:50 AM. 87.6
 meadowlark. 92.5 E end LeCompton bridge. From here 3
 photos. no (770205-4) up Kaw River to mouth of Delaware River where
 eagles rest in cottonwood trees and fish. 770205-5 of trees used
 by eagles and (770205-6) down stream of Kaw River at 1:10 P.M.
 94.6 redtail. 98.2 2 crows. 00.4 3 juncos. 02.1 robin. 03.7
 home at 407 Yorkshire Dr, Lawrence, Kansas.

Kaw River, mouth Delaware River, Douglas Co., Kansas

Feb. 6, 1977

Checked bald eagles in the LeCompton area on the Kaw River.

Left home with Temp 21°F and stiff breeze. 12.4 robin, 12.8 Karalid and Farmers Turnpike. 19.1 18 tree sparrows, cardinal, 19.3 19 tree sparrows, 8 juncos. 10:50 From E end of Leecompton bridge can see 4 adult and 6 immature bald eagles resting in cottonwood tree on E side of mouth of Delaware River. Returned to Leecompton and left car at tracks (RR) north on first street east of the main street. ^{Photo (770206-1) from here shooting NW to mouth Delaware River} From here walked along edge of Kaw River W. among riparian trees to a point S of the mouth of the Delaware River where upon arrival a car (green with yellow line on side) drove up to the trees where the eagles were roosting (resting) and after getting out of their car proceeded to examine 10 ~~beaver~~ beaver sets and reset 3 more from 11:20 to 3:00 P.M., taking 2 beavers. Needless to say the eagles left in both to W and 2 to the east, and for the next 20 minutes were out of sight. At 11:25 can see one adult to W and 1 imm to E swirling above the river (300' high), no other eagles visible. At 2:13 an immature arrived and alighted in cottonwood on E side of mouth of Delaware River



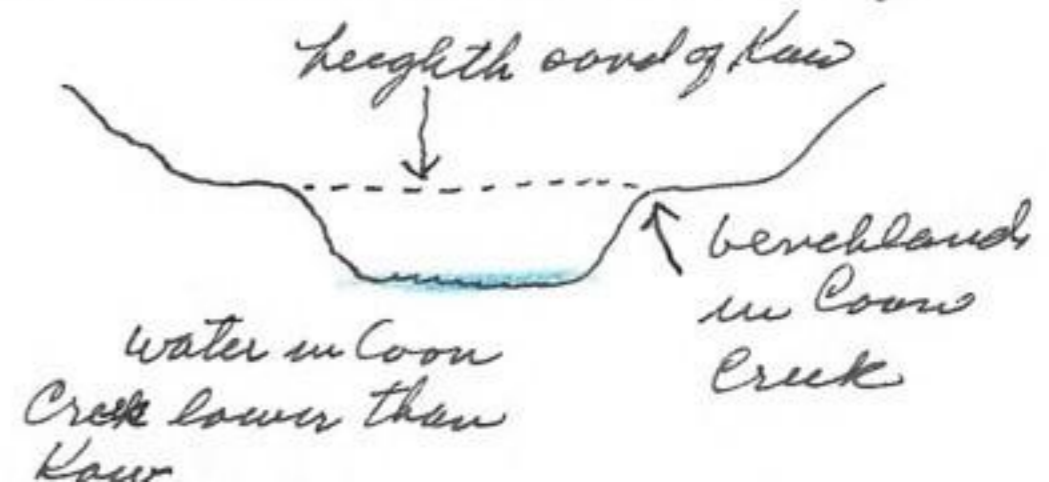
2:18 the immature above left and flew up river but at 2:21 returned and alighted in same tree. This bird had extra large areas of white under elbows of wing.



2:35 an adult and 2 immature in cottonwood trees on N side along river, at approx 4.0 mile up river.

tail blackish above but whitish below.

3:15 one adult arrived and alighted in same tree as the immature above. It is evident that eagles leave their resting and hunting areas when disturbed by man in their areas and that it takes some time for them to return after the disturbance has left. This area should be posted against trespass or hunting or annoyances by boat or plane. The 23 American mergansers also left and did not return. The interrelationship between beaver, mergansers and bald eagles is obligatory; the beaver & mergansers helping to keep water open for the eagles to fish. A redtail hunted in the same area at the mouth of Coon Creek which flows into the Kaw SW from the Delaware on S side of Kaw is now lower than the sands of the Kaw River. A bench on the slope of the Coon Creek matches the height of the present sands of the Kaw thus;



The wind on top of the S bank of the Kaw is greater than in the River Valley proper and probably due to increase pressure of wind as it crosses upper bank which would be lower because of increased pressure.

Lawrence, Kansas
402 Yorkshire, Douglas Co., Kansas
 Feb. 8, 1977

Noticeable departure of tree sparrows (group averaging 15 birds) from bird feeder at home. These birds have been in rather constant numbers since at least Jan 14, 1977 to Feb. 8, 1977 and their disappearance has been correlated with the disappearance of snow from the ground. This year the tree sparrows were the dominant bird on feeder. It is interesting to note that 40-50 English sparrows dominated the feeder from early winter to December 27. (between then and Jan 14 on trip to W & S but on return they were gone and only 5 or 6 were associated with the tree sparrows. The usual number of starling, chickadees and downy woodpeckers were here this winter as usual in previous years.

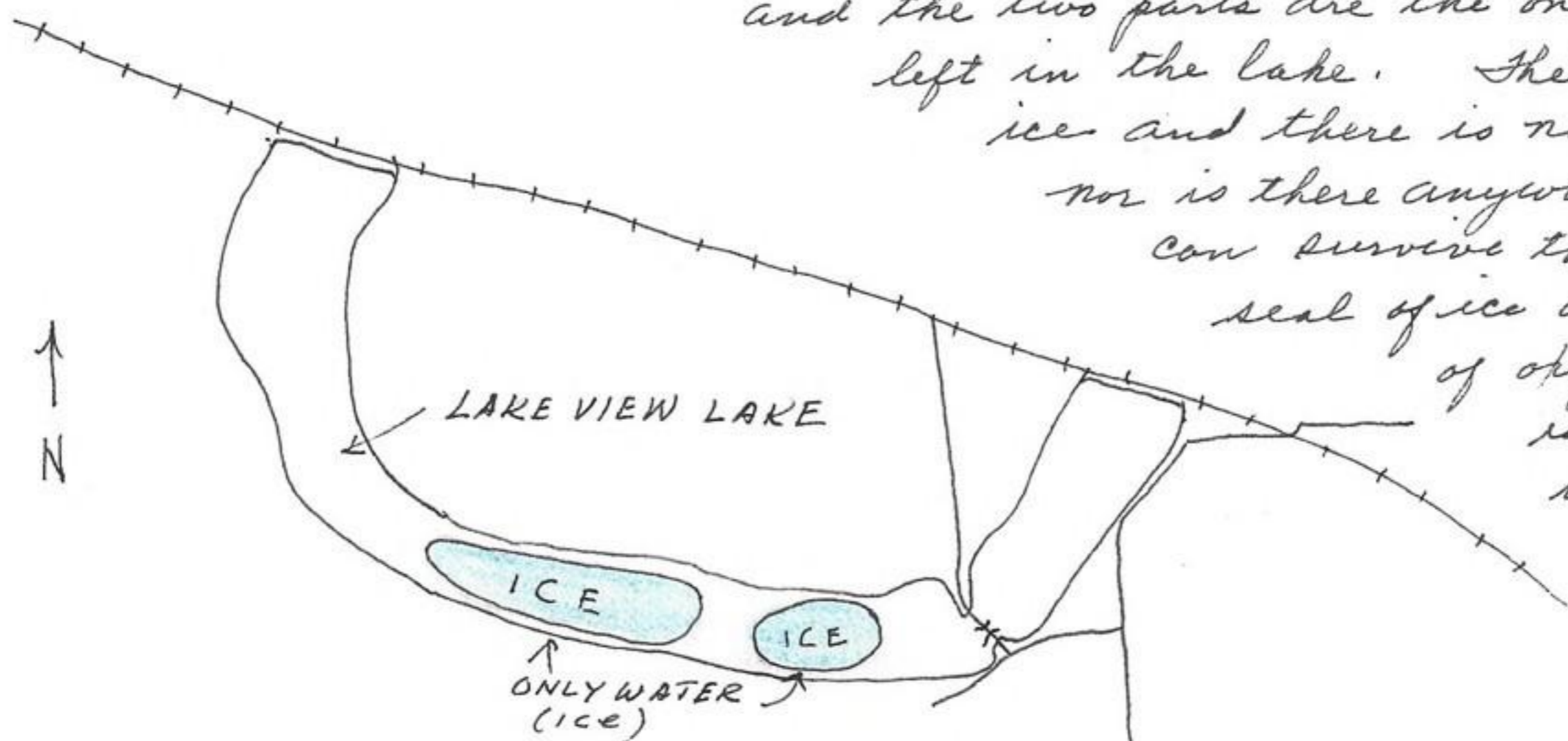
Lawrence, Douglas Co., Kansas
 Feb. 9, 1977

Robert Clark observed an adult bald eagle circling 400' high at 23rd and Kasold at 1:00 P.M.

mouth Delaware River, Jefferson Co., Kansas
 Feb. 12, 1977

made trip out to LeCompton to check on bald eagles at mouth of Delaware River. Left home at 402 Yorkshire at 677016.3 at 10:05 A.M., sky clear, temp 42°F. Wind from north blowing smoke from powerplant in a horizontal direction. 16.4 4 meadowlarks, 19.5 Lake View Causeway at bridge. The lake is now segmented

and the two parts are the only water left in the lake. The water is ice and there is no open water nor is there anyway that fish can survive this complete seal of ice and lack of oxygen. There is some standing water in the nearby fields

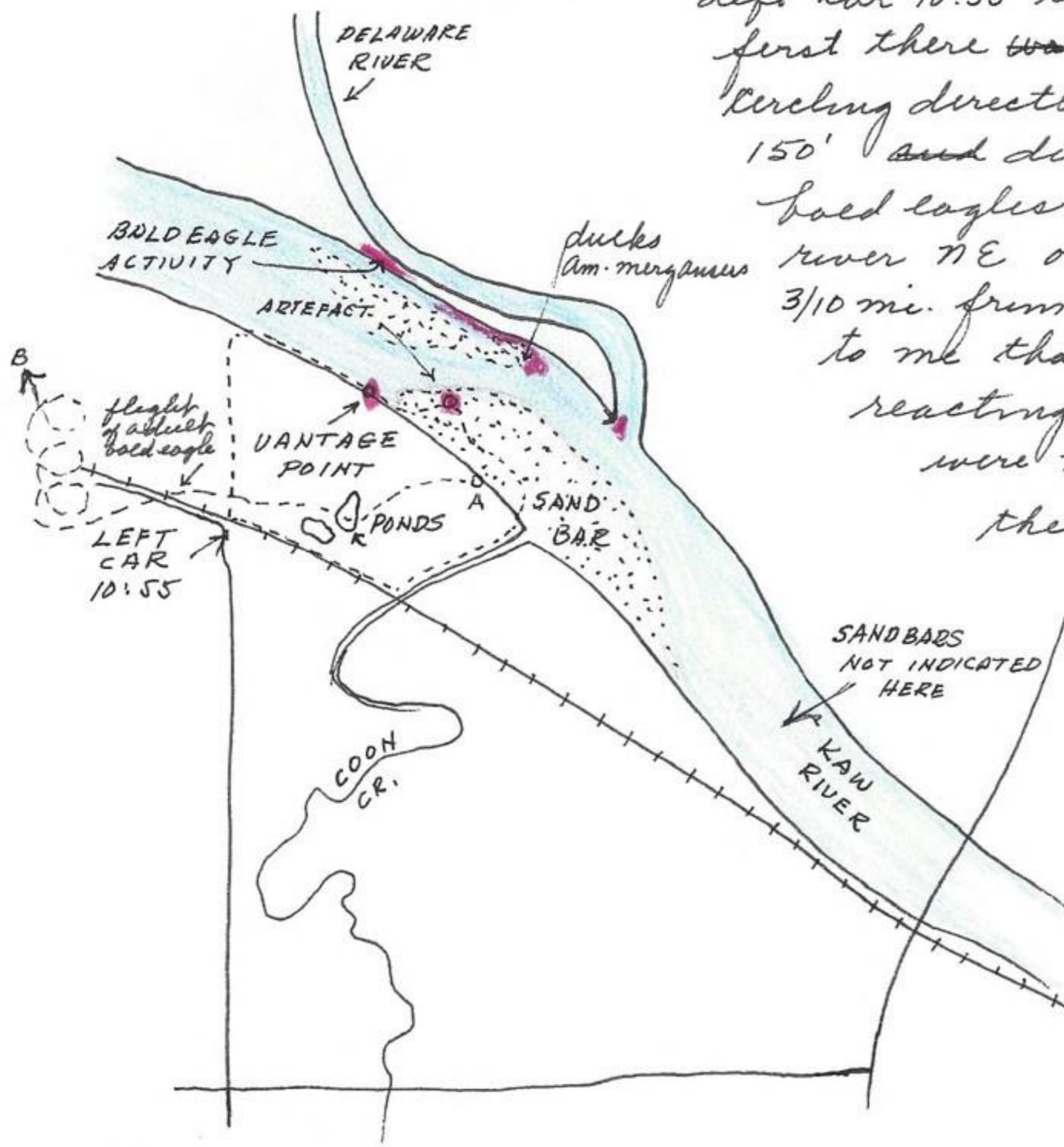


21.7 opossum walking in ^{open} field which is some distance from wooded areas (2/10 mile). 4 horned larks. 22.0 sparrow hawk left line and flew W along road at side of car to 22.6 or 1/2 mile at 20 miles per hour. 2:31 base hill at small bridge. 23.6 5 crows on sands at edge of river. River free of ice and river channel 80% in sandbars. North bank of river clear of snow, several beaver holes in bank at ^{present} water line. 24.0 red-bellied woodpecker 25.4 juncos. 25.6 juncos. 26.0 juncos 26.1 Leempton Road.

Left car 10:55 retrail. As I crossed the first there ~~was~~ were 3 adult eagles circling directly above the river perhaps 150' and directly N and 3 immature bald eagles circling 150' above the river NE or down river about 3/10 mi. from adults. It appeared to me that these eagles were reacting to my presence and were moving up and down the river in the adjustment.

By the time I reached the river and took up my position at vantage point. They were out of the immediate area but farther up and down the river.

50 mallards flew up river as



I approached the edge of the river. From my position at the vantage point at 11:15 made the following observations. Up to 11:30 the eagle could be seen up & down the river and then disappeared. Crows remained (19) on N side of river in cottonwood trees and on sand along edge of water. ^{Some crows} They were ~~changing~~ changing position from N to S side and vice versa throughout the period of my observation. Could see 8 crows molesting immature eagle in flight. 4 female goldeneye in river 150' of vantage point. 2 redtails using same area as bald eagles. During the initial dispersal of eagles, the crows molested them continuously. 30 mallards, 29 am. merganser at point indicated. 13 am. merganser & 30 mallards at mouth of Delaware River. a Kingfisher dove several times into water at observation point. 11:35 2 grackles flew up river at treetops on N side river. Wind now from NW.

11:40 8 mallards (pairs) left from group on N side, circled 6 times then left upstream. 3 crows arrived from S side and now all crows on sands at edge of water in area of ducks and mergansers. 18 Am. mergansers left water, ~~circled~~ to 200' then up river. Crows always calling. 11:51 crows still in area ^{where} of mergansers were feeding before they left. Floating ice in river rare, but ice on S side out 6-10 feet and solidly tied into bank.

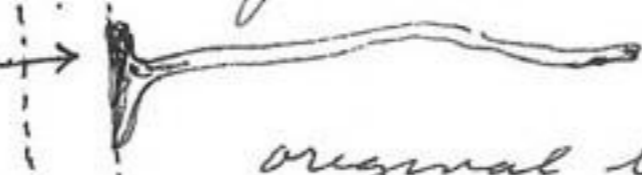
11:53 now only a single common merganser in water upstream.

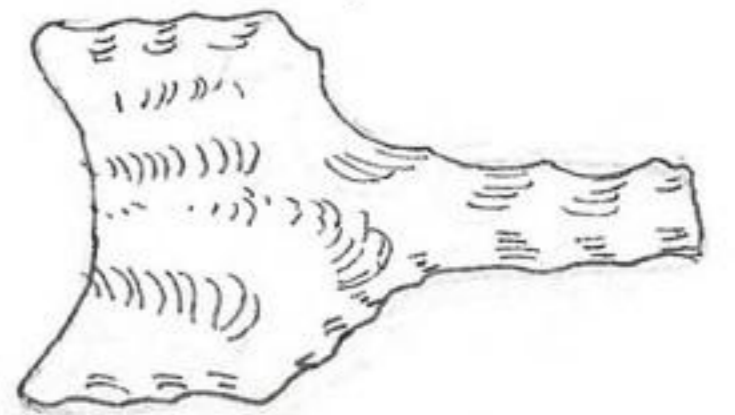
11:56 An immature eagle flew over head and alighted in top of cottonwood tree on N side of river directly across from my position. It was not challenged by the crows. 12:00 12 mallards arrived from the E. 15 crows left down stream for 2/10 mi and alighted again on sandbar. 12:05 single common goldeneye flew up river. 12:07 80 mallards and 2 pintails left and flew up over trees into Delaware River. Adult & immature bald eagle circling above. 12:09 2 adult bald eagles chasing each other in area of Delaware River to N and their speed ^{with the wind} among the trees and over the water is unbelievable. Wind increasing to 6" waves. Mallard activity increasing with arrival from down stream.

12:23 an immature bald eagle ~~alighted~~ which alighted in the top of a cottonwood across the river at 11:56 now moved 200' up stream to another cottonwood tree. Photo (770212-1) of this eagle.

12:25 single Am. merganser approached one group of merganser but circled and then went to another group. 12:33 2 adult eagles circling above river when 3 ♂ and 3 ♀ mallards alighted in middle of river. One of the ^{adult} eagles dove at the mallards ~~no sooner~~ ^{as} as they alighted but the mallards escaped without attack. Photo (770212-2) of this eagle. Another ^{immature} ~~adult~~ circling at mouth of Delaware River. In tree across river are 1 adult and 1 immature. The adult left and returned with a fish from Delaware just N beyond. Photo (770212-4) of the ^{in tree} immature and adult golden eagle eating the fish from top of tree. At this moment can see 3 adult and 4 immature bald eagles in area. 12:50 some white caps from wind. Single ♂ Am. merganser flew up river. 1 adult ^{and} 2 juveniles circling mouth Delaware River. 12:55 250 mallards and 8 Canadian geese arrived from E. 1:00 5 mallards from down river.

1:03 sand blowing in air for first time. Eagles not affected by high wind (perching eagles). 1:07 A ⁽⁷⁷⁰²¹²⁻⁵⁾ second immature bald eagle ^(which flew up river) arrived from the E and displaced the adult eagle in top of tree across the river leaving 2 immatures in the tree. 10 Am mergansers left. 1:08 6 mergansers left and crossed separation between the Kaw & Delaware and flew N. 1:15 the immature

that displaced the adult bald eagle was sitting on the limb that the adult ~~was~~ ^{had been} sitting on and all of a sudden the limb broke and the ~~juvenile~~ ^{bald} eagle dropped 3 or 4 feet and with the limb still in his talons flew out and around the tree and as it approached the tree the second immature left the tree and followed the other immature in close pursuit. The first eagle with the stick dropped down below the tree level and when it returned in sight the stick was gone. Both birds returned to the top of the same tree. The stick was about $1\frac{1}{2}$ inches in diameter and 3 feet long with the break at the contact with the main branch . The immature bald eagle that broke the original limb now wilfully broke another small dead twig from the outer end of the upper branches and started to fly out around the tree but windward to the other immature eagle backed to within 10 feet of the second immature who then gave close pursuit in a circle around the tree and then left. The original immature returned to top of tree and wilfully broke off a third small twig which it hit while still in flight. It carried this twig (approx. $1\frac{1}{2}$ feet in length and $\frac{1}{2}$ inch wide) first in its talons, then transferred it to its bill, then back to feet and then again to bill and after circling once returned to the top of the tree and while still carrying the twig in its bill transferred it twice from bill to feet and then dropped it. It adjusted its position on the limb and broke off another twig which it carried in flight for half a circle of the tree and then on return to the tree top passed by a large twig and grabbed it as if it were picking up a fish from the water but the twig did not break and the eagle stopped abruptly in an almost perpendicular position with head down and tail up. This abrupt stop did not break twig but by flapping its wings to gain normal position broke the twig and it sailed on again to circle the tree. One more twig was broken on a tree which made the sixth one which it carried and then dropped. All passes at twigs was into the wind. This activity lasted from 1:15 to 1:22 P.M. Left at 1:25 and searched sandbars for artefacts. Collect an awl from head of main sandbar just below observation point and is no. 770212-10. It was approx. 10 feet inland from the edge of the water in a line of exposed small stones of former shoal area now exposed.



From 2:30 to 2:45 an adult bald eagle (^{on map} A to B) flew and then sailed or circled over edge of river valley, at 2:45 while I passed by ponds the ducks and ^{52 Canada} geese left to NE whereas when the eagle flew 200' overhead it did not displace the waterbirds. Two green-wing teal remained in the pond. Returned to car and then to home.

Perry Reservoir, Jefferson Co., Kansas

Feb. 13, 1977


mileage 67047.4, left 9:55 A.M. Clear sky, temp 42°F. 47.7 redtail top telephone post. 47.9 cardinal. 48.6 redtail on top of pole and remained while car passed by left when I stopped beyond. 48.9 cottontail rd kill. 49.2 meadowlark. 50.4 shrike. 5 meadowlarks. 50.8 Lake View causeway and same condition as yesterday. 52.6 crow. 54.4 base of hill at bridge. Considerable green masses on sidehill to left. 54.9 adult bald eagle 10 feet down from top of tree (cottonwood) on N side of river bordering river. water open below eagle and no ducks or mergansers. This eagle is directly N from old chimney on bench to left of road. 55.2 adult bald eagle caught fish and immature gave chase and adult tried to land in tree but was displaced by young. The adult flew down river and alighted by the immature observed at (54.9). 56.7 crow. 57.1 cardinal. 57.5 Leecompton Road, Took sideroad to E to top of hill to check for a vantage point to observe eagles but limited as to where I could drive. The highest knoll to N may give good view of river along mouth of Delaware River. I have checked Leecompton and there is no place. The best is on bridge but here the bridge vibrates when cars pass and even so it is illegal. 58.6 E end Leecompton bridge. Can see one adult in top cottonwood on N side river just W of power lines, one adult in top cottonwood to right (or E) of mouth of Delaware River, one adult in cottonwood on W side mouth Delaware. ⁵⁰⁰ mallards and pintails and ²³ mergansers (may be others), ⁵ goldeneyes, ² green-wing teal from first eagle noted to 2/10 mile up river from mouth of Delaware. 8 crows moving up and down river and associated with the ducks. So far observed 5 adult + 2 immatures bald eagles today 61.6 Delaware bridge at Perry. Open below R.R. bridge + 50' below but solid ice above. 63.5 highway 24. 64.8 Thompsonville. 2 cardinals, 65.6 now N. sp. hawk. 2 marsh hawks circling 250' above oak valley drainage to left, 2 fox squirrels. 66.4 Overlook. Lake still in solid ice, no fracture systems, no ice thrusts along shore, no wild-fowl. 11:00 A.M.


photo (770213-1) of lake from Overlook showing condition of ice, and represents the condition of the lake throughout its length. 67.1 W end dam now N. 67.1 redtail, bluejay. 67.4 yellow-shafted flicker, red-headed woodpecker, juncos. no water on surface of lake. 67.9 convergence 2 roads. From this point a ridge of snow on lake to E end of dam. 68.1 redtail. 68.2 43 Crows feeding on ice in bay to right. This is the bay that has the old County road cement bridge. Crows left ice and flew W into trees on top of hill. 68.4 now right to peninsula. 68.9 E end peninsula, can see ice thrust on NW end Gap Point, no ice heave in this area. 69.3 back to main rd. Crows now moving W over hill and calling continuously 69.4 2 redtails in same tree to W and 18 crows in bay to right. Crows calling from all sides and they represent a dispersed group. 70.5 higher snow piles on road and thru this area of old drifted snow is accumulation along side of road to 1 foot high. from graders. Snow on good N exposures in forests, most bare. 70.9 up end bay on rd. 71.1 redtail to left in tree. 71.6 Crow. 72.7 highway no. 237, redtail. 74.4 Luck Creek bridge; all lake in ice, no open water at 11:25 A.M. 77.0 meadowlark. 78.3 2 crows. 78.7 shrike. ponds frozen, bird life rare today and have not seen a single tree sparrow or junco. Snow off field and only in good N exposures. 81.1 main road now E. to Ozawkie, 83.3 Ozawkie bridge, one windblown streak from old submerged highway to SE on other side of lake. All in ice. 85.2 4 corners now N. 85.4 soils saturated and soils to left on plowed slope are greenish near top, grayish in middle + red below. They stand out when wet, Cardinal. 86.4 redtail on post. 86.9 Cardinal. 87.3 now W. 88.0 redtail. 88.7 sandy pt, white phase redtail, waterfowl hole open with ducks and geese and will check farther down peninsula. Slightly increased in size. The lake is a salt mass of ice that is sitting on a ^{bordering} landscape free of snow. Snow mainly on a few isolated N exposures and on N side of fence rows. 88.9 gates to Paradise Point. 89.1 redtail. 89.6 from road vantage point counted 60 Canada geese, 184 Am. mergansers, 120 mallards, 7 ring-billed gulls which are the first observed this winter. The geese were resting on the ice, ^{2/3} most of the mallard on ice and all the mergansers in the water. Continued to 90.2 at old camp site (SW most SW camp site.) and from edge of ridge among trees took the following photographs.

(770213-2) open pond in ice of ducks and geese. Time 12:40

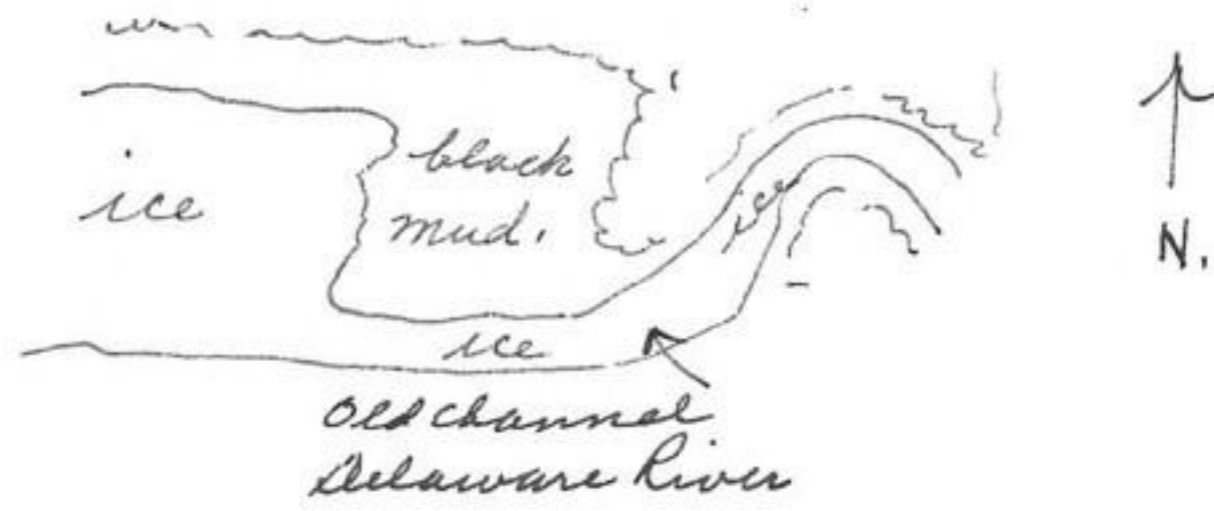
(770213-3) " " " " " " " " " " " "

(770213-4) " " " " " " " " " " " "

From sandy point the pond looks like this  Actually the pond is round.

From old camp site the pond looks like so 

Continued W and at 90.8 west end of peninsula on main road now going E. 91.0 3 crows in field. Ice in by N of peninsula up to a point at highest point on peninsula (cross roads) and then a dark black mud E for approx 1/10 mi. E of line of the Delaware River which is confined to its old river bed. The supersaturated soils made them black. 91.8 Now on main road after having made side trip to shelter.



92.4 same redtail.

92.7 Paradise Park gates

at 12:50. In last hour

clouds have moved in

from the west. 93.8 redtail.

94.6 redtail. 95.9 redtail.

96.4 4 corners, now S. 97.1 Little Slough Creek. with 50% in ice and 50% in flowing water. 99.4 sp. hawk hovering in road in middle indicating that they must view their prey 6-8 feet ahead of them. 00.8 bluejay.

03.1 Big Slough Creek bridge, no water open, even along shore. N exposure of hills with patchy deposits of snow among the timber on slope.

05.3 SE corner of Reservoir area at 1:10 P.M. 06.2 3 crows. 08.0

highway 24. 09.0 sp. hawk. 10.9 E end Leempton Bridge. 11.8 now E of upland road (not river road but next road S.) 12.4 2 bluejays.

13.1 fox squirrel high in cottonwood tree feeding on buds. 13.7 4 bluejays, 2 titmice, 1 junco. 13.5 bridge at old house. 14.3 2 juncos, yellow-shafted flicker. 14.8 9 crows top tree, 2 flying beyond.

15.2 now E at road junction. 15.7 now N. 16.5 2 crows. 16.7 205 robin in a loose flock that passed thru and over trees in a 4 minute time interval. 17.4 main road now E. 19.0 meadowlark.

21.0 Lake View causeway. Wind from SSW. most of sky in high clouds. Home at 204 Yorkshire at 2:00 P.M.

Peterson Pond, 1 3/10 mi W, 1 2/10 mi N Lawrence (P.O. new one), Douglas Co., Kansas.

Feb. 16, 1977

Set 25 museum specials along N side of pond among grasses and weeds and 50 NW of along fence row bordering the turnpike. Water open. Set at 1/2 hour before sunset and on return at 10 min after sundown did not have any mammals in the traps. Ground frozen below the 2 to 4 inch level especially in damp soils.

Feb. 17, 1977

From first 25 traps, ^{this A.M. (8:00 A.M.)} along N side of pond caught: (temp 30°F, water frozen)

770217-1	<i>Microtus ochrogaster</i>	135-30-20-10-38gms ♂ testes 8mm
770217-2	"	161-36-19-12-54gms ♂ testes 12mm
770217-3	"	145-32-19-12-36gms ♀ ut enlarged
770217-4	"	129-30-18-10-24gms ♀ ut. normal
770217-5	"	150-33-20-11-38gms ♂ testes 10mm
770217-6	"	147-31-20-11-40gms ♂ (testis 6mm)
770217-7	<i>Peromyscus leucopus</i>	170-74-21-15-24gms ♂ testes 13mm
770217-8	<i>Reithrodontomys megalotis</i>	138-73-17.5-11-10gms ♂ testes 5mm ut normal
770217-9	"	132-70-17-12-10gms ♀

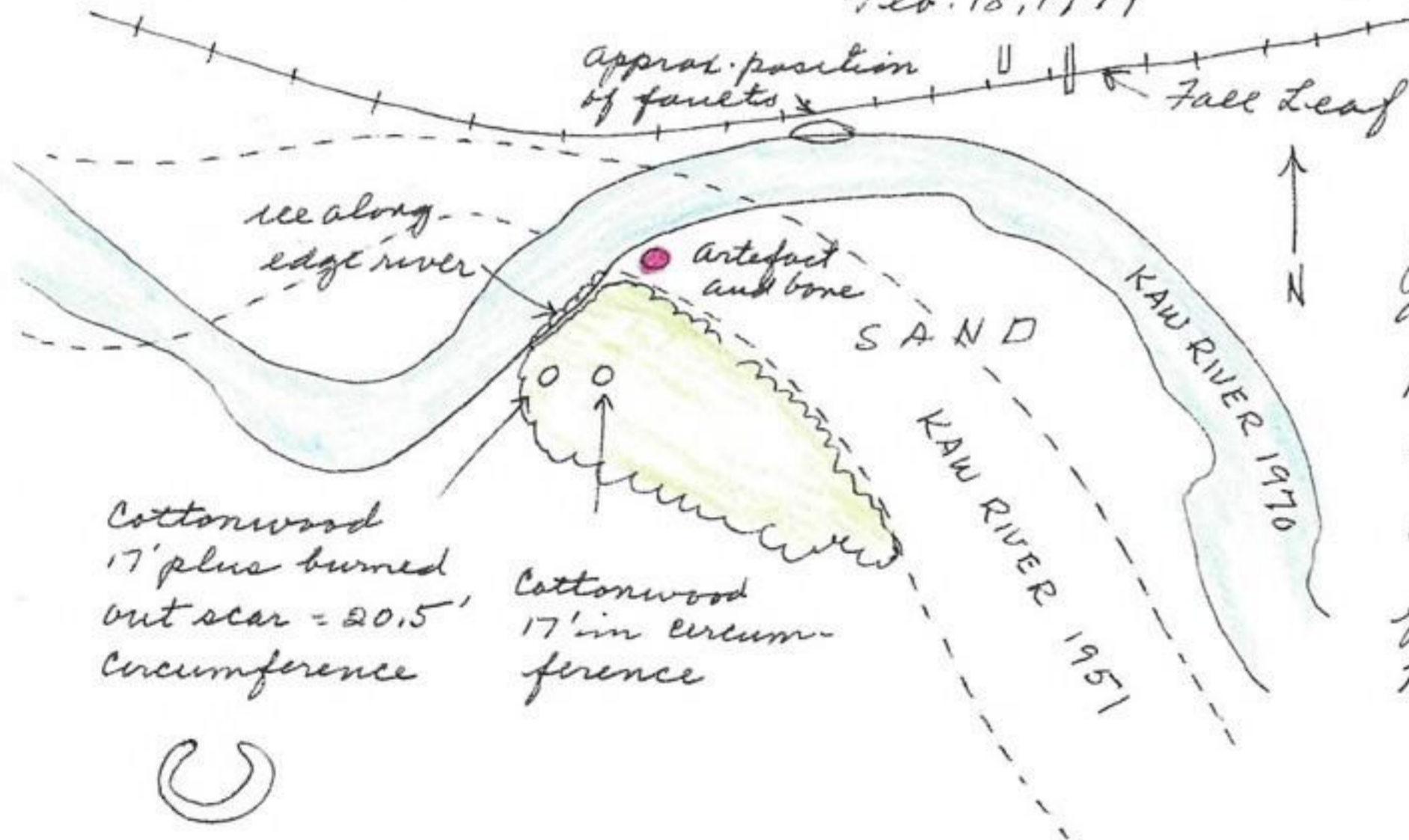
From second set of traps (25) caught:

770217-10	<i>Synaptomys cooperi</i>	138-20-19-10-44gms ♀ ut normal
770217-11	"	144-21-20-10-46gms ♂ testes 6mm
770217-12	"	135- 135-20-20-10-40gms ♀ ut normal
770217-13	<i>Microtus ochrogaster</i>	143-29-19-10-42gms ♀ ut normal
770217-14	"	145-32-18-10-37gms ♀ ut enlarged
770217-15	"	147-30-19-10-42gms ♀ testes 13mm (2x1 emb 26mm)
770217-16	"	165-37-20-12-48gms ♂ testes 13mm
770217-17	"	135-31-18-11-31gms ♀ ut enlarged
770217-18	<i>Peromyscus maniculatus</i>	140-58-20-13-18gms ♂ testes 9mm abdominal

The *Synaptomys* were caught along a fence line with good cover of grass but at this time of year the protective grasses are heavily matted. Many runways that looked good did not yield. Some other trails had sprung traps as if *Sigmodon* were in the area and of all years this extremely cold winter should have killed the small *Sigmodon* leaving the large one to survive. Large size *Microtus* over medium or small size should be the norm this year.

SW Fall Leaf, 2300 feet W 800' S of NE corner Sec 31, T12S, R21E, ^{Douglas Co.,} Leavenworth Co., Kansas. (the red dot is the above locality).

Feb. 18, 1977

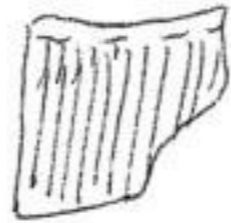


Checked river sand and gravel bars for Indian artifacts and bones of Pleistocene mammals. Red circle is where pot sherd and bones were collected. Although checked down stream did not find artifacts but other bones. Motor cyclists and four wheel.



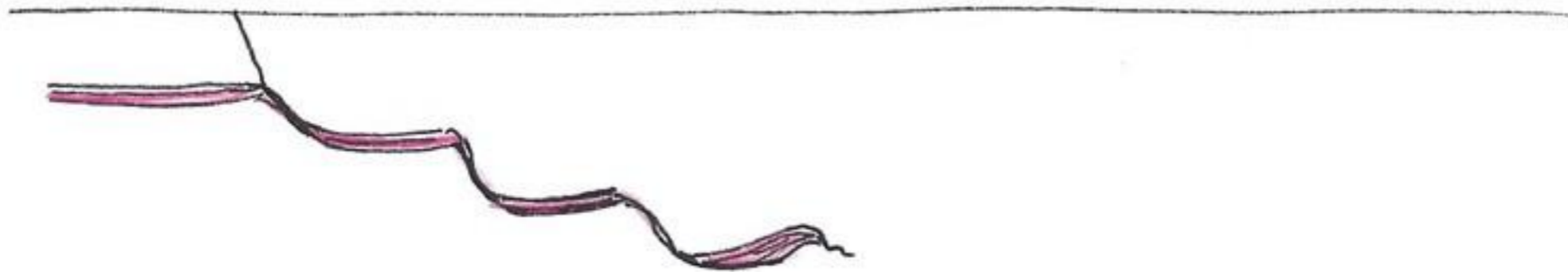
cars have murdered this area both on the river sands in w the trees to S. Artifacts and bones collected are:

- 770218-1 Thoracic vertebra of Bison with spinal process measuring 14 inch (distal end broken)
- 770218-2 horn core (bone) of Bison?
- 770218-3 first lower premolar Bison
- 770218-4 2nd " " "
- 770218-5 3rd " " "
- 770218-6 1st molar Bison.
- 770218-7 raccoon lower jaw?
- 770218-8 adult *Odocoileus virginianus* lower right jaw.
- 770218-9 atlas or (first cervical) of Bison
- 770218-10 Patsherd



770218-11 scapula

On N side of bank of river as indicated on map is a series of faults in sand profile as:



From along edge of river in equivalent to 3/10 mi observed one gizzard shad 11" standard length, one 12" standard length and one 4 inches standard length. all dead but not decayed. No other shad of any size observed so there has not been any winter kill of these fish.

Beaver activity on either end of high bank thru timber stand but no activity between because of inaccessible bank. Also noted that when my dog ran at great speed over the sands, the front feet were the ones that gave the thrust in running motion instead of the rear leg or feet which I presumed were the legs that gave the forward thrust.

heavy front light hind heavy front light hind.

The black-capped chickadee was the only bird noted while crossing the forested area.

Noted several places where moles had raised ridges to the edge of motorcycle tire marks and had not gone beyond as if the compacted soils from the wheel inhibited the forward progress of the mole.

Deerfield Creek N of Peterson Road, NW Lawrence, Douglas Co., Kansas

Feb. 20, 1977

Last night set 50 traps around dry pond on hummocks and in grass. Pond now dry and bed covered with grass (curly). All traps placed in good used runways, mainly on the hummocks of grasses and weeds. Set at 1/2 hour before sundown and checked 10 min after sundown. No catch.

770220-1	<i>Microtus ochrogaster</i>	144-30-19-10-41 gms ♂ testes 12mm
770220-2	" "	135-31-18-11-30 gms ♂ testes 9mm
770220-3	" "	146-35-19-10-37 gms. ♂ testes 11mm
770220-4	" "	133-30-19-10-34 gms ♂ testes 9mm
770220-5	<i>Peromyscus maniculatus</i>	140-50-18-12-20 gms. ♀ ut. normal
770220-6	" "	138-57-20-13-18 gms ♀ testes 10mm

Temperature this A.M. 26°F and above mammals frozen. It is unusual that so few mammals were captured last night. Will leave set today and check again at sundown to see if they are more active in the daytime. Temp. about 40°F today.

This evening pulled traps. There were no mammals or traps set off. I can only account for this low catch in such a favorable place is a recent kill by weather change. Junco and 5 tree sparrows used grassy field for night roosting.

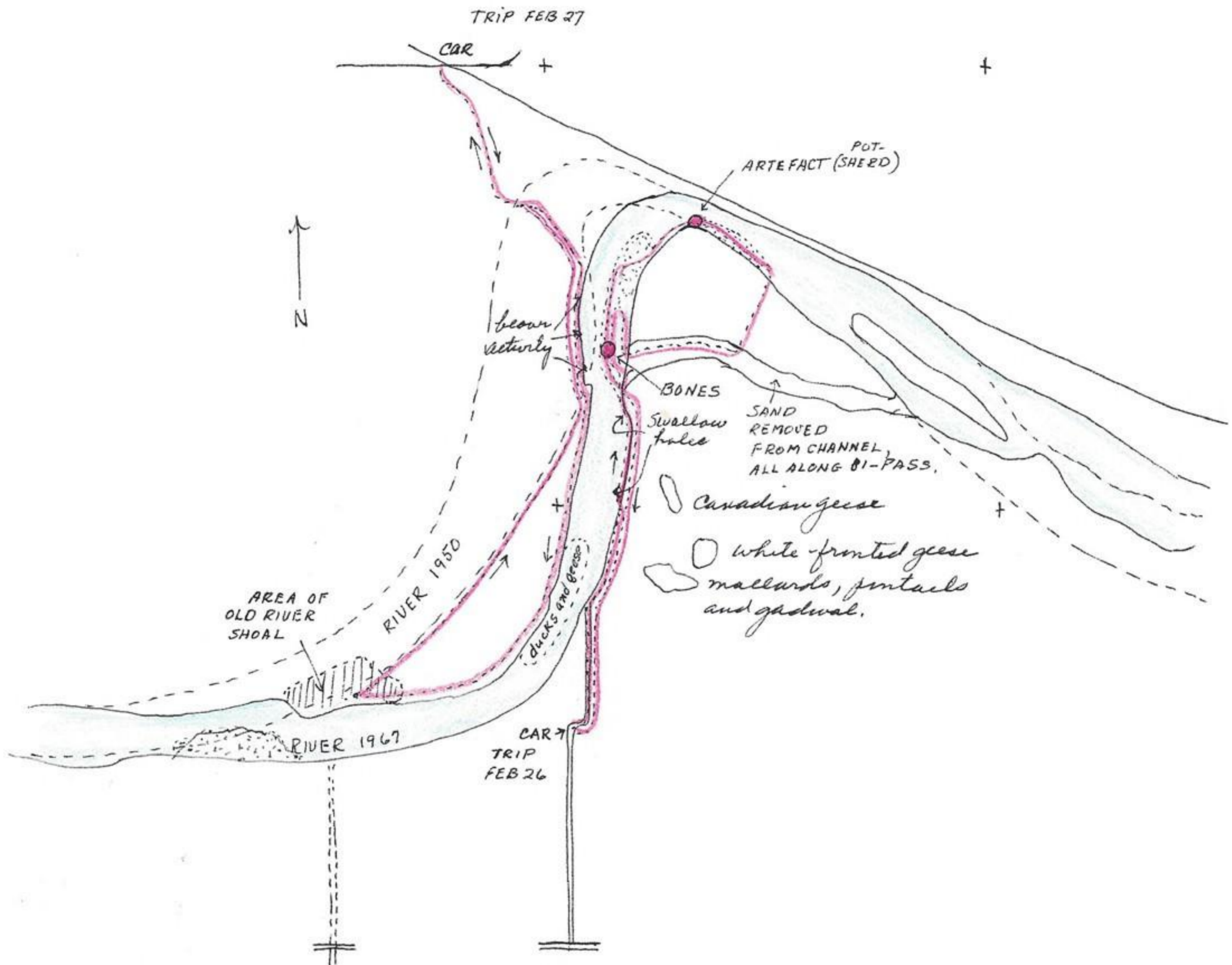
402 Yorkshire Dr., Lawrence, Douglas Co., Kansas

Feb. 20, 1977

Yesterday and today a single tree sparrow fed at feeder with the usual 10-15 English sparrows. There are still a few tree sparrows in the Lawrence area but they are nothing in numbers compared to earlier in the winter. I have noticed that when tree sparrows are feeding they will come ^{at a} low angle to alight on the ground taking sometimes a foot to taper off their glide. Several times I have watched the tree sparrow drive an English sparrow from the feeder. These sparrows move from bush to feeder at fairly regular intervals but not as frequently as the English sparrow but more so than the junco (slate-colored) who is the last to leave the feeder when disturbed from outside sources. The earliest arrival at day-break is the junco, followed by the tree sparrow who arrives shortly after and then the English sparrow later. I have noticed quite a variation in the amount of red on the top of the head ranging from faintly present to the full breadth of the top of the head of a brilliant red. The white face line also varies in intensity.

Kaw River, 4 mi E Lawrence, 2000 ft S and 1600' E from NW Sec. 26, T 12 S, R 20 E,
Douglas Co., Kansas.

Feb. 26, 1977



made trip this A.M. to check on birds and Indian artefacts and bones in general. On road between car and river 3 sets of adult deer imprinted in road and trending N.E. across field. A sparrow hawk approached my dog and followed it for about 5 seconds. In field noted 42 Canadian geese in one group, 37 white-fronted geese that alighted near a group of 8 blue and 18 snow geese, 200 pintails and 80 mallards and one gadwall duck. The whitefronted geese circled four or five times before landing and did not call. These waterfowl were feeding on corn. Along beach noted 4 large gizzard shale, the largest 13 inches standard length. One group of 240 bank swallow holes in bank about half way to bi-pass channel and another group of 250 holes near eroded bend near first trees. At the beginning of trees along bank

there was continuous beaver activity of bank trails and cut cottonwood trees. From outer edge of sandbar out from (or w) the entrance of the bypass channel collected several bones:

- 770226-1 astragulus of Bison?
- 770226-2 " of deer?
- 770226-3 distal phalange of deer (toe bone)
- 770226-4 lower right jaw *Odocoileus virginianus*.
- 770226-5 beaver leg bone.
- 770226-6 Antler *Odocoileus virginianus*.
- 770226-7 Cervical vertebra Bison

From point marked in a red circle which is the locality designation collected a pot-herd at beginning of sand bar accumulation at bend of river and 3 feet from river bank and is numbered:

770226-8.

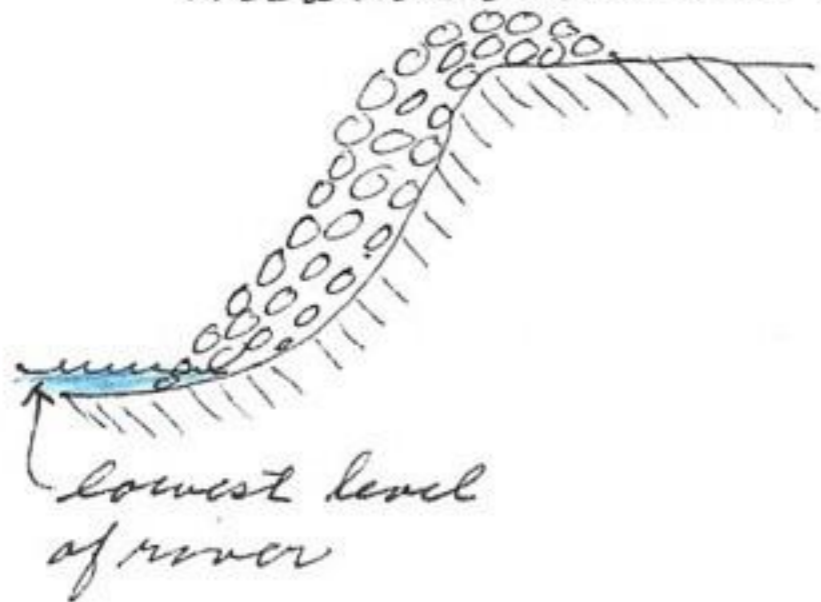
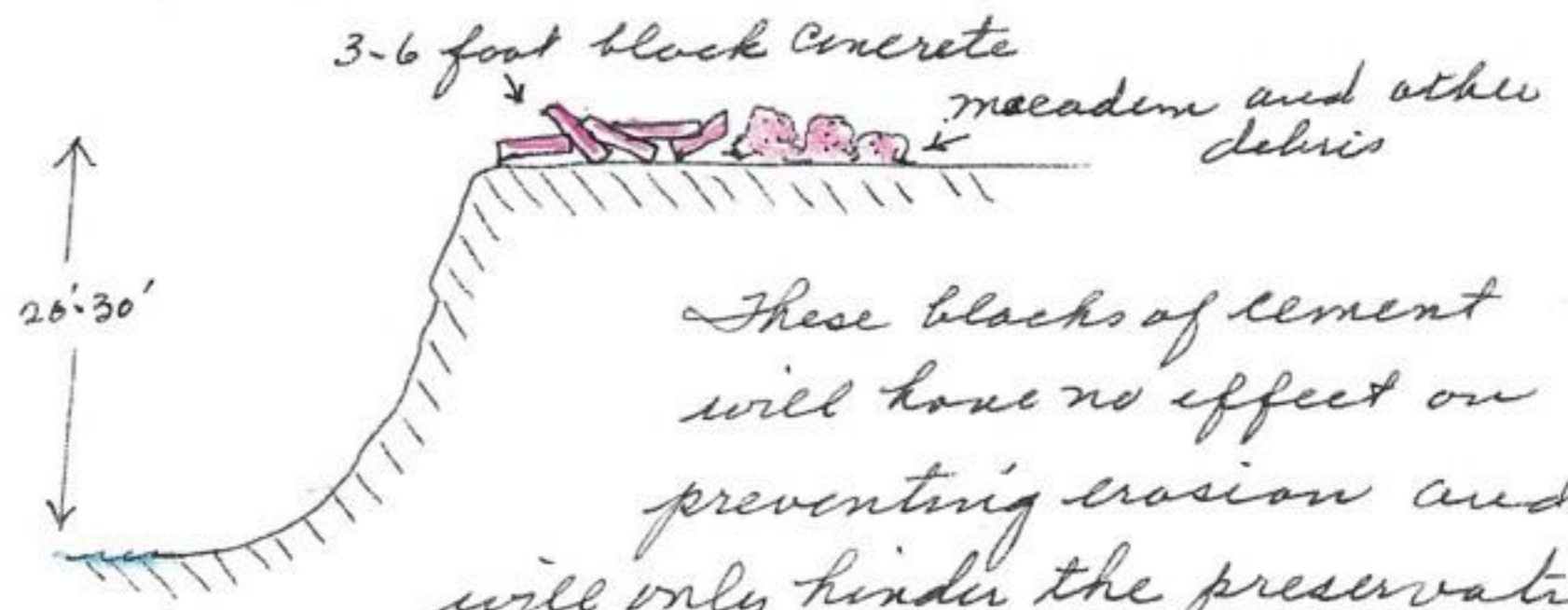
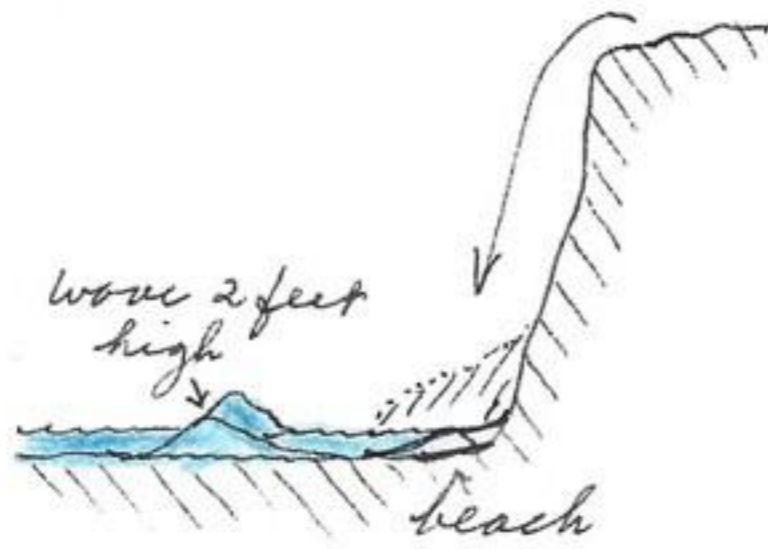
The bi-pass channel has been excavated for sand. On the sands of the channel observed 6 coyote tracks leading from S to N, 10 raccoon tracks crossing channel in both directions, and 2 skunk tracks. The tracks all ~~lead~~ led straight across the channel floor without deviation. On return noted 12 tree sparrows along the edge of the bank among weeds. One yellow-shafted flicker 110 m from trees. Beaver activity all thru area. *Leptodea luevisima* is the common unionid in the Kaw River drainage 135 mm length.

Mud Creek, Kaw River, Jefferson Co., Kansas

Feb 27, 1977

James Robert Bee and I made trip down along Mud Creek to Kaw, thence S along sandbar to shoal area at head of sand bar (up stream and then return. Noted 42 Canada geese in water on east side of sand bar along with 18 pintails and 60 mallards. Beaver activity along river that is bordered by trees. Trees up to 7 inches had been cut, most of them 2-3 inches in diameter. Set of 3 deer tracks and several coyote tracks. Shoal area either old river bed now exposed or rocks and debris have been forced up on bar by force of water when sandbar was covered, mainly river rocks and stones but considerable man made items of all descriptions. This is the area where Michael Cain has collected many spear points, knives, bones and the Pleistocene peccary tooth which is the second record for Kansas. On east side of river where road ends a section of bank fell into the water and created a loud noise and a wave approx. 2 feet high for some distance out into the river. A canoe would have capsized and a man would have been killed if he

had happened to been walking along the shoreline beneath or at the base of the bank.



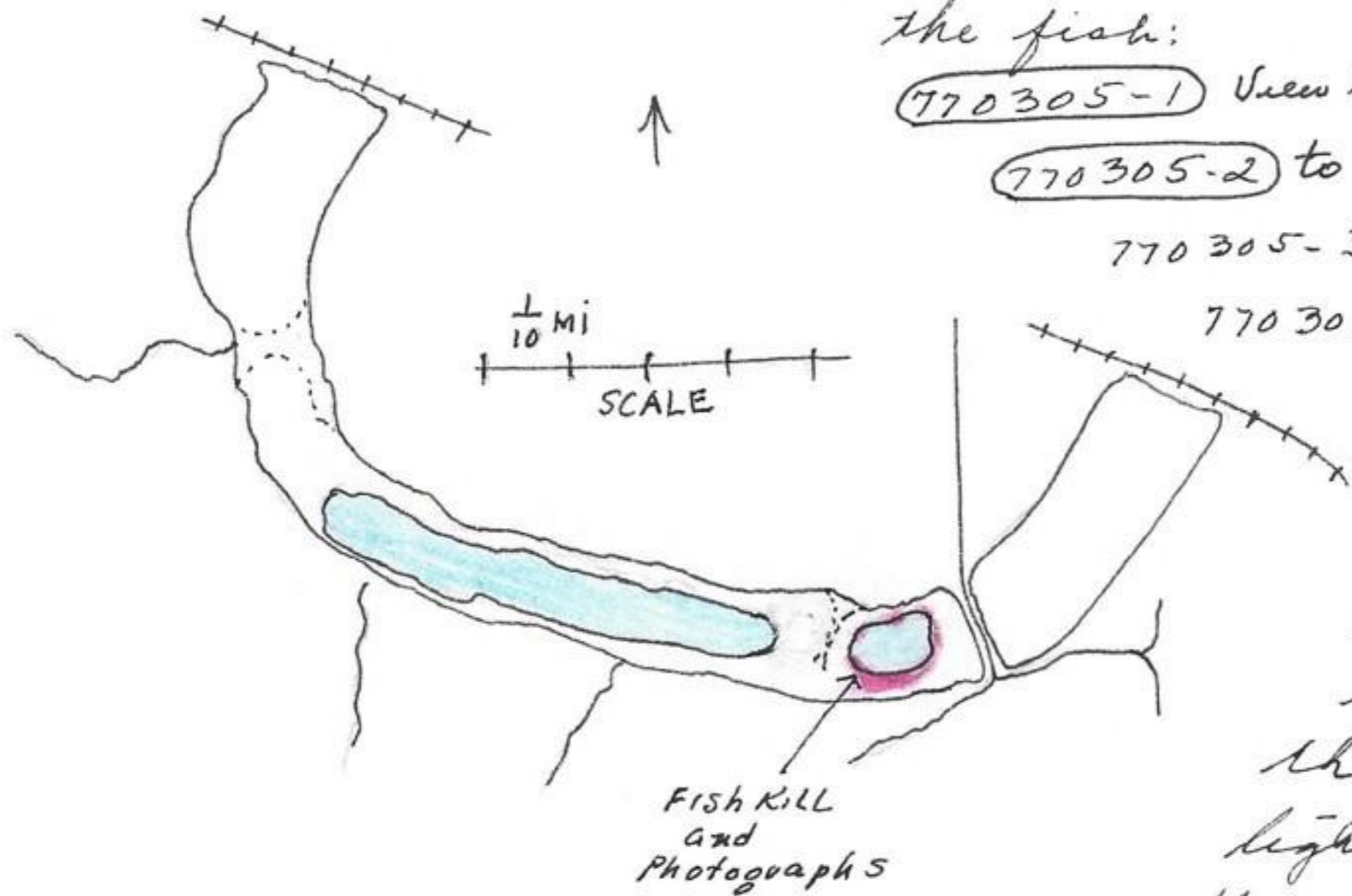
and uninterrupted coating of large boulders along the entire meander curve is the only thing that will stop this erosion.

Old cars, rubber tires etc increase the erosion of the river bank. Jetties of rock are soon bypassed and in time they are left as islands in the river as the bank erodes behind them.

These blocks of cement will have no effect on preventing erosion and will only hinder the preservation of the river bank.

Lake View, Douglas Co., Kansas
March 5, 1977

Mary and I made a preliminary check of fish kill at Lake View and made several photographs of the fish:



770305-1 View to W from E + N end Lake

770305-2 to W from SE corner Lake

770305-3 NG

770305-4 NG.

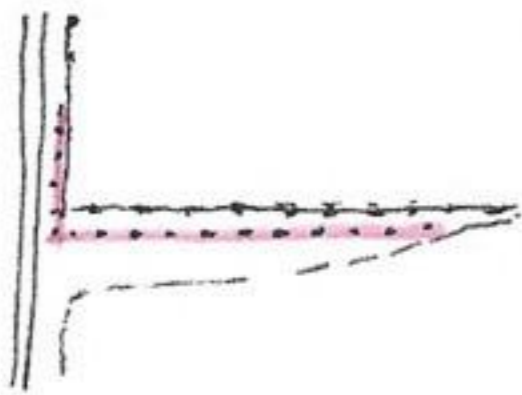
There were no ring-billed gulls in the area but enroute noted 4 in cooling lakes of the Kansas Power and Light Company, nor were there crows or any other

kind of fish eating birds. Raccoon tracks, however, were associated with the fish and several of them had been partly consumed. The odor was tolerable at this stage of decomposition because of the cool nights & day.

On a trip to Topeka via highway 40, counted 7 striped skunk road kills. On return via Still Road counted 4. Flocks of grackles and redwings in last week.

²
2 1/10 mi. W and 2 1/2 mi. N Lawrence (P.O.), Douglas Co., Kansas
 March ⁵ 6, 1977

Set 50 traps along S property line of Kaura Power & Light Co.
 in shallow drainage ditch grown to grasses 1/2 - 1 foot
 high. All traps in good runways and feeding
 areas. Trails covered with grass stem
 debris. This is a tough grass that has
 complete mat protection. Some catails in
 area.



March 6, 1977

Picked up traps at 8:00. Temp last night 26°F. Pond refrozen with
 thin ice. It is remarkable how few mammals were captured
 in such a well used community. Cuttings appeared quite recent.

770306-1	<i>Sevmadon hispidus</i>	255-90-31-18-100gms. ♂
770306-2	<i>Synaptomys cooperi</i>	132-20-20 ⁻¹⁰ -40gms. ♂ testes 6mm
770306-3	" "	137-17-19-10-50gms ♂ testes 1mm
770306-4	" "	133-19-19.5-10-47gms. ♀ ut. enlarged. open vagina
770306-5	<i>Microtus ochrogaster</i>	162-38-20-11-45gms. ♀ 3x2 plac scars

Lake View, Douglas Co., Kansas

March 6, 1977

Mary, Annette, & I checked fish kill and made the following
 photographs.

- (770306-6) Fish kill SE corner remnant pond, Mary in distance. Causeway ^{behind}
- (770306-7) Carp and progressively smaller fish in head of small bay.
- (770306-8) Larger fish nearer water.
- (770306-9) Carp.
- (770306-10) is an Indian hide scraper from N side of lake in sands.

Some maximum standard measurement are:

- Ictalurus punctatus* (channel catfish) = 1004 mm.
- Cyprinus carpio* (Carp) = 508 mm
- Lepidosteus platostomus* (short-nosed gar) = 805 mm
- The largest unionid *Leptodea laevisima* was 173 mm and
 the largest *Procladius alata* was 176 mm. Other dead fish were:
- Gizzard shad, *Alosa a. cepedianum* Freshwater drum *Aplodinotus grunniens*
- Small mouth bass, *Micropterus dolomieu* Black bullhead - *Ictalurus melas*.
- Green sunfish, *Lepomis cyanellus*
- Bluegill, *Lepomis macrochirus*
- White crappie, *Pomoxis annularis*
- Reg. mouth buffalo, *Ictalurus cyprinella*

770306-11 misc fish dropped over bank of pond

770306-12 misc fish, mainly carp

770306-13 misc fish.

770306-14 Gar, bass and carp.

770306-15 To SE showing N side pond. Carp and smaller fish have segregated according to size.

770306-16 misc fish and water pollution

770306-17 Fish and Proptera alata.

770306-18 Carp.

770306-19 Catfish

770306-20 catfish

770306-21 catfish

770306-22 carp.

770306-23 gar

770306-24 gar

770306-25 general view of pond segregated from main lake. To W.

770306-26 E end pond to S.

770306-27 ibid

770306-28 E side pond.

770306-29

770306-30

770306-31 general view to S across pond. Lake View residents high and dry.

As far as I could ascertain there were no living fish in the pond nearest the causeway and only 4 moving turtles in the W pond, however there were no dead fish there but there could be. This is one of the interesting things that should have been tested to see if possibly there were survivors in the E pond and if so what kinds could have withstood the oxygen deficiency, and secondly what the differences were between the two ponds as to water and pond characteristics. How many turtles died etc? The sand bar on N side seemed to have formed to contribute to the isolation of the two ponds. Was the deeper E pond created and maintained by the fish? Noted that the highest windrow of dead fish were the smallest fish and these the exceptionally small ones 1 to 2 inches long. The E, S and SW edges of the lake were the most heavily populated with dead fish and the average width of the solid mass of fish was about 10 feet (30 x 2). The killdeer (1) and a single redtail in area. I would estimate fish covered 10,560 square feet of lake bed surface around the edge of the pond. Pond had bank on N + E sides. The first journal world newspaper report of this winter kill at Lake View was Feb. 28, 1977.

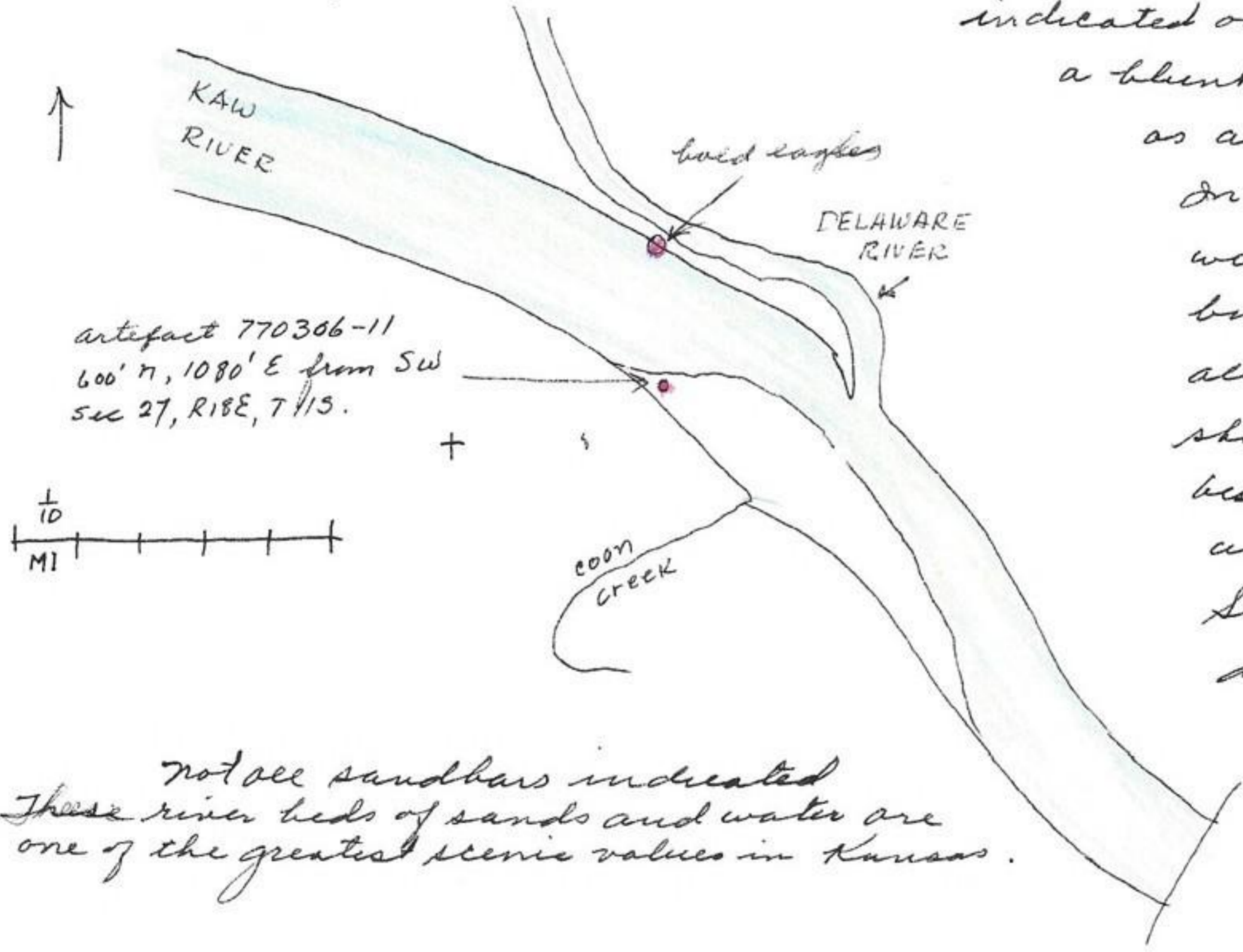
Mouth Delaware River on S side Kaw River, Douglas Co., Kansas
March 6, 1977

Noted two immature eagles in top cottonwood tree on N side Kaw about 2/10 mi. W mouth of Delaware River. They circled the area 4 or 5 times and then one alighted again in the tree while the other one flew E until about over the S end of LeCompton bridge and then circled E over the riparian community on N side of river for about 1 mile then circled higher ^{and E} until about out of sight of 10x50 binoculars. An adult arrived near tree where young one was perched and remained from 4 to at least 5:00 P.M. From 1:00 to 3:50 P.M. there was no ~~other~~ eagles in area. Two people ^(fishermen) remained at mouth of Delaware on E side the entire time I was on S side from 1 to 5:30 P.M. and no doubt had kept the eagles from using their hunting grounds. These fishermen, beaver trappers and motorcyclist cause excessive interference of the wintering site of these ^{and other} bald eagles. The river should be called off-limits during the winter, especially the mouth of the Delaware River where the main concentration of eagles wintered this year. As a result of these fishermen there were no ducks in the area. However, upriver there were 14 American mergansers and 45 ring-billed gulls. The gull were,

associated with the mergansers. I noted on one occasion when a bald eagle alighted on top of a dead cottonwood tree that the upper part shook from the impact.

There should be a law against use of river beaches and sands by 4 wheel drives and motorcycles. They run chains and sand bar into a completely smoothed surface. These people are invading every conceivable niche in our environment with irreversible damage. At one or two places the white-tailed deer had crossed the sand bar to the edge of the river. Coyotes tracks were common throughout the bar area.

At the upper (W) end of sand bar where the large sand bar starts to form found a blunt bone instrument where river bottom (shoal) had moved up upon and thru the sand bar. From point indicated on map collected a blunt end bone used as an artifact by Indians. There were several large bones of buffalo also on exposed shoals. The best areas are now under water. Search this sand dune for 4 hours but did not find any other Indian artifact.

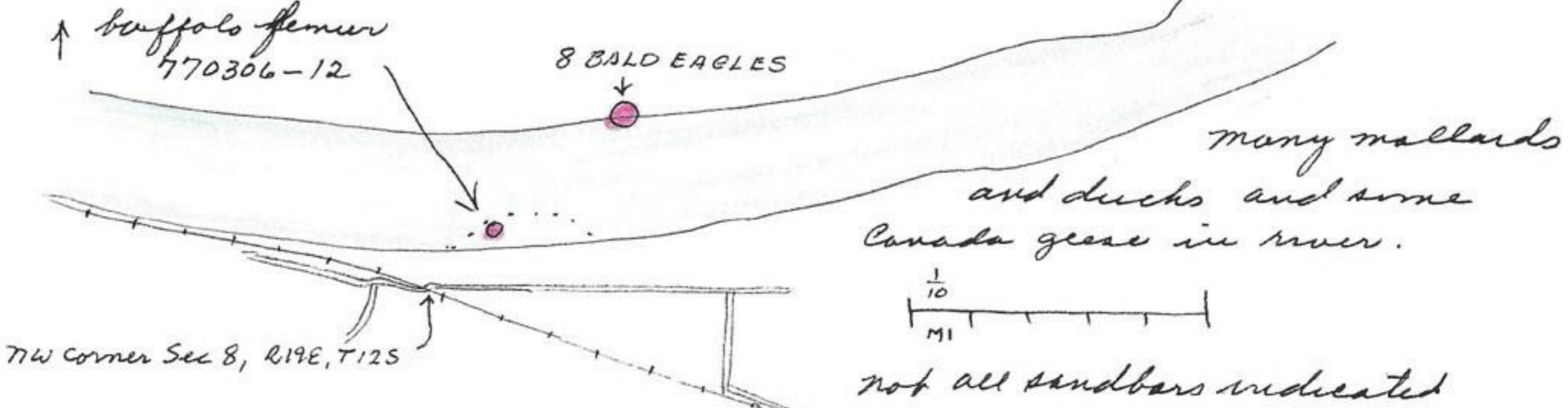


not all sandbars indicated
These river beds of sands and water are one of the greatest scenic values in Kansas.

find any other Indian artifact.

Kaw River, E Leecompton, Douglas Co., Kansas
March 6, 1977

Son James Robert made canoe trip from Leecompton and noted 8 bald eagles in one tree, some with white heads.



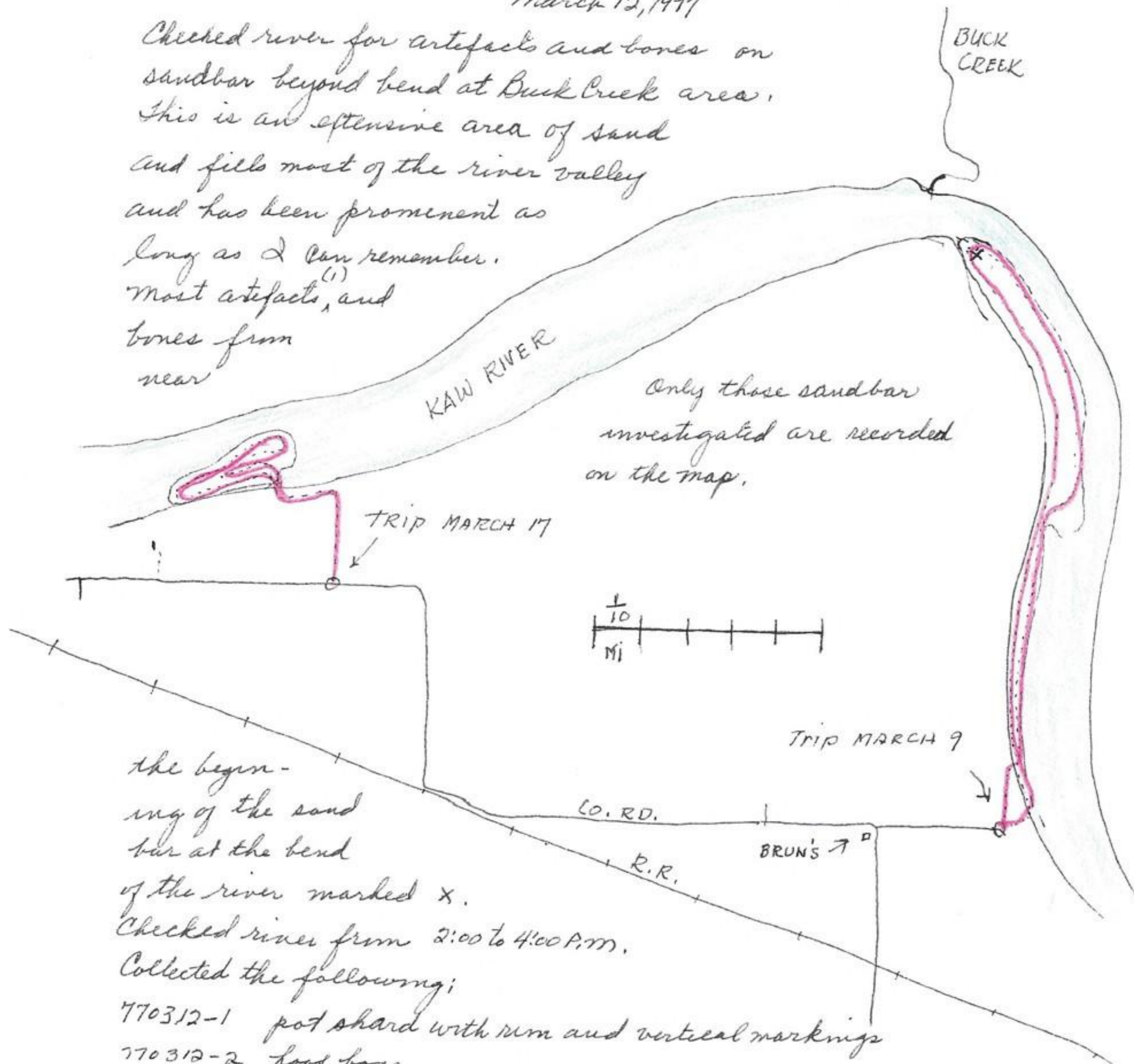
NW corner Sec 8, R19E, T12S

402 Yorkshire Str. Lawrence, Douglas Co., Kansas
 March 9, 1977

18 snow geese and 4 blue geese flew N over the house about 450' high, they called.

2 1/2 mi. SE. Buck Creek in Douglas Co., Kaw River, Kansas
 March 12, 1977

Checked river for artefacts and bones on sandbar beyond bend at Buck Creek area. This is an extensive area of sand and fills most of the river valley and has been prominent as long as I can remember. Most artefacts, and bones from near



the beginning of the sand bar at the bend of the river marked X. Checked river from 2:00 to 4:00 P.M.

Collected the following:

- 770312-1 pot shard with rim and vertical markings
- 770312-2 hoof bone.
- 770312-3 hoof bone
- 770312-4 astragulus
- 770312-5 toe bone, second phalanx
- 770312-6 thorax + cuboid
- 770312-7 second phalanx
- 770312-8 second phalanx
- 770312-9 Cervical vertebra

Only birds in area were one flock of American mergansers, 2 crows, 3 ringed billed gulls, 1 kingfisher

This area is not a good shoal area and artefacts are not represented as on some other sandbars.

Perry Reservoir, Jefferson Co., Kansas.

March 13

Annette and I made trip to Perry Reservoir to check on herds and mammals. 67682.0 mileage and ^{left} 9:30 A.M. Temp. 38°F. wind from NW. Has been raining last few days. Sky mainly clouds with occasional sunshine. 82.3 fox squirrel. 84.1 sp. hawk. 84.8 8 grackles. 85.7 Causeway at Lake View (this always has reference to bridge). 1 killdeer only and lake up approx. 6 inches. Fish still in area. 85.7 robin. 86.5 2 redwings ♂ 86.7 yellowthroated flicker and 3 ♂ redwing on territories and calling. 6 robins, 2 killdeer in field. 20 starling 87.4 meadowlark some water in fields. 88.2 30 ring-billed gulls feeding in river. 88.8 base hill. 90.4 Oakley Creek + water but not moving. 92.5 E end LeCompton bridge. 150 ring-billed gulls feeding in area where there were 18 American mergansers at mouth of Delaware River on the River. no bald eagles in area. River now about 50-50 sand + water. 95.5 Delaware River at Perry, green and low + open. 96.9 grackle, sp. hawk. 97.2 2 grackles, redwing ♂. 97.5 highway 24, meadowlark. 98.8 Thompsonville. 99.6 now N. 00.4 Overlook and only one ring-billed gull in entire area, no ducks or geese. N of dam. (10:50 A.M). 00.5 2 redtails. 01.0 W end dam. 02.0 redtail, meadowlark. 02.3 now to peninsula. 120 ring-billed gulls at NE end peninsula and either resting on beach or feeding on beach + in water, some out from point, occasional gull flew by. 03.1 robin, sp. hawk. 05.3 gates. 50 gulls over equivalent number of lesser scaup and robbing them of food they bring to the surface. 06.6 rd. 237, meadowlark. 07.7 redtail. 08.0 now N. 08.8 Rock Creek boat ramp, 80 ring-billed gulls in bay but no ducks etc. 10.1 returned to main road and now at Rock Creek bridges 14.1 redtail, meadowlark. 14.3 meadowlark. 14.5. male + female bluebird. 14.9 2 robins. ~~16.7~~ 16.7 meadowlark. 16.4 redtail, meadowlark. It is interesting how many times the redtail and meadowlark are recorded together. 16.9 main Ozawie rd, now E., 5 grackles. ~~17.4~~ 17.4 cardinal 19.0 Ozawie Causeway at bridge, 80 ring-billed gulls to N. and 20 to S of causeway, 18 lesser scaup. From SW end of Old Town Park on island extension, 380 ring-billed gulls resting. This has been a favorite resting place for gulls and other birds but suffer disturbance by motor boats. At SE end of Old Town Park in bay collected a *Leptodea laevissima* (180 mm.)

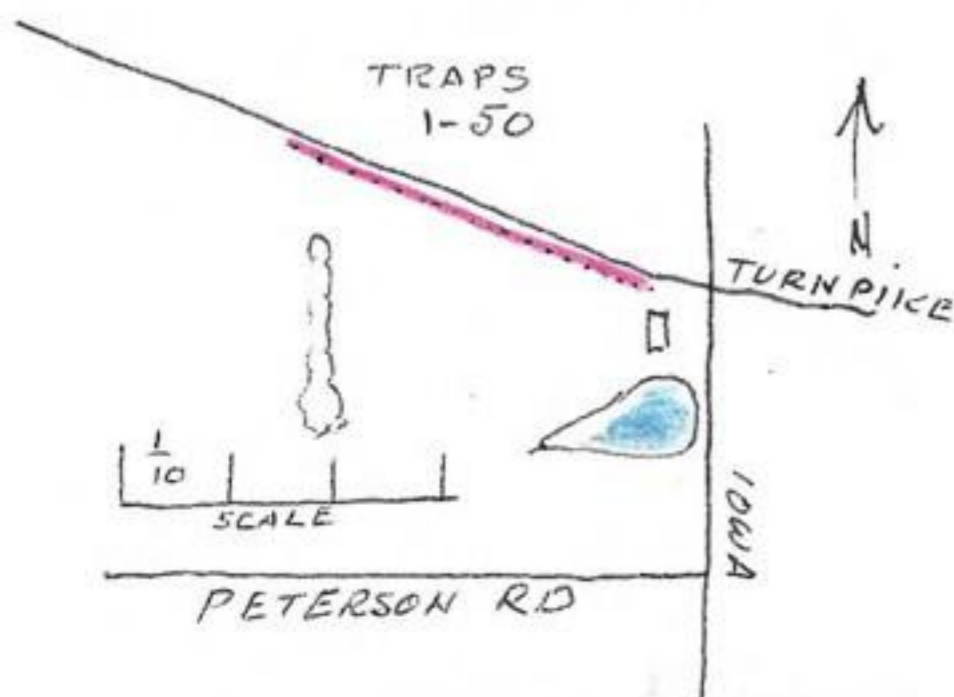


no 770313-1 that measured seven inches in length. These unionids are spaced approx. 8 feet apart and they are all large specimens. *Quadrula quadrula* and *Protrera elata* are also present.

25.0 entrenched 4 corners now N to Paradise Point. 27.6 redtail hawk.
 28.7 gates to Paradise Point. 30 ring-necked gulls along beach on S
 side of Paradise Peninsula where they are actively feeding along the
 beach. 29.7 from picnic shelter can see approx. 800 ring-necked
 gulls resting in shallow water or on land to NW. no other ducks
 or shorebirds although mudflats are extensive. 52 white-fronted
 geese circled high, calling and dropping down to general vicinity
 of the gulls but at about 300 feet or half the descent turned and
 continued N. These geese are easily distinguished from Canadian,
 blue or snows by under pattern and call. At W end of peninsula
 2 red~~heads~~^{headed} woodpeckers. 8 cowbirds, one yellow-shafted flicker
 in field 300' from trees. 32.5 2 fox squirrels. 33.2 gates. 33.9
 white-tailed deer ran across ^{open} field to S, redtail. 37.0 opossum road
 kill. 37.6 Little Slough Creek bridge, water intermittent and
 green. 39.1 redtail. 40.2 2 sparrow hawks, redtail. 43.0 gates
 to Big Slough Park. 43.7 now left. 45.2 water in this area
 of Perry Reservoir all clear and blue whereas at Paradise Point the
 water is brownish. 10 crows feeding at
 at end of point where ^{waves} water from main
 Perry Reservoir flows past point. 45.5 3
 meadowlarks along road. They would normally
 be on top of ridge in open fields. 45.8 old
 county road approx. 3' above lake and ponds. At boat ramp
 is the beginning of the new trail built by Kansas Trail Council and
 reads. Perry Lake Trail, Slough Creek Area. Devils Gap trailhead.
 Longview 7 mi. Old Quarry Rd 10 mi. In lake to N can see
 180 ring-billed gulls, 18 lesser scaup, 2 pintails and 1 goldfinch. 47.7
 back to gates. 49.4 opossum rd. kill. 50.1 Big Slough Bridge 125
 ring-billed gulls to E, 12 to W. 54.3 meadowlark. Returning via
 Little Wild Horse Creek, and at 58.7 2 bluebirds. 58.8 Highway 24
 62.8 Left LeCompton Road and now on uplands road to ~~the~~ E. 63.7
 fox squirrel. 66.9 redtail. 68.4 main river road. Home at 75.6

Along Interstate 70, $\frac{2}{10}$ mi NW Curtis 100 Inc, Iowa St., Lawrence, Douglas
 Co. Kansas

March 13, 1977



Set 50 museum specials along fence line (grass 1' to 3' wide)
 on S edge turnpike right-of-way, plowed fields on S
 side fence except $\frac{1}{10}$ mi along Curtis 100 Inc property.
 all traps in runway along fence, some fresh and
 some old. Will compare with previous years catch.
 Set $\frac{1}{2}$ hour before sundown. to sundown.

Along Interstate 70, 2/10 mi. NW Curtis 100 Dr., Iowa Street, Lawrence,
Douglas Co., Kansas

March 14, 1977

Frome trapline of 50 traps set yesterday evening and checked at
8:00 A.M. today caught:

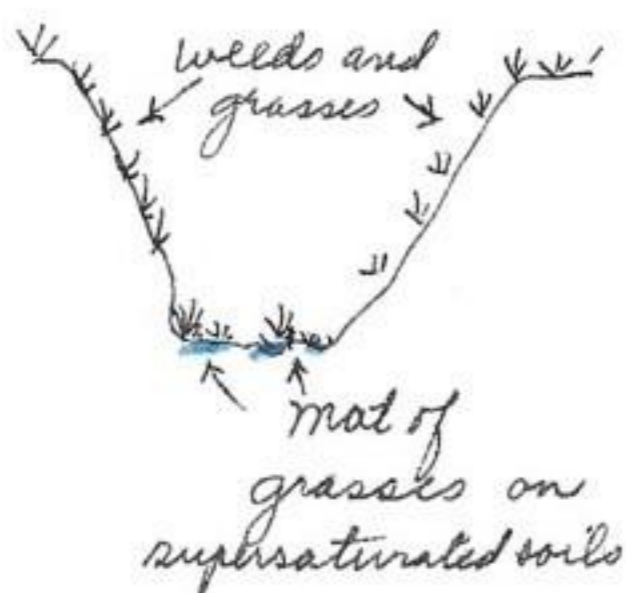
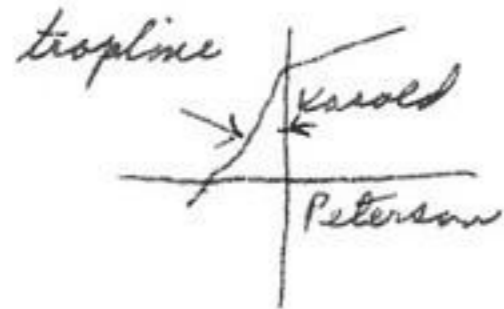
770314-1	<i>Microtus ochrogaster</i>	154-31-20-13-48 gms ♀ ut. enlarged
770314-2	"	147-31-18-12-40 gms ♀ ut enlarged
770314-3	"	164-36-20-12-52 gms ♀ 2x2 plac. scars
770314-4	"	148-33-18-12-39 gms ♀ ut enlarged
770314-5	"	145-33-19-10-40 gms ♂ testes 11 mm
770314-6	"	150-37-19-11-44 gms ♂ testes 13 mm
770314-7	"	163-41-20-12-49 gms ♂ testes 11 mm
770314-8	"	141-31-19-11-34 gms ♀ ut enlarged
770314-9	"	158-35-20-12-43 gms ♂ testes 14 mm
770314-10	"	153-37-20-11-36 gms ♂ testes 12 mm
770314-11	"	137-33-19-11-35 gms ♂ testes 11 mm
770314-12	"	131-28-19-10-28 gms ♀ ut. normal
770514-13	"	127-28-19-10-24 gms ♀ ut enlarged
770514-14	"	87-20-16-8-8 gms ♀ ut normal
770514-15	"	89-19-16-8-8 gms ♂ testes 4 mm
770514-16	<i>Peromyscus maniculatus</i>	141-53-18-12-20 gms ♀ 2x1 emb. 13 mm (one resorbed)
770514-17	"	[89]-[3]-18-13-20 gms ♂ testes 9 mm

There is definitely fewer *Scymnus* than last year but since there
the ^{grass in the} right-of-way has been cut and the winter has been severe in
low temperatures.

Kasold and Peterson Rd, Lawrence, Douglas Co., Kansas

March 14, 1977

In a drainage ditch NW of the intersection in bottom of ditch under
mat grasses and on edge of bottom set 50 museum



specials. Most traps under mat grass. Some
cattails. Older traps in weeds on slopes but
these were not as fresh as those in bottom. Most
of this winter the water has been frozen and thus
made available islands of grasses. Set between
5:00 and 6:00 P.M. Temp. 80°F this afternoon,
high wind from S. At 5:30 280 white-fronted geese
flew N over trapping area at approx. 500' high.
They were calling.

Drainage ditch, NW corner Kasold and Peterson Road, Lawrence, Douglas
Co., Kansas

March 15, 1977

From trapline set last evening caught the following:

770315-1	<i>Sigmodon hispidus</i>	240-101-30-18-85 gms. ♀ ut. normal
770315-2	" "	245-95-32-18-96 gms. ♂ testes 17 mm
770315-3	" "	[185]-[53]-29-17-69 gms. ♀ ut. normal.
770315-4	<i>Microtus ochrogaster</i>	148-33-19-11-38 gms. ♀ ut. enlarged
770315-5	" "	147-32-19-11-38 gms ♂ testes 14 mm
770315-6	" "	[130]-[16]-20-12-37 gms ♂ testes 11 mm
770315-7	<i>Reithrodontomys megalotis</i>	125-57-17-11-8.5 gms. ♀ ut. normal
770315-8	<i>Peromyscus maniculatus</i>	135-54-18-11-14 gms. ♂ testes 10 mm
SKi 770315-9	<i>Microtus ochrogaster</i>	158-33-19-11-58 gms ♀ 4x2 emb 25 mm
770315-10	" "	140-29-19-10-28 gms ♂ testes 9.5 mm
770315-11	" "	138-30-20-12-25 gms ♀ ut. enlarged
770315-12	" "	155-35-20-11-39 gms ♂ testes 14 mm
770315-13	" "	132-28-18-10-27 gms ♀ uterus enlarged.

The weight of the six embryos in specimen ⁷⁷⁰³¹⁵⁻⁹ is 19 gms. Several traps were sprung in runways that looked like they were used by *Sigmodon*. Last year there were several ^{*Sigmodon*} taken from here.

Lawrence (402 Yorkshire Dr), Douglas Co., Kansas

March 17, 1977

Cleaned cement reflection pond and while it was full of dark brown leaves, the water was relatively clear and the painted surface ^{in one week} was clean in contrast to summer when the paint surface becomes coated with algae that is difficult to remove.

^{mouth of}
17/10 mi SSE Buck Creek in Douglas Co., Kaw River, Kansas

March 17, 1977 (see map of March 12, 1977)

Search sand bar bones and artifacts on S side of river, and collected the following

- 770317-1 Bison femur
- 770317-2 Bison ascarabulum
- 770317-3 Bison atlas
- 770317-4 cannon bone *Odocoileus*
- 770317-5 Bison skull fragment
- 770317-6 *Galant* 2 Bison
- 770317-7 " " "
- 770317-8 beaver femur

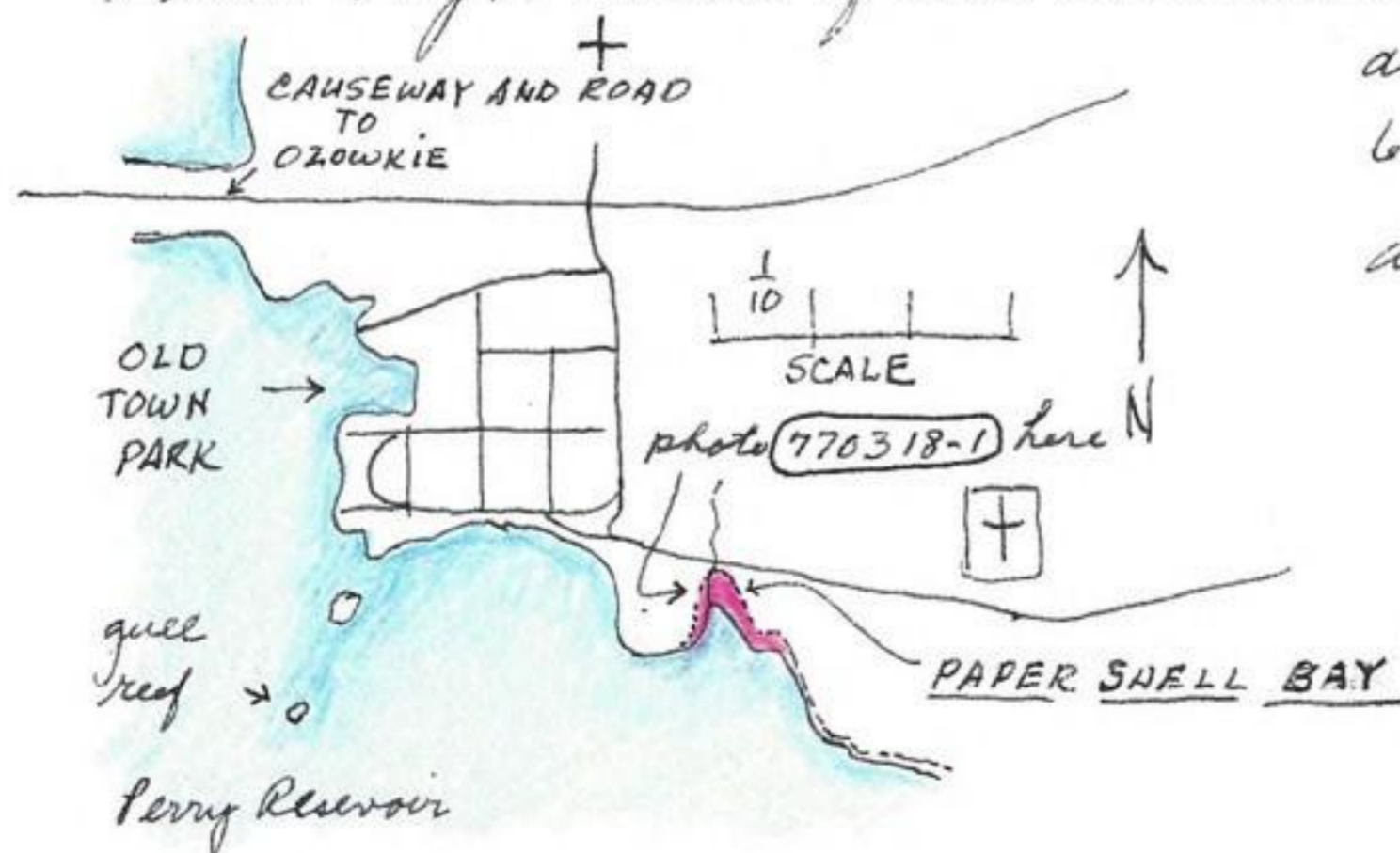
- 770317-9. Cervus tooth
 770317-10 Cervus tooth
 770317-11 basal segment of antler

Only one killdeer in area, 1 flock 5 ducks flew up river and 2 ring-billed gulls in 2 hour period on sand bar. Good area but no Indian artefacts. Raccoon and coyote tracks. No bald eagles but family living in area report them on several occasions this winter here.

Perry Reservoir, Jefferson Co., Kansas.

March 18, 1977

Made trip to Old Town Park to check on unionid population of one of the mud bottomed bays. Left 402 Yorkshire in Lawrence at and picked up mileage at Lake View turnoff on Farmer's Turnpike at 04.3 (continuing W on "Farmer's Turnpike" at 9:07 A.M. Sky 95% clear but hazy. Temp 48°F. 05.9 2 meadowlark. 06.1 5 meadowlark 06.2 sparrow hawk. 06.7 meadowlark. 07.7 redtail, 09.9 Leecompton Rd. 10.1 opossum road kill. 11.3 meadowlark. 12.6 meadowlark. 13.1 E end Leecompton bridge. 28 ring-billed gulls 1/10 mi down river, some in water, some on sands. 14.4 male redwing. Most stored sailboats still in the City of Perry. Continued N. 8 robins on lawn three town 16.7 highway 24 N of Perry City. 08.1 sp. hawk. 08.3 sp. hawk, robin. 19.3 SE corner Perry Reservoir area. 20.4 Ferguson Road, meadowlark. 21.5 Big Slough bridge, wind producing white caps from NNE. 5 gulls W bridge, 30 E bridge either flying or on water. 22.6 raccoon rd. kill. 23.7 red-bellied woodpecker. 24.2 fox squirrel road kill. 25.1 sp. hawk. 26.0 meadowlark. 27.0 redtail. 27.6 Little Slough Creek with water but still intermittent. 28.2 opossum road kill. 28.3 four corners now W to Ozawie 29.8 now at SE vantage point of Old Town Park. This area has been added to the Park as a picnic area and is one of the best prominent to observe the lake. The mud bay that supported the unionid population is to the E and will be known as Paper Shell bay, because of the numerous large Leptodea laevis there,

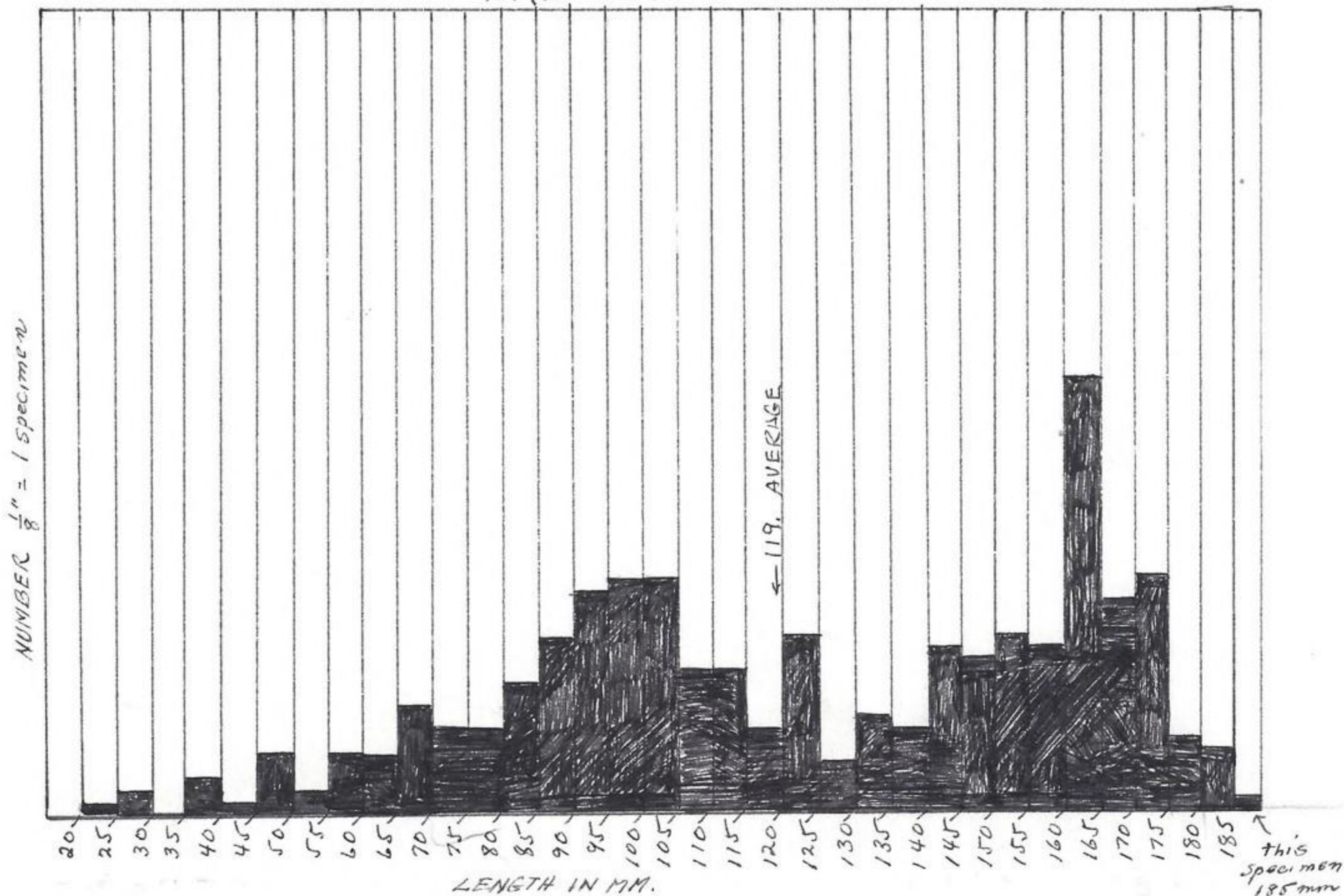


and its center is located 2100 ft N and 600 feet E of the SW corner sec 32, R18E and T9S, Jefferson Co., Kansas. At present the bay is mud but firm enough to traverse except near edge of water. Entrenched water course with flowing water 1 gallon per 20 seconds, and clear. Shells average 8'-10' apart.


Recorded the length^{in mm} of the following Leptodea laevissima representing 75% of the shells exposed in the bay muds and at a systematic walk in parallel lines from E to W.

168-169-95-158-140-163-160-172-164-171-170-168-135-90-120-70-150-
 90-165-100-90-163-172-170-128-120-111-90-160-80-150-158-99-146-163-140
 88-99-78-97-109-102-130-174-172-90-103-170-106-142-47-153-152-88-90-90,
 105-72-173-86-113-134-150-102-765-170-46-97-101-110-75-81-49-78-68-88-36-
 180-160-118-85-174-180-63-135-92-47-165-170-156-155-98-168-90-185-120-88-
 120-160-175-163-104-143-82-120-116-123-102-90-73-114-97-98-105-116-94-50-
 168-108-137-70-100-141-114-76-110-113-96-173-160-98-78-170-160-170-72-114-
 168-149-143-88-62-102-86-157-128-143-56-108-103-105-149-152-162-102-83-166-144-
 175-178-70-83-150-86-140-25-142-152-96-146-86-173-93-182-90-78-163-
 127-149-162-172-163-152-160-156-160-158-167-164-148-88-160-124-162-164-
 122-96-138-163-124-91-163-104-84-154-94-113-130-96-112-148-40-108-65-
 108-90-131-99-88-179-100-164-99-88-29-108-153-144-68-152-88-170-113-96-
 56-124-120-140-60-45-176-130-81-98-162-162-127-124-61-68-160-102-146-53-
 157-60-72-82-130-133-138-93-769-153-168-161-147-104-138-90-91-120-60-94
 138-142-145-150-161-160-93-100-35-158-115-159-26-113-167-160-164-170-160-158-
 122-68-151-162-159-166-140-161-162-156-84-150-63-168-99-58-158-146-168-
 164-70-178-108-46-70-73-98-115-86-116-121-38-118-102-170-168-97-103-96-
 112-130-83-121. or 336 specimens measured.

119 (20-185)



Of the population of unionids saved two complete and one half shell of *Leptodea laevissima*:

770318-2	<i>Leptodea laevissima</i>	183 x 145 (greatest height), 120 to hinge line	
770318-3	" "	183 x 143 (" ") 117 to hinge line	
770318-4	" "	183 x 143 (" ") 117 " " "	
770318-5	<i>Carunculus parva</i>	34 x 20 mm	[770318-7, 770318-8, 770318-9 other <i>Leptodea laevissima</i>]
770318-6	<i>Leptodea laevissima</i>	130 x 97	

The largest *Quadrula quadrula* measured 83 mm in length and constituted about 5% of the population. A *fratula slata* was even more scarce and of usual size. *Lasmogona complanata*

Left at 29.8 at 11:25 A.M. During my inspection of bay approx. 12 ring-billed gulls singly flew over this bay. Of several dead fish on mud, gulls tracks were associated. Out of 100 snow and blue geese that alighted on W shore S of Ozawie, 16 were blues. They remained on shore until a ranging motorcyclist push them on again. 103 ring-bill gulls ^{and one Herring gull (adult)} on island at the extension of SW end of Old Town Park. 80 other gulls flying in lake S of the Ozawie causeway and generally dispersed. Left Old Town Park 11:45. 32.1 Little Slough Creek. 33.2 meadowlark. 35.8 grasses at Walters property is showing invasion of shrubs and becoming less useful for muskratines; 36.6 now to Big Slough Park. 37.6 gatis. 38.1 fox squirrel, bluejay. 39.2 Gap Point. (Corp of Engineers now call this area Devils Gap). Bay created by county road has 2 ponds on E side. Largest *Leptodea laevissima* in these ponds is 160 mm in length. Fish to point and beyond. will fly but no strikes. *Leptodea laevissima* in ponds and forest of shoreline but replaced almost entirely by *Leptodea fragilis* in the more rocky areas of the shoreline. *Leptodea fragilis* has yellow epidermis while *L. laevissima* has dark ^{sandy} brownish olive color. At boat ramp water brownish out to 50' beyond shore. 130 snow and blue geese in close flock in lake to N. 300 ring-billed gulls associated with 15 lesser scaup near NW shoreline, toward Rock Creek. 39.3 1:30 leaving Gap Point Boat ramp. 40.7 redtail, 40.9 leorning gatis. In Park area heard 4 Cardinals singing & observed 1 slate-colored junco. 42.0 redtail, frogs calling. 43.3 Big Slough, 8 gulls to W, 100 generally distributed to E, mostly in water. 44.3 crow. 45.5 SE corner of Perry Reservoir area. End of census except raptors on way home. A fox squirrel started to run across the road and when within 1 foot of side of car ran back 3 feet and remained in road for 20 seconds as if in shock, then continued across the road in the same direction. ~~30.1 most ponds~~. Arrived home at 2:15 P.M. ~~The evening~~

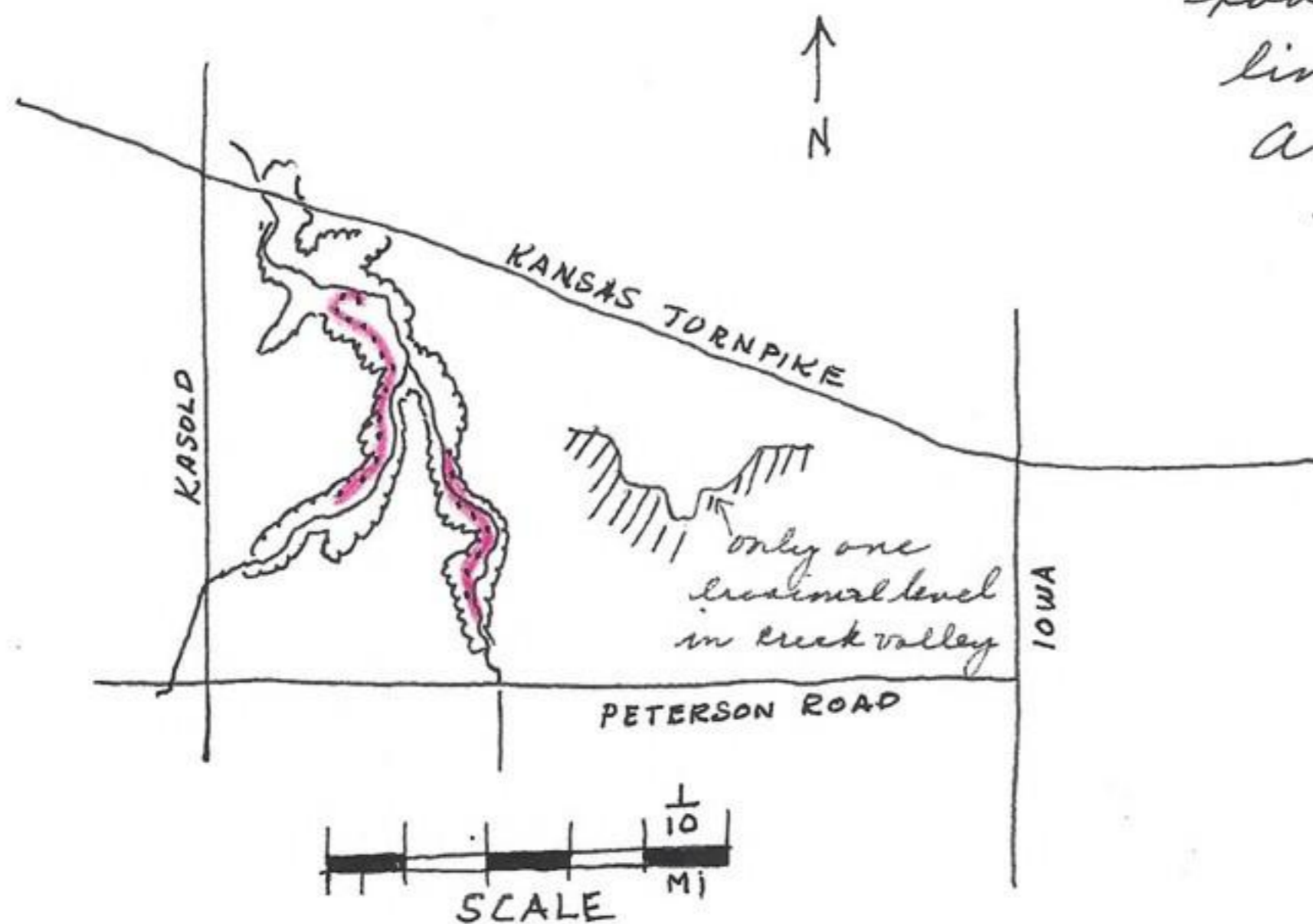
Deerfield Drainage between Peterson and Turnpike, NW Lawrence, Douglas Co., Kansas.

March 20, 1977

From 50 traps set yesterday evening collected:

770320-1	<i>Peromyscus leucopus</i>	173-75-23-16-29gms	♂
770320-2	"	179-80-22-15-25gms	♀
SKI 770320-3	"	180-81-22-15-29gms	♂ testis 12mm
SKI 770320-4	"	181-84-22-15-24gms	♂ testis 10mm
SKI 770320-5	"	174-77-22-16-22gms	♀ 2x1 emb 1.5mm
770320-6	"	163-69-22-15-25gms	♂
770320-7	"	173-78-22-15-23gms	♀ 1x1 emb 3mm

No 770320-7 partly eaten in neck to skull and as far as lungs and heart of pleural cavity.



There are more dead trees that have fallen, especially upper limbs than a year ago.

Also there is an increase in woodrats, skunks and raccoons. As a result

85% of the traps were sprung. This seems to be in agreement with the general build-up of the woodrat population in the county. The Deerfield Creek is intermittent and the one thing that is different is that

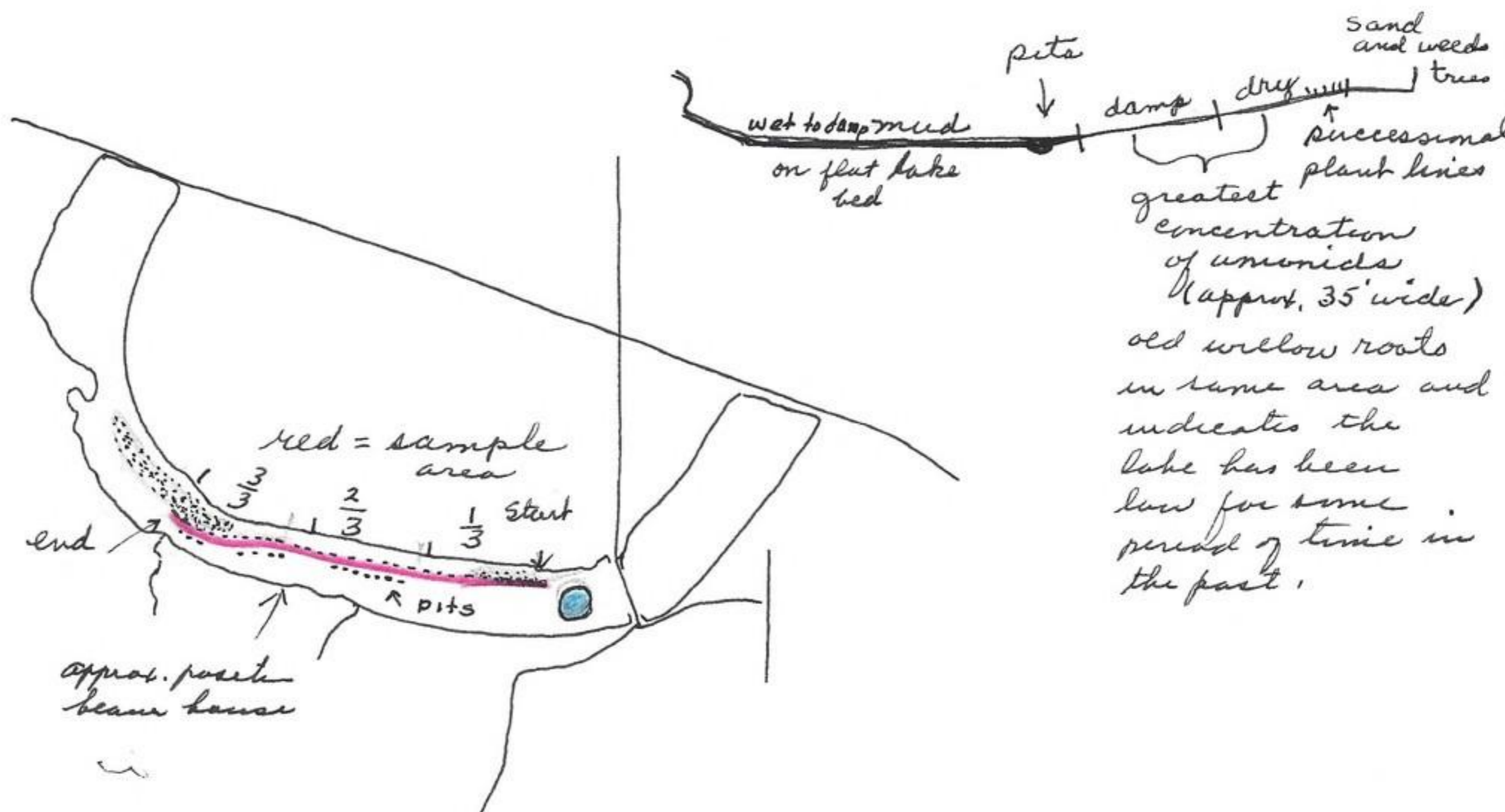
there is more mud in the bottom of the creek from the extensive building and earth removal in the Deerfield area. Drainage has two erosional levels.

guncos use overhang of river channel for roosting at night
 museum Natural History, Univ. Kansas, Lawrence, Kansas
 March 21, 1977

A graduate student reported from 50 to 100 sandhill cranes circling north over the east end of the Welton Dam in Kansas. They called as they circled high. This is a usual sight in both the spring and fall of each year. Those landing are usually at the refuge at the W end of the dam. The groups are generally between one fifty and one hundred in number.

Lake View, Douglas Co., Kansas
 March 23, 1977

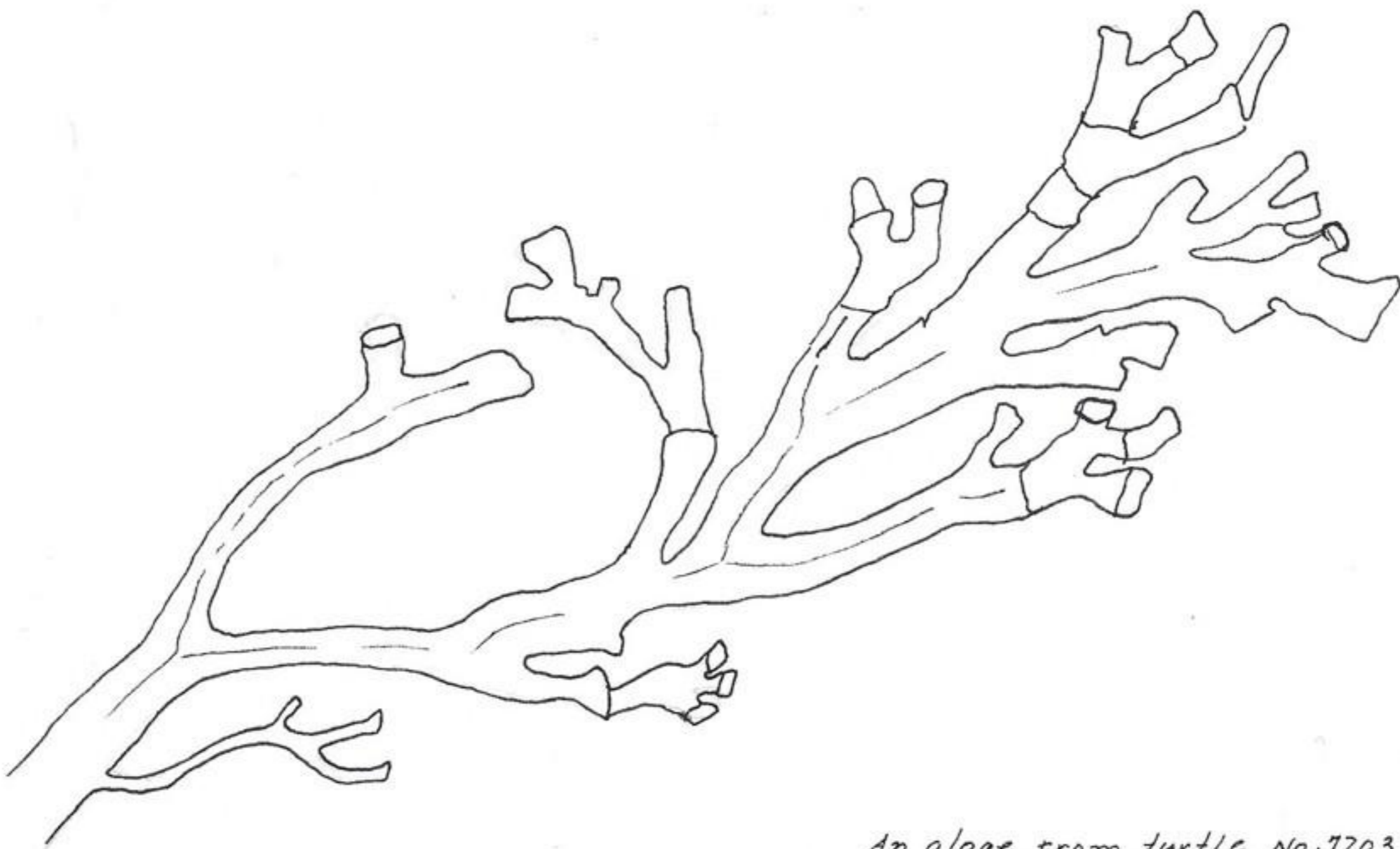
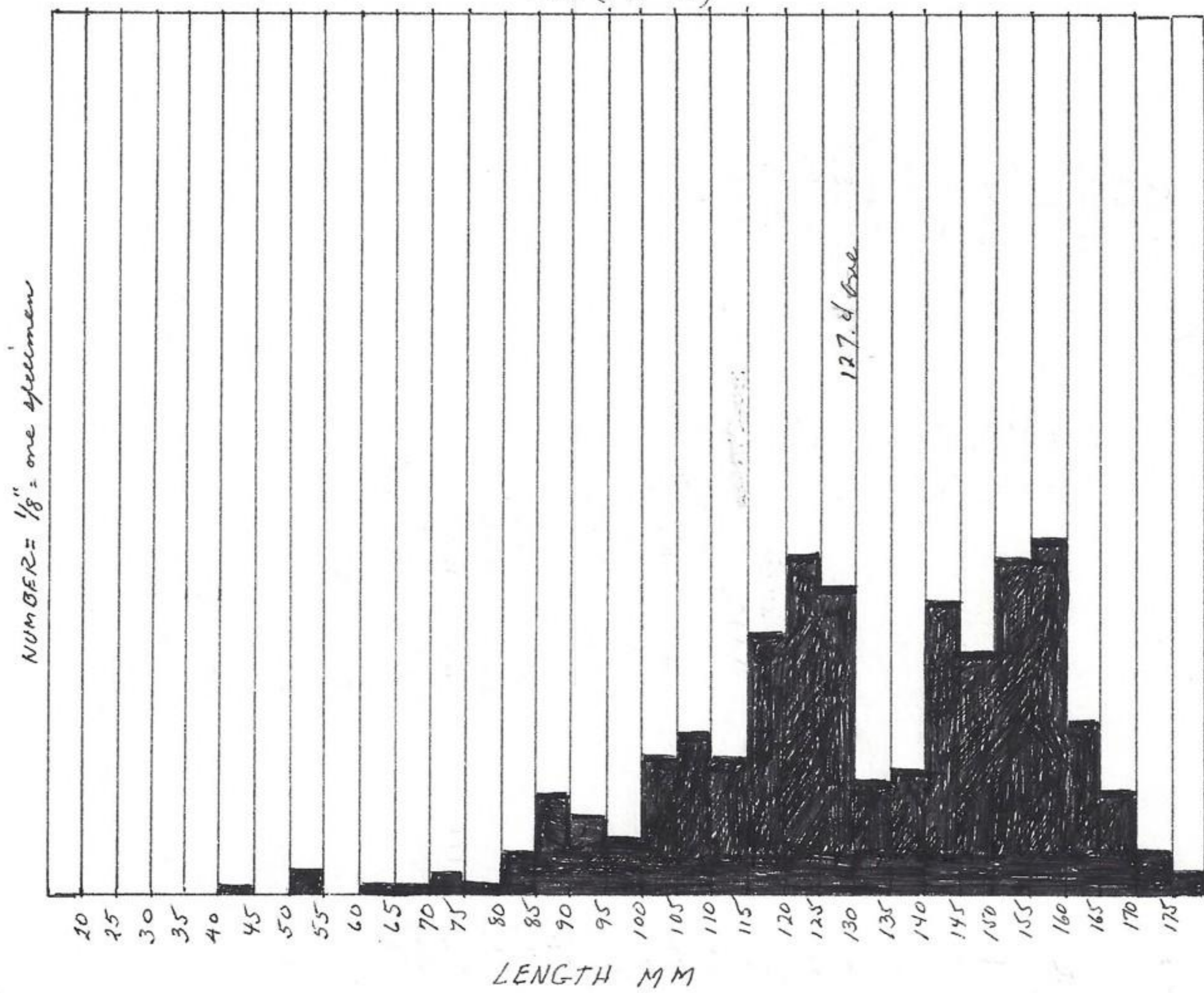
Checked condition of lake and made census of the unionids



From the west side of lake along the line indicated in red collected or rather measured all Leptodea laevis and the largest of 3 or 4 other species. measured all (total length) except some that were buried and measurement to elevate. They are recorded by sections of 3rds and successively recorded; (beginning at 3rd section then back to first and second 3rd)

159-148-126-92-157-117-138-158-120-148-107-147-79-110-139-
 73-106-112-143-154-166-154-162-122-152-138-127-157-165-157-148-
 127-138-115-123-124-92-100-43-116-111-91-121-84-74-86-128-127-120-123-122-
 148-111-117-170-103-124-127-106-145-154-137-99-168-97-116-151-161-126-
 153-160-104-153-158-157-103-152-154-153-144-97-108-124-127-134-143-156-
 68-93-152-140-140-128-123-81-153-116-123-103-111-110-127-157-117-160-
 128-157-130-147-86-(beginning more sandy beach)-103-124-107-103-102-107-143-
 121-144-143-123-120-119-130-50-53-127-126-123-101-122-127-95-116-147-127-
 160-161-161-152-110-90-122-117-120-147-132-123-111-155-131-140-152-117-
 138-127-137-136-126-128-86-87-117-151-144-122-127-111-170-88-127-123-
 119-143-144-140-124-123-120-118-126-128-127-156-128-103-88-117-106-158-
 103-130-102-130-122-118-117(end directly N of mouth drainage on south side of
 lake). Now back to beginning nearest the body of water. 158-153-151-153-146-
 152-141-155-170-158-169-163-168-112-107-152-143-109-80-110-147-148-
 129-142-122-163-158-162-151-155-160-152-157-150-164-155-159-147-175-
 160-115-150-146-168-108-149-118-109-150-142-147-156-150-142-110-118-158-
 157-119-187-162-162-152-143-147-159-99-177-171-147-122-107-170-152

14.8 (177-43)

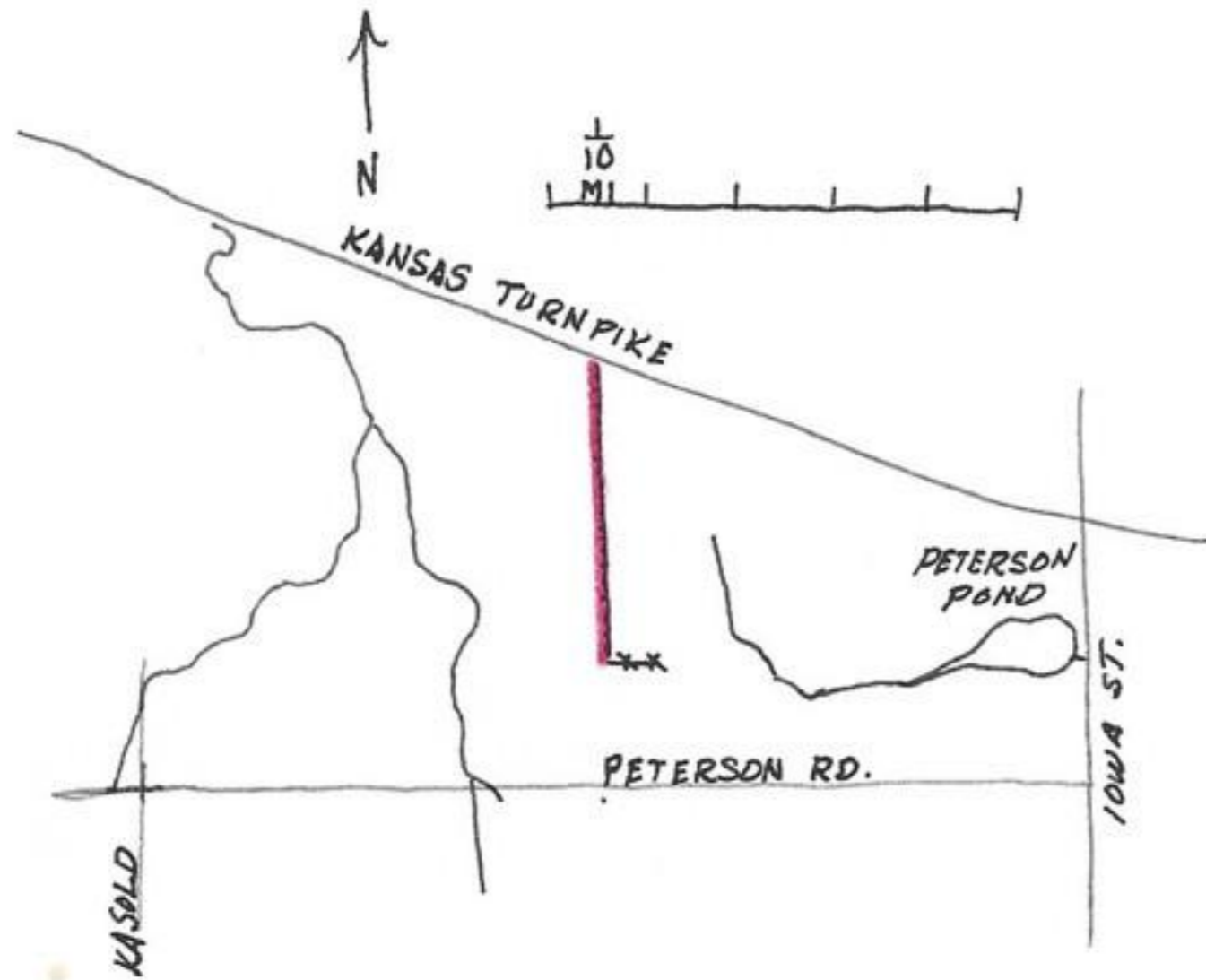
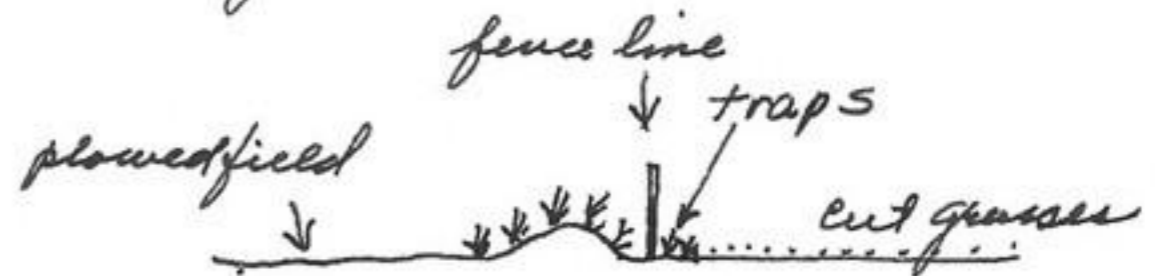


An algae from turtle No. 770323-1
 MICROTHAMNION KUTGINGEANUM
 (spelling?)

13/10 mi N, 115/20 mi. W Lawrence (P.O.), Douglas Co., Kansas

March 26, 1977

From trapline of 50 museum snap traps set along utility line from Kansas Power Co along fence line grown to grasses. Plowed field to W, cut grasses to east



This fence line has been trapped on previous years and these records should be compiled for trends. One year most mammals were *Synaptomys*, last year *Sigmodon* this spring neither. It is surprising that this area repopulates itself after repeated trapping as if removal of mammals makes more space for more mammals.

770326-1	<i>Microtus ochrogaster</i>	151-32-20-11-43 gms ♀
770326-2	"	151-32-20-11-59 gms ♀
770326-3	"	158-35-20-10-
770326-4	"	144-28-20-11-40 gms ♂ testes 11 mm
770326-5	"	148-32-19-11-39 gms ♀ 0x4 emb. 21 mm
770326-6	"	151-31-19-11-43 gms ♀ 2x2 emb 3 mm
770326-7	"	148-36-22-11-39 gms ♂ testes 11 mm
770326-8	"	142-33-20-10-40 gms ♂ testes 14 mm
770326-9	"	154-31-20-11-41 gms ♂ testes 13 mm
770326-10	"	147-31-19-11-36 gms ♀ 1x3 emb 9 mm
770326-11	"	150-31-19-11-36 gms ♀ ut. enlarged
770326-12	"	151-33-20-12-43 gms ♂ testes 12 mm
770326-13	"	155-36-20-10-44 gms ♂ testes 13 mm
770326-14	"	154-33-20-11-63 gms ♀
770326-15	"	153-33-21-11-49 gms ♂ testes 13 mm
770326-16	"	141-31-20-11-32 gms ♂ testes 12 mm
770326-17	"	150-34-19-11-35 gms ♀ 1x2 emb 2 mm
770326-18	"	136-28-19-11-24 gms ♂ testes 9 mm
770326-19	"	127-27-19-10-22 gms ♀ ut. normal
770326-20	<i>Peromyscus leucopus</i>	178-78-23-16-23 gms ♀
770326-21	" <i>maniculatus</i>	143-52-18-15-24 gms ♂
770326-22	<i>Reithrodontomys megalotis</i>	127 55-27-12-5 gms ♂ testes 6 mm

770326-23	<i>Peromyscus maniculatus</i>	151-61-19- ¹³ 13 -23 gms. ♂ testis 10 mm.
770326-24	"	146-59-20-13-17 gms ♂ testis 10 mm
770326-25	"	148-52-19-13-21 gms ♂ testis 10 mm
770326-26	"	146-58-18-14-17 gms ♂ testis 10 mm
770326-27	"	143-45-19-13-20 gms ♂ testis 10 mm
770326-28	"	136-55-19-13-12 gms. ♂ testis 6 mm

1 1/10 mi downriver from mouth Oakley Creek, Kaw River, Douglas Co., Kansas.

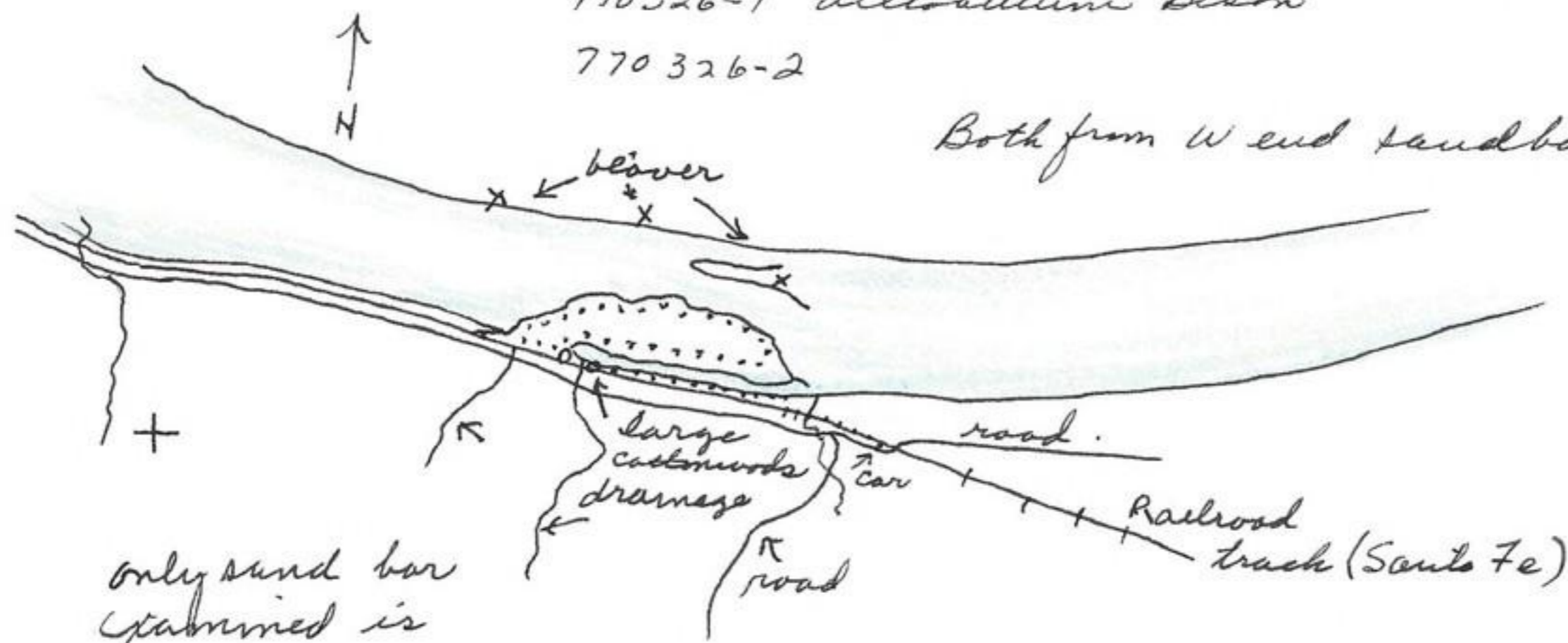
March 26, 1977

Inspected sandbar for artefacts and collected the following:

770326-1 acetabulum Bison

770326-2

Both from W end sandbar.



Observed 6 lesser yellowlegs which arrived from down river. They alighted about 100 ft from me and fed in shallow water along the edge of the sandbar. They seemed more active and nervous and maintained a close formation even as they fed. After working about 150 up river, they left. 2 kingfishers in area, one dropped down to water from about 150' high much on the order of a duck. 2 red-breasted mergansers slept along the edge of a sandbar in middle of the river. In the lower end of creek that enters the Kaw where road begins hillside grade noted two three seasonal levels with the third one graded to the Kaw River.

Lake View, Douglas Co., Kansas

March 26, 1977

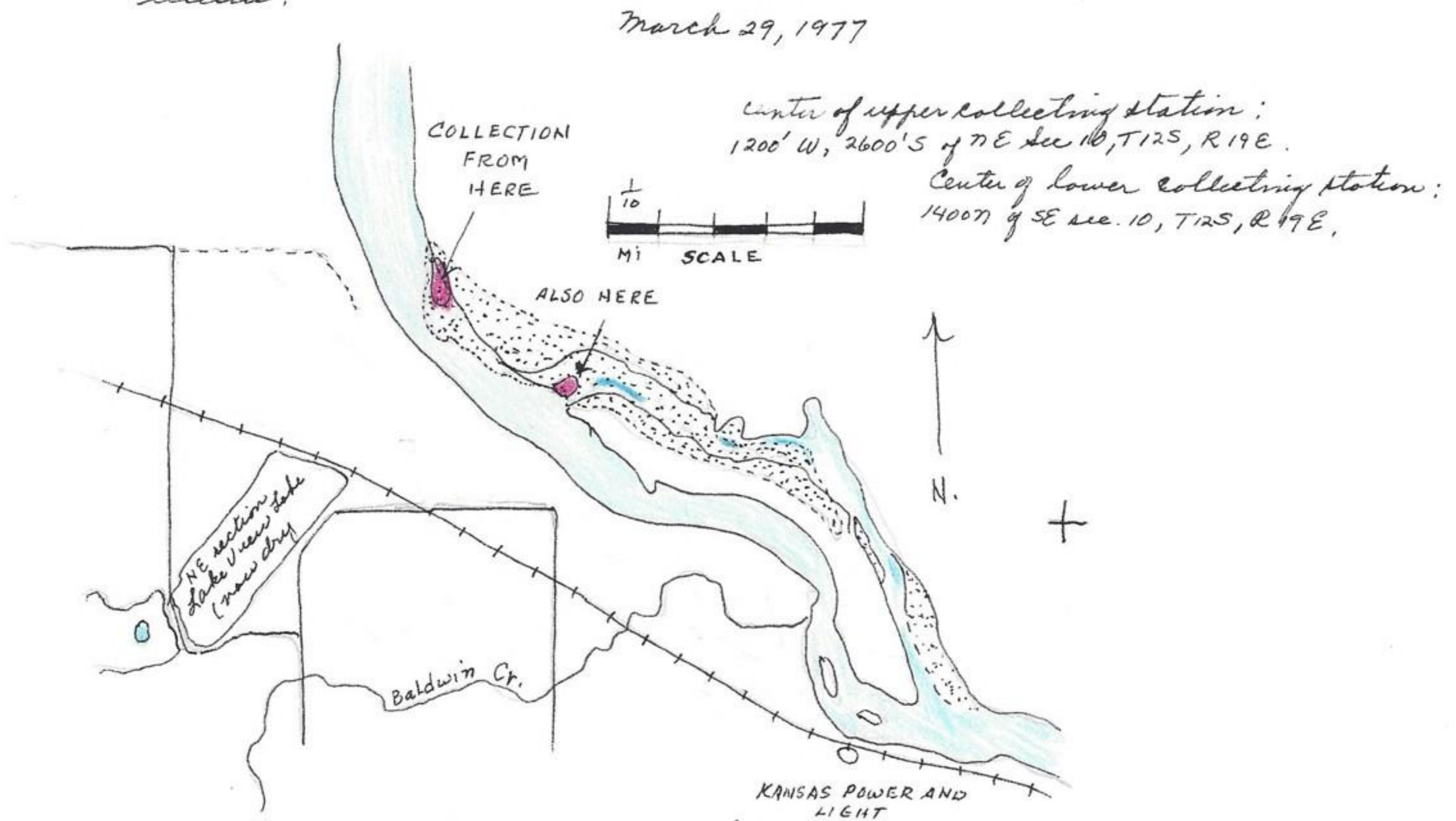
Checked last remaining pool of water (winter fish-kill pond) to see if any fish survived. Noted two *Cyprinus Carpio* that had just died and were in water on beach. One measured 138 mm standard length, the other 136 mm. Also three ^{black} bullheads that measured 189, one 148 and one 203 mm standard length (*Ictalurus melas*). The black bullheads have the highest tolerance for oxygen deficiency.

One dead red eared turtle not over 3 or 4 days old measured 131 mm length of carapace. This turtle was covered underneath and on sides with the same algae as identified on March 23, 1977 (see notes of that date).
Two *Leptodea laevissima* taken alive from the water at edge of pond and placed in aquarium measured 158 and 168 mm ^{having} ~~total~~ greatest length. The dead fish, ^{in the last day or two.} recently died, were the only fish observed in the pond and had survived the winter kill of fish at Lake View.

402 Yorkshire, Lawrence, Douglas Co., Kansas
March 28, 1977

Photo 770328-1 of sunset from home.

1 3/10 mi. up Kaw River from Kansas Power and Light Co., Douglas Co., Kansas.
March 29, 1977



measured a *Lampsilis anodontoides anodontoides* as 105 x 50 mm and a *Lampsilis radiata schuquoidea* as 105 x 59 mm. These are the most common unionid including *Leptodea fragilis laevissima*. Above are numbered respectively 770329-1 and 770329-2.

In the Combined collecting areas (2) collected the following bones and artifacts:

- 770329-1 distal femur
- 770329-2 Calcaneus
- 770329-3 tibia - fibula

- 770329-4 leg bone
 770329-5 ulna or fibula
 770329-6 scapula
 770329-7 leg bone
 770329-8 scapula
 770329-9 tibia or fibula
 770329-10 tibia - fibula
 770329-11 humerus
 770329-12 femur
 770329-13 tibia
 770329-14 rib
 770329-15 leg bone
 770329-16 ulna
 770329-17 thoracic vertebra
 770329-18 ulna
 770329-19 rib
 770329-20 leg bone
 770329-21 thoracic vertebra
 770329-22 leg bone
 770329-23 humerus
 770329-24 vertebra
 770329-25 humerus
 770329-26 rib
 770329-27 humerus
 770329-28 leg bone
 770329-29 radius
 770329-30 cannon bone
 770329-31 tibia
 770329-32 femur
 770329-33 leg bone
 770329-34 leg bone
 770329-35 radius
 770329-36 thoracic vertebra
 770329-37 radius
 770329-38 thoracic vertebra
 770329-39 " "
 770329-40 " "
 770329-41 thoracic vertebra
 770329-42 " "
 770329-43 skull bone
 770329-44 pelvic girdle

- 770329-45 pelvic girdle
 770329-46 scapula
 770329-47 "
 770329-48 vertebra
 770329-49 skull, horns
 770329-50 lower ramus & teeth
 770329-51 lower left mandible, Sus.
 770329-52 " right "
 770329-53 upper max. (2 teeth)
 770329-54 " " "
 770329-55 tooth
 770329-56 lower left mandible & teeth
 770329-57 " " " " "
 770329-58 skull,
 770329-59 horn & skull
 770329-60 first phalanx
 770329-61 2nd "
 770329-62 2nd "
 770329-63 3rd "
 770329-64 skull bone
 770329-65 astragalus
 770329-66 calcaneus
 770329-67 2nd phalanx
 770329-68 1st phalanx
 770329-69 2nd "
 770329-70 2nd " (dist.)
 770329-71 skull fragment
 770329-72 navicular bone
 770329-73 condyle
 770329-74 skull frag.
 770329-75 vertebra
 770329-76 skull frag.
 770329-77 astragalus
 770329-78 "
 770329-79 "
 770329-80 "
 770329-81 bone
 770329-82 vertebra
 770329-83 skull frag.
 770329-84 ~~fish~~ fish vertebra
 770329-85 leg bone.

- 770329-86 Cannon bone
 770329-87 bone
 770329-88 3rd phalanx
 770329-89 scapula
 770329-90 humerus condyle
 770329-91 femur condyle
 770329-92 ~~atlas~~ atlas
 770329-93 tarsal or carpal
 770329-94 rostrum ?
 770329-95 distal condyle cannon
 770329-96 cervical vertebra
 770329-97 " "
 770329-98 thoracic vertebra
 770329-99 " "
 770329-100 femur
 770329-101 cervical vertebra
 770329-102 " "
 770329-103 distal femur condyle
 770329-104 " " "
 770329-105 knife ?
 770329-106 tooth
 770329-107 tooth
 770329-108 jaw
 770329-109 patcher
 770329-110 bone

On a sandbar and in shallow water on S side of river south of easternmost collecting area were approx. 1000 ring-billed gulls resting. These gulls fed at the Lawrence Sanitary landfill and rested in river between feedings. It would be interesting to find out their schedule. At the landfill there would be 3 or 4 hundred gulls in air above the refuse being dumped by the garbage trucks. On the river were 6 godwit ducks, 1 lesser yellowlegs and 2 cranes, the latter associated with the gulls.

Perry Reservoir, Jefferson Co., Kansas
 March 29, 1977

It was reported that there were 150 pelicans N of Paradise Point in shallow water on N side of bay.

Lawrence, Douglas Co., Kansas
 April 1, 1977

First martin observed this morning at 8:00 A.M. at 402 Yorkshire Dr. There were 8 in area of a martin house used on previous years.

Lawrence, Douglas Co., Kansas
April 1, 1977

Recorded on cassette by Jeffrey P. Lysaught of 4409 W 62 Shawnee Mission, Kansas of a conversation between Lysaught and Miss Mc Gregor of Lawrence, Kansas at her home.

[First let us talk about how you first came to know about the family.] They lived near where my sister and her husband lived. My sister and her husband then lived at 1538 Vermont and the Slyches lived at 1617 or 1645, I cannot be sure but at any rate the 16 hundred block on Massachusetts. My sister and Mrs. Slyche belonged to the same club and knew each other well and much earlier than that when Mr. Slyche was a student here at K.U. and Mr. Rice also was a student, they knew each other then, and Mr. Rice at that time was not married and lived with his parents in the old stone house just north of the Catholic Church. It is now gone. It was torn down oh about four, five or six years ago. Well, at any rate, when the Slyches were married they came to live at the Rice's home, that would be my brother-in-law's parents home in this old stone house. [What year do you think this was, roughly.] Well, probably in the 1880's but I cannot give you the date. My brother-in-law graduated in 1891 from the University and Mr. Slyche must have been about the same age, and when he was a student, Mr. Slyche, he lived in, well, to be called a trailer now, but of course people didn't know about trailers in those days, but at any rate, he lived in a wagon that was covered over and I think that at one time lived with another fellow, sometimes alone with himself and so on. He was rather short of money. I'm not sure whether he was employed with the University yet, I think not but I think he may have been graduated or almost at the graduation point when he married. Now his wife's name was Ophelia and I can't right now but I may before you leave, think of her, last name at that time. [Wasn't it Aptel?] Yes that^{is} it Aptel-A-X-T-E-L and she came from Wheaton, I mean she had gone to school at Wheaton College, Illinois. Now she had met him I am not quite sure,

but at any rate she was new to the town when they were married and he brought her here and people thought of all the silly little creatures they had ever saw. She was a pretty little thing rather small woman and very pretty and wore her hair in curls down her back and they thought that why did a man that had no more financial prospects marry such a helpless person but I tell you she turned out to be the man of the house, she had more get up and go and more planning ability than most women and they lived at the Rice's home for two or three years and then they moved into a house but I cannot tell you at all in what part of the town it was. However I can tell you one thing about it of their move from here that might indicate something of their personality. As I said she was a dainty prettine doll type person and he was a big tall man with flamboyant manners and hair, he wore it like mark Twain, remember the mark Twain hairdo. I never saw Mr. Lyche myself, well, I seen him at a distance but I never knew him but I had seen pictures of him and he really was an excellent taxidermist but he liked to think he was a Shakespeare scholar. He lectured on Shakespeare and he was very interested in it. You are too young to know that there was an argument as to whether Shakespeare wrote his own plays or whether somebody by the name of Bacon [Sir Francis Bacon] did it. Well he, I forgot how excited he was, but he was quite interested in that and had lots of ideas on it and sometimes he lectured on just that part of Shakespeare. [I noticed that when I went to a museum in Topeka and one of the things that I ran across was somebody gave a talk on Shakespeare. I was doing well with his work with animals until all of a sudden Shakespeare popped up. I'm glad you cleared that up for me.] Well, the only actual written reference that I have ever seen to that was in the club that my sister belonged to and that Mrs. Lyche and I later and I wrote a history of it. There is a mention of him being a guest speaker on Shakespeare, not on animals. He did lecture on animals too but as the zodiac was a literary club, a city club, so naturally. But he thought he knew quite a bit about Shakespeare and Mrs. Lyche did. She was proud of him, very proud of him and I think she would have been offended and hurt if

anyone had suggested that he had more ability than she did, but I still think she did. Well, anyway, at the things that indicate their character a little bit there are a couple of little stories, at least there is one that I would like to tell. Once when the children were quite young she went to the town of Aptel which I think was named for her people anyway she went out to Aptel to visit with her relatives and when she came back he met her at the station with a horse and buggy which of course in those days and drove her to a house she had never seen before, that was her new home, he had bought it and moved while she was gone, moved everything. He didn't consult her at all, she didn't know he had even moved, well it was a better house than she had been living in and a better part of town, but I cannot just say where either one was. But at any rate, but the thing I can remember, now she told this herself, what I remember was she said "I was really naughty about it." I would be too. She said some things she never found and many things it took months to find them, he just carried them bodily into the house. Well when she had three children at that time, she thought it was almost too risky to take. Well anyway that would indicate quite a little about each of their characteristics. She would no more of thought about moving his office without consulting him about it. Well, I'm not sure I can tell any more antedates like that. I do remember her saying that he was never at home when any of the children were born. That is a little indication of his inability to understand anything that was unpleasant in any way but left her to do it alone. Course in those days we did not have a hospital here but they did have midwives who someone did come and take care of her but still he saw to it that he was not around and the first child they had died I think at birth. Then they had Ruth who was the only daughter, and then there was Walter, a son who at one time ran a bicycle shop here in Lawrence, he was a good mechanic. He was a little bit of a fellow about the size of his mother. I never saw him either. But at the time I knew the Dykes best he was then working with the Ford Motor Company in Detroit, I never did see him. Then the next one was

Lindsay, Lindsay Louis had the same name as his father and he became a doctor but he didn't last very long, he died quite young. And George, the youngest boy wanted to be a doctor, he wanted to be just as good a doctor and maybe an even better doctor as Lindsay was but he never got past, he could never get into the medical school. They used to have the premedics here in Lawrence and then they go to Kansas City for the medical course but he never did get there. Well, he finally gave up on that and finally became a pest control man. Now he had the same type of abilities, I would say, as his father, very dexterous hands, extremely so as his father had and I suppose tapidermists almost has to have and that came in handy with his pest control, also he knew enough about chemistry and all the other things to go with background for pest control work so it was handy what he knew what he had learned in trying to become a doctor. Did you make any contact with him in Kansas City or find out anything about him. [I have a friend trying to get a hold of him.] He may not be living, I haven't seen him since Ruth was ill one time. [Was that his daughter?]. Ruth Ophelia, her mother's name was Ophelia and she was a highly nervous person but I think she had experiences as a young girl that were partially to blame for that, I don't think it was altogether genetic. Well, she was raped by a colored man at one time and it really did things to her and she was braver than the boys and was more like her mother that way but she was tall like her father, she looked like her father and I don't know whether I should mention this or not, it should not come out in any publication but she committed suicide largely because she had the feeling that her life had never amounted to anything and when her mother became elderly and had to have someone stay with her, it was Ruth who stayed. The boys paid no attention to her. I stayed two school years that is from September to June with Mrs Dlyche at the house. I remember she told me at Christmas time one year I was there she had a card from Walter, the one that was in Detroit and was the first she had heard from him since the Christmas before. They did not pay any attention to her, it was all up to Ruth.

However, I want to say that George was better. Of course he was at home longer then and when he went to Kansas City he was closer. Lindsay, I think probably paid some attention to his mother and he had a little boy, he must have been five or six years old at the time his father died. Lindsay died quite young and he would come at least once a year I'm sure and bring the little boys to their grandmothers; and they paid some attention. But they were very indifferent and Ruth carried the burden of it. Well, when Mrs. Slyche became around 90 years old she became a little bit hard on Ruth, she had to be practically home all the time, well she could get someone to stay in the afternoon or something with her mother but she did not feel that she could afford somebody all the time to give her more freedom. With everything combined life was pretty hard on Ruth and she finally just gave up and committed suicide and I always kind of blame it on the doctor who was attending her mother who was keeping her alive. She did not want to live. She was well over her 90's and it was such a burden to Ruth and he was a very fine doctor. I won't say other than that but if you sometimes sacrifice the living for the dead it is more humane, especially when the dying doesn't want to live. Well anyway, Ruth did not commit suicide until after her mother's death but I think the experience took too much from her. Now when I lived with Mrs. Slyche she was at 1617 Massachusetts, I think was on the ^{west} ~~south~~ side of the street was an odd number and my sister then was living at 1538 Vermont and going to this club and it was Mrs. Slyche that proposed my name for the club so after all that close association she thought me good enough to go into the club. Well at any rate another thing about Mrs. Slyche, she was a scholar herself and when I lived there she spent most evenings reading aloud. She would read aloud until her voice gave out and then I would read. She liked to read, and we read heavy things, oh, the story of the missionaries in California and that type of thing, it was not just stories, just silly stories or anything like that, she read good things. We even read some Shakespeare.

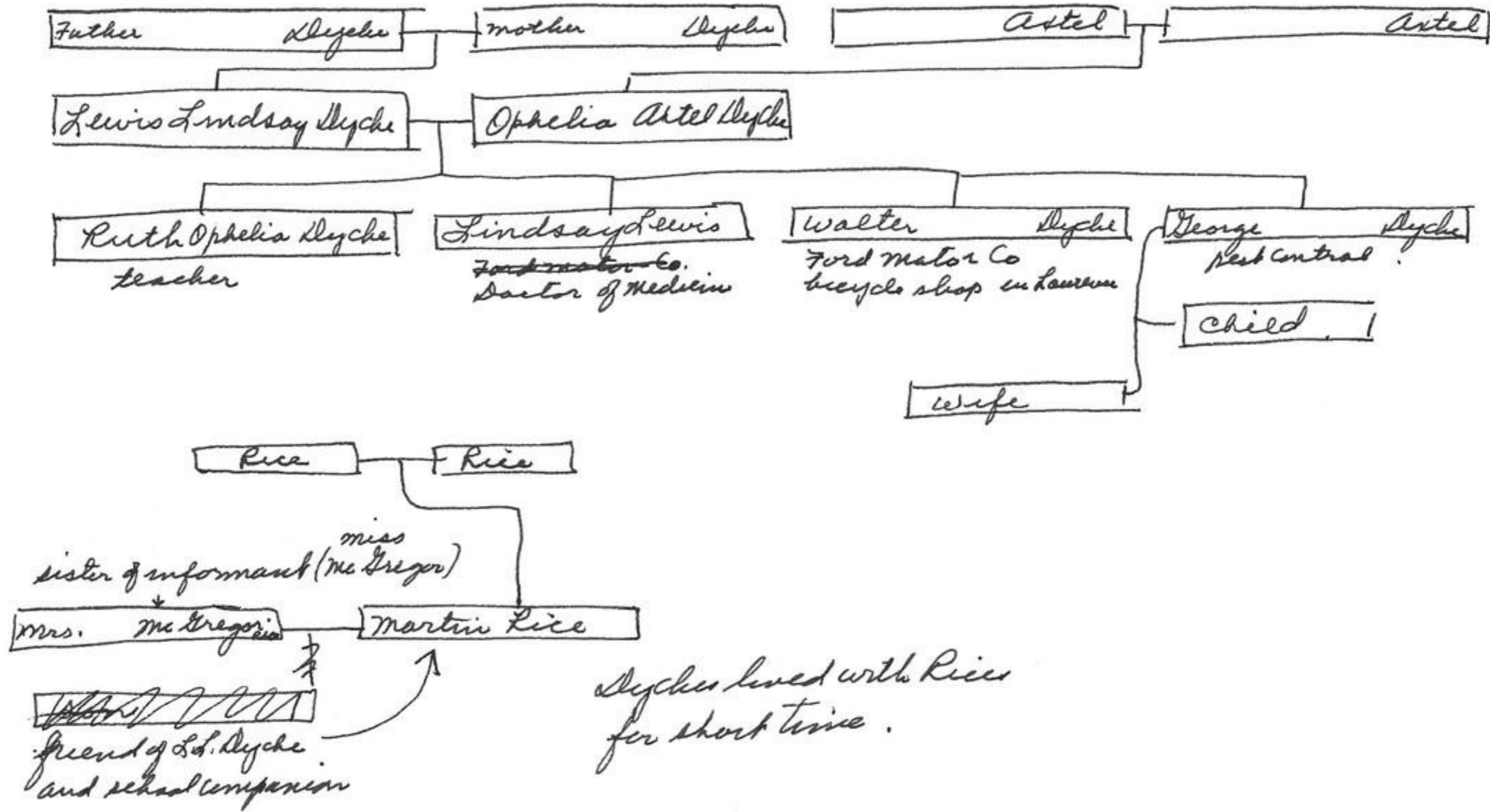
and she was very proud of him and always praised his Shakespeare. She seldom mentioned his trips. I don't think she liked those trips very well. He would be gone you know over a year sometimes. Course they were long trips and it was hard to travel. He was with Peary when he discovered the north Pole. [Did she make reference to that?]. Yes, she did to that. But as far as collecting the animals, she couldn't have cared less I guess, although she was proud of him. The Lyche Museum you see all the animals are his captures and that display went to Chicago World Fair in 1893. It made a name for the University at the time and put us on the map. [Did she ^{and see the display} go up there?]. Oh no, no, no I don't think she ever went, she stayed home with the children. [Did you ever talk to any of the children about their father?]. They didn't talk, I didn't know any of them very well except Ruth. She taught in high school, she taught at Saint Marys, I guess that is Saint Marys not far away from here, a Catholic school near Atchison. She taught there several years and she taught elsewhere, I cannot tell you everywhere but she taught one year in the South, someplace in Alabama. But she was a little erratic and a little hard for her to keep a job. I think she knew her subject alright, home economics I believe, I'm sure it was. She was very good to her mother and no daughter could have been better or kinder than she was to her mother and I think she was very proud of the boys, she was very proud of Lindsay, I'm sure, the one that was the doctor. I don't recall her talking to the father very much. [She was probably pretty young, although older than George]. No she was in high school I think when his father died and Ruth was quite a bit older. No she was not a child at all. In fact I knew the family before the father died but I didn't happen to know the father. One thing that I remember about the place where they lived, out in the backyard there was an elk I believe, something of that nature, life size, made of plaster I suppose, hard enough to stand the weather. Well that was his interest you see animals and he was skilful with his hands. He had made the object itself and when I first came to visit my sister, I lived in South Dakota at the time and

came in 1916 to visit her. They then lived at 1530 Vermont and I was curious about that backyard with the animal in it. I thought it was alive and I went over to look at it but it was only stone and plaster. [Did he have anything else in his backyard?]. He may have had earlier but this was the only piece I ever saw there and that disappeared before Mrs. Myche died. Before Mrs. Myche died after I visited with them but before anything else happened they built a small house in the back. The house they lived in was a big one. They rented rooms sometimes in the third story, so it was completely furnished in the third story. I had a room in the second story. One year while I was there George was there but somehow I never talked to him very much. I knew him alright. I can't say what he would have said about his parents or anything. Well, they built this little house in the back of their yard and rented it and I think the idea when they built it was to move into it but I don't think that Mrs. Myche could ever live in any other house. It had been their home when Mr. Myche was living, he had been very proud of it and well anyway how do you get out of a big house into a little bit of one. [It would be a hard move, that's a step down.] Yes that's a step down and how do you dispose of your things, you almost have to really get rid of things that she didn't want to depart with, so they never moved. Ruth never lived in the little house either, but friends of mine lived there for quite some time. It's quite a nice little house. [Did the boy or Mr. Myche help to build the house?] No, Ruth was responsible for building that. It was after her father's death and the boys were away. Now the boy George who lived in Kansas City, and he may yet, but you cannot locate him, it is odd that he would not have a name in the ^{telephone} directory if he is still living. He would be about my age I'm afraid, might be a little bit younger, but he is not a young man at all. But after he went to Kansas City for a while and away from home he married a very attractive girl. I never knew her very well but she was up several times to see her mother-in-law and I thought that he had

done very well. She seemed nice to him in every way and she was nice looking and evidently had had some means so I think he did very well and seemed to be proud of them. George had lots of good points and is the only one I knew very well out of the boys I knew. [Did your brother-in-law, Mr. Rice, your sister's husband, know Mr. and Mrs. Slyche?] Mr. Rice and Mr. Slyche had known each other when they were students at the University and then when the Slyches were married they came to live with Mr. Rice's parents in the old stone house north of the Catholic Church, my brother-in-law's parents home. So they knew each other, oh yes. Mr. Rice always called her Mrs. Ditch. It kind of pleased her to be teased about it. After they moved there after my sister and Mr. Rice were married, they knew each other very well. [Did they do social things together?] I don't know that the Rices and Slyches had much to do as couples but the men knew each other at the University, my brother-in-law, a teacher in Physics, Professor Martin Rice who taught physics for some fifty years there (K.U.) and of course Mrs. Rice and Mrs. Slyche knew each other thru the club, also thru the church, Slyche belonged to the Congregational Church and we belonged to the Plymouth Church at 9th and Vermont, the place where there are a lot of chimneys on top. So the families knew each other and it's possible that they were in the same groups. Now, the Rices belonged to several group things, book clubs. You didn't ask to get in, you were invited. That is true with these women's clubs. You see there are a number of study clubs. The one my sister and Mrs. Slyche and I belonged to was the Zodiac Club, now don't mix that up with astrology. It really doesn't have anything to do with it except for the name. I say sometimes, because it is amusing, while I was writing up some material of the Zodiac Club I was up at Spencer Library and I came in and asked for some books on the Zodiac. I had been there before and Mr. George Griffin knew what I wanted and this young man followed me right into the room where I was going to work and he said "Do you belong to the Zodiac Club?" I said yes and he said "How

did you get in so soon and how did you manage to get in?
 Get in soon, why I have been a member for 40 years,
 I guess, and he looked so surprised. Well then later
 I found out that there was an astrology club that had
 just started. "Well how did you get in when I haven't
 been able to. But when I explained to him what I
 meant by the Zodiac Club, he just vanished and he wasn't
 the slightest bit interested in me then. The story as to
 how it got its name, it was called something else and
 then something else and then one day they were discuss-
 ing about getting some name that was somewhat
 different, they didn't want to call it the Ladies Literary
 Club or something like that and one of the early members
 husband came to pick up his wife to take her home and
 he suggested they call it the Zodiac Club. It was different.
 If you meet some other zodiacs, they won't tell you that
 story. They will say that it is from the twelve signs of
 the Zodiac because there were twelve original charter
 members and it was to meet once a month for the twelve
 months of the year. Well, when I read all the back
 minutes of the secretary book there were nine charter
 members, it was to meet from September to June from
 the very beginning and there was no 12 anywhere in
 it. When I found out about the man suggesting the
 name, I believed that and that is what I put in the
 article. Well what else do you want to know? [That's
 fine so far]. The programs are given by the club
 members except the first meeting in the fall has a
 guest speaker and it used to be that on our Anniversary
 which happens to come near Kansas Day the 29th of June,
 we were organized on the 5th of February, so we always
 combined the two, our anniversary and Kansas Day and
 they usually had a guest speaker. They were usually
 somebody connected in some way with the University or a
 member or both. And you see Mr. Dyche was a Professor
 of the University and his wife was a member. It was a
 natural selection. But it was not animals he was talking
 about but Shakespeare. [I suppose the members would
 rather hear about Shakespeare than about animals?]. Yes
 that's true, we do not have that kind of lecturers they are
 always on literary subjects. You will have to come

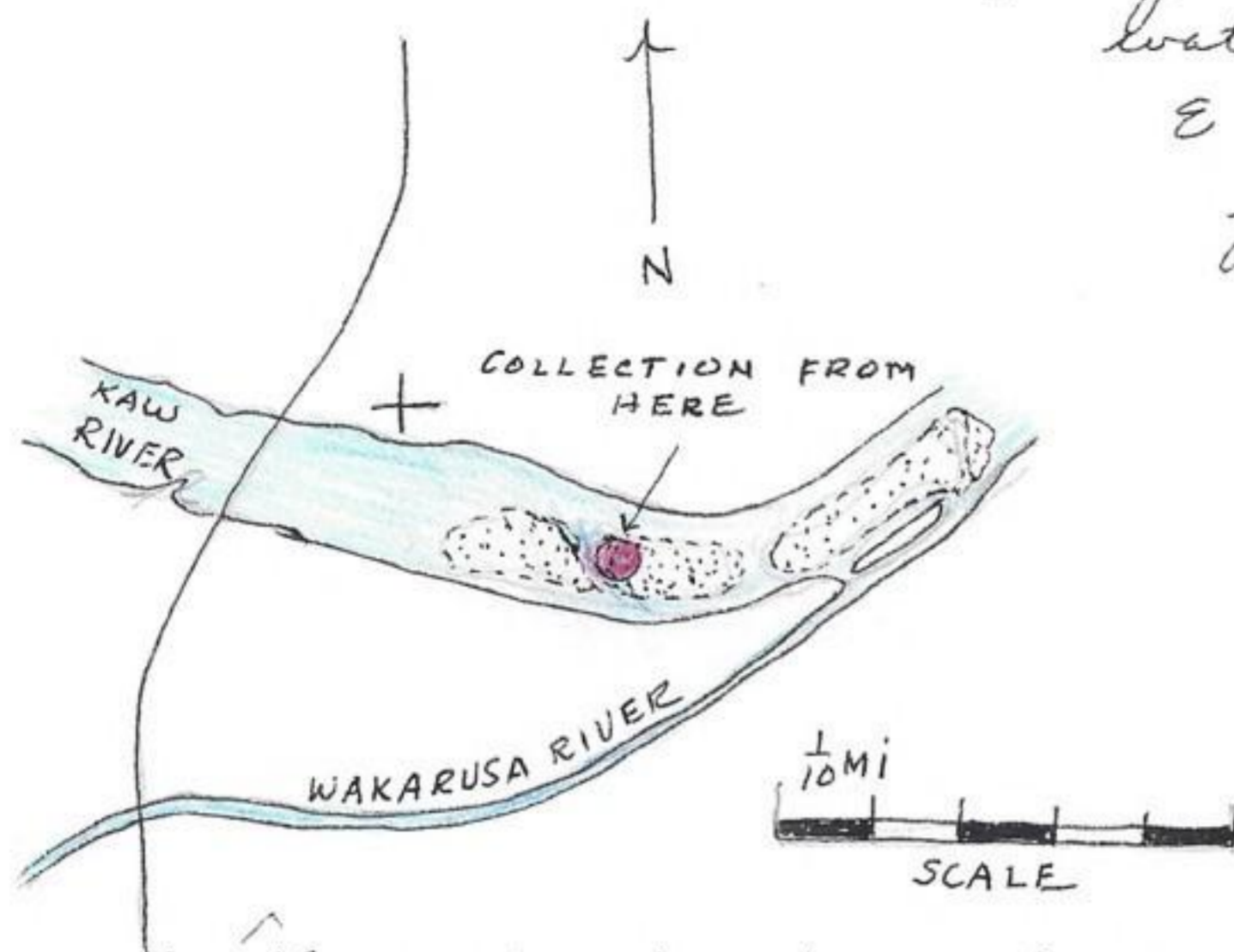
another day to talk about the Zodiac Club. I could talk endlessly on that subject. We will be 100 years old next year. Organized in 1878. [Was that the original national club?]. No this was strictly local. These nine ladies that met, they had heard of other ladies forming clubs and they wanted one too and it was a very worth while thing to do. It is still a very worth while thing. In the beginning there was no library in Lawrence and the University did not have any at that time but when it did finally have a library there was one room of the old Fraser and these women are mostly cultured women coming from New England, Mrs. Slyche herself had come from Illinois. Many of the other women had come from New England and they felt starved for something cultural so they wanted a club where they could learn something. They started in on English history, they spent four years on English history and had reached the reign of Queen Ann. First they had a teacher, well just one person assigned as teacher and the other people were supposed to learn their lesson. There was an assigned topic but they didn't do it that way, so they began with one person as teacher and four persons who were supposed to help out, well, after a while they reduced it to three, then two and then it wasn't very long until there was one leader and two assistants. (end of 30 minute reel).



Check Zodiac Club minutes for Syches talk on Shakespeare. not with Peary on N. Pole discovery. (contradiction)

4/10 mi. down Kaw River from Eudora bridge, Douglas Co., Kansas
 April 2, 1977

Specific position of collecting site at 800' S, 1400' E of NE Sec 4, R21E, T12S.
 Area of former shoal across a former sandbar,



exposing small gravel, stones etc. The deep water has shifted from S side of river to E side. new piracy along S side to join the Wakarusa River. Birds

in area were to water pipit that feed on various parts of the sand bar as well as on river bank. 6

Baird sandpipers feed in one group in shallow water. Two killdeer in area. Juncos (slate colored still in area along river edge.

The dominant shell is *Leptodea*

fragilis and out one in 50 is a *Leptodea levissima*. At several places now exposed are shallow holes in sand and gravel of former submerged area dug by fist? with edges slightly elevated and finer gravels. It is presumed that these are

deep while water was still deep enough for excavation and escape when holes become freed of water support. The bank on S side of river is as high and perpendicular as I have seen on the Kaw River and I will measure it when in area and with facilities. The channel between the Kaw and

Wakarusa is filled with a log jam. In previous years I always travelled the deepest part of river on the S side down to the mouth of the Wakarusa River but now this is the shallow part of river with only outlet high water channel. The sand bars were then on ~~west~~^{north} side of the river.

From the former shoal area from among the greater accumulation of gravels near the beginning of the sandbar and along cross channels collected several artifacts of bone and pottery. In general there are more bones at the head of the shoal than areas farther down stream from the shoal area but this is not always the case as some larger bones, especially the scapulae may be beyond among finer gravels.

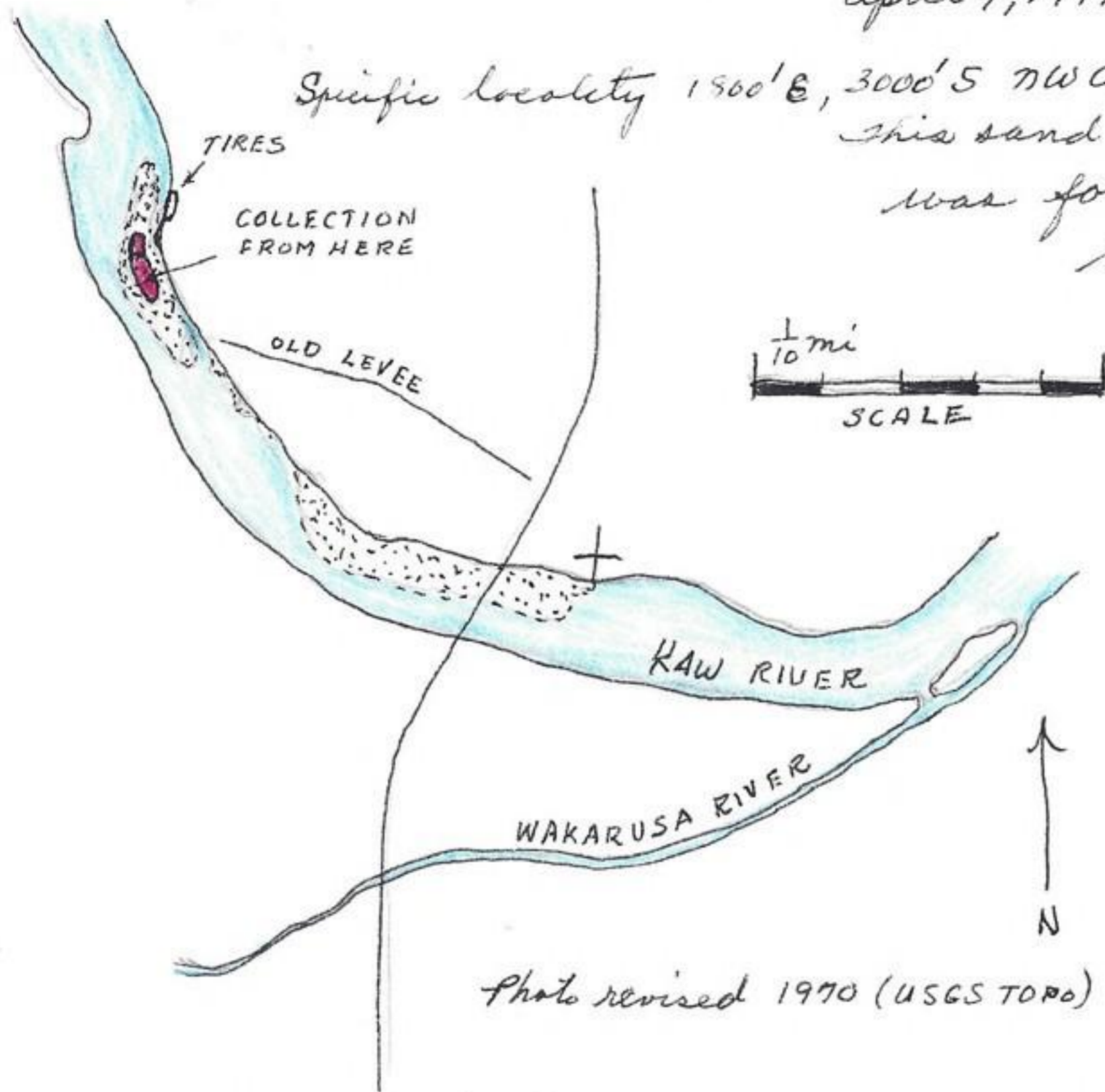
770402-1 lower mandible & teeth

770402-2 pig teeth

770402-3 lower left mandible & teeth

- 770402-4 antler base
 770402-5 lumbar vertebra
 770402-6 astragalus
 770402-7 2nd phalanx
 770402-8 humerus
 770402-9 humerus
 770402-10 lumbar vertebra
 770402-11 radius
 770402-12 atlas
 770402-13 metatarsal or metacarpal
 770402-14 thoracic vertebra
 770402-15 astragalus
 770402-16 pig teeth?
 770402-17 lumbar vertebra
 770402-18 astragalus
 770402-19 thoracic vertebra
 770402-20 end femur
 770402-21 thoracic vertebra
 770402-22 lower femur condyle
 770402-23 " " "
 770402-24 axis
 770402-25 thoracic vertebra
 770402-26 fused central & 4th metatarsal
 770402-27 astragalus
 770402-28 bony core squamosal of mammuthus
 770402-29 scapula
 770402-30 axis
 770402-31 scapula
 770402-32 rib
 770402-33 rib
 770402-34 scapula
 770402-35 metatarsal or metacarpal
 770402-36 tibia
 770402-37 metatarsal
 770402-38 acetabulum
 770402-39 femur
 770402-40 rib
 770402-41 rib
 770402-42 metatarsal or metacarpal
 770402-43 tibia
 770402-44 tibia
 770402-45 metatarsal

7/10 mi. up Kaw River from Eudora Bridge, Leavenworth Co., Kansas
 April 4, 1977



Specific locality 1500'E, 3000'S NW corner Sec. 32, R21E, T13S.

This sand ~~bar~~ bar is now in area that was formerly the deepest part of the river, and is W of the first rack jetty of a series between here and toward the Eudora bridge. The river as from 1970 revised edition and is not exactly like the river course today nor have I included sandbars except the ones that I examined or collected from. From the area where I collected and in about the center of

the strictly barren sandbar collected a set of 4 Killdeer eggs from slight depression in sand and lined with coarse gravels. The nest cavity was dry whereas the surrounding sands were wet from the morning rains. During the three hours I was on the sandbar did not see or hear Killdeer at the nest or in the area. As these eggs were fresh the parents were not as concerned as they would be in later incubation. This set of four ^(skeletal elements) eggs is no. 770404-1 Charadrius vociferans and measured mm x mm; mm x mm; mm x mm; mm x mm.

A single lesser yellowlegs arrived from down river and alighted on edge of beach, waded vigorously in water but did not feed and after about 1 minute left and gave its 3^{note} call as it continued up river. 2 crows only other bird in area except one Kingfisher. On bank on E side (indicated on map) are approximately 2,500 tires, mostly on upper edge of bank but extending from top of bank to river edge. In high waters these tires will be pulled into the water and distributed over the river bed below. Already 15 tires are on the next sandbar down river. A photo should be published in the local paper with the caption that this pile of tires will be taken photographed every month and published with criticism until the responsible agency for enforcing the pollution laws acts ^{on} the individuals

or individuals responsible for the pollution by requiring them to remove the tires from the bank of the river. The collectors should also clean up the river bed by removing the tires already dislodged from the river bank. This could create a national attention to a serious problem.

From the stooal area near the head of the sandbar collected the following artefacts and bones. These bone could be as old as late Pleistocene and as modern as the cow:

- 770404-2 max. teeth, *Odontocetus virginianus*
- 770404-3 max teeth in upper jaw
- 770404-4 pot - sherd
- 770404-5 rib
- 770404-6 axis vertebra
- 770404-7 carpal bone
- 770404-8 tibia
- 770404-9 2nd phalanx
- 770404-10 tibia
- 770404-11 tibia
- 770404-12 axis
- 770404-13 base antler
- 770404-14 femur
- 770404-15 first phalanx
- 770404-16 femur.
- 770404-17 thoracic vertebra
- 770404-18 femur
- 770404-19 tibia fibula
- 770404-20 thoracic vertebra
- 770404-21 atlas
- 770404-22 cervical vertebra
- 770404-23 lumbar vertebra
- 770404-24 astragalus
- 770404-25 femur
- 770404-26 astragalus
- 770404-27 first phalanx
- 770404-28 basi-sphenoid - basi-occipital
- 770404-29 3rd phalanx
- 770404-30 femur.
- 770404-31 atlas
- 770404-32 tarsal bone
- 770404-33 thoracic vertebra
- 770404-34 tibia

770404-35 radius-ulna

770404-34 lumbar vertebra

770404-37 rib

770404-38 posterior end mandible

770404-39 metatarsal

770404-40 tibia

770404-41 thoracic vertebra

770404-42 right scapula

770404-43 metatarsal

770404-44 Calanews.

770404-45 left mandible and teeth, Odontileus rugenoncus, adult.

On return home noted sparrow hawk and flocks of common grackles at farm houses.

Kaw River, Bicentennial Trail, Douglas Co., Kansas

April 6, 1977

Took class on trail to end and returned by dike road. On trail from 1:30 to 4:30 P.M. On trail counted 60 male ridge across trail. Left car at 1:40. Will keep list of kinds of birds and mammals observed enroute. Black-capped chickadee, bluejay, pied-billed grebe in river, robin, golden-eye duck in river, fox squirrel, red-bellied woodpecker, slate-colored junco, Carolina wren, cardinal, ♂ redwing, blackbird, downy woodpecker, cottontail, yellow-shafted flicker, common grackle, lesser yellowlegs, ring-billed gull, mourning doves, meadowlark, cowbird, goldfinch, horned lark. One of the students (Rosemary Miller) reported having seen a bald eagle (adult) in trees approx. 2/10 mi. E Kansas Power & Light Co in late February of this year.

This area is already showing signs of trampling and off trail passage. The trail has been built for large groups of people and as a result the real scenic value is being destroyed. A single-file trail would be better. There was very little plant growth beneath trees, some wild onion and weeds. On the sand bar at end of trail one of the students found an Indian head. ☉.

Lake View, Douglas Co., Kansas

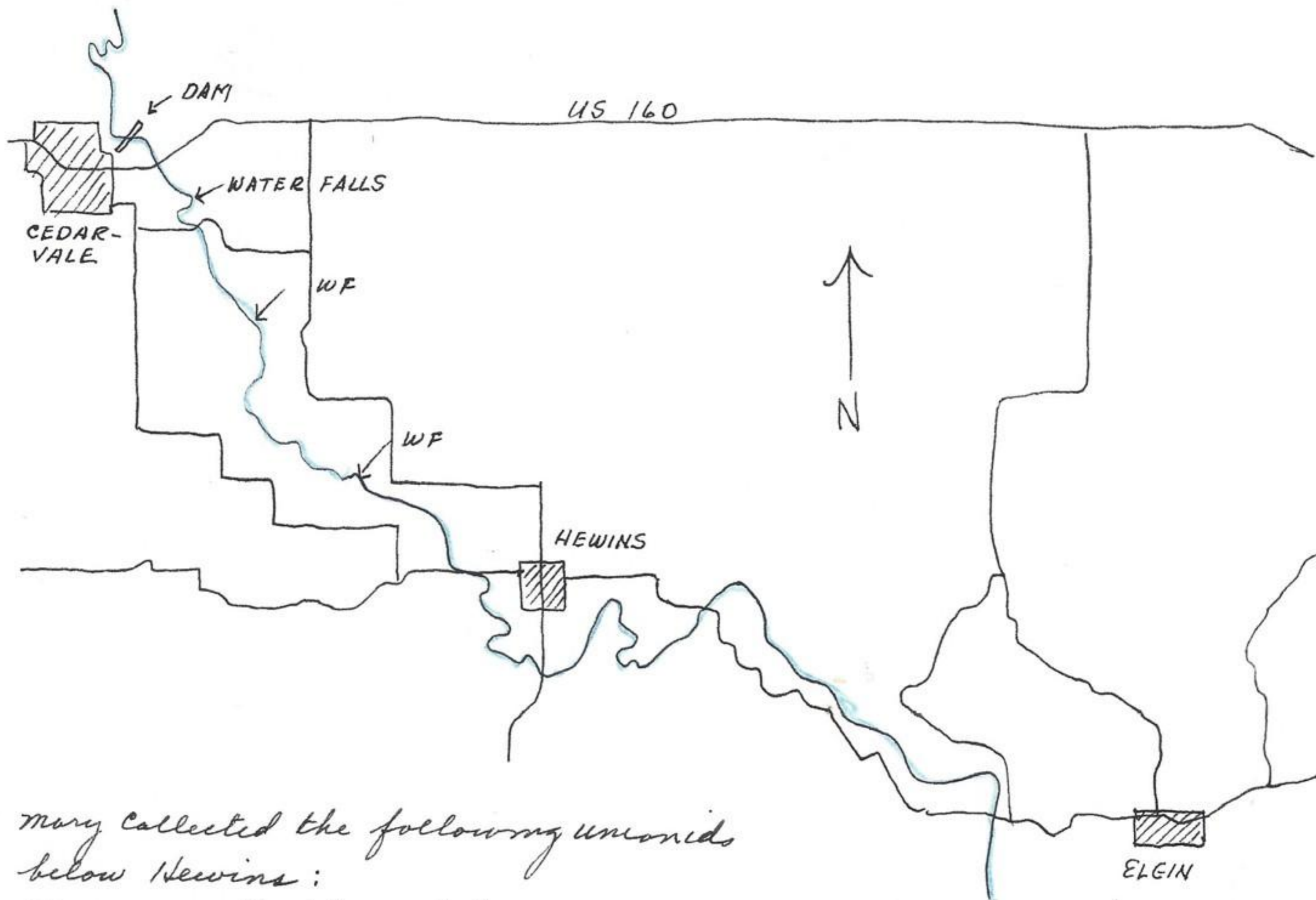
April 6, 1977

Mary P. Bee checked the lake (last remaining pond of water) and did not find any fresh fish around the shoreline. Three fishermen fishing on the N side of pond had not caught any fish.

Chaney River, Chautauqua Co., Kansas

April 9, 1977

Mary Pauline took group of Explorer scouts on canoe trip on Chaney River on a two day trip. Trip outlined and camp indicated:



Mary collected the following unionids below Hewins:

- 770409-1 Proptera alata
- 770409-2 Proptera purpurata
- 770409-3 Actinosais carinata carinata
- 770409-4 Lampsilis ovata ventricosa

Other unionids found were Proptera verrucosa, Anodonta grandis, Crenodonta parviora and Lampsilis anadontoides anadontoides and Lampsilis radiata siliquoides

Because of the low level of water there were many short portages.

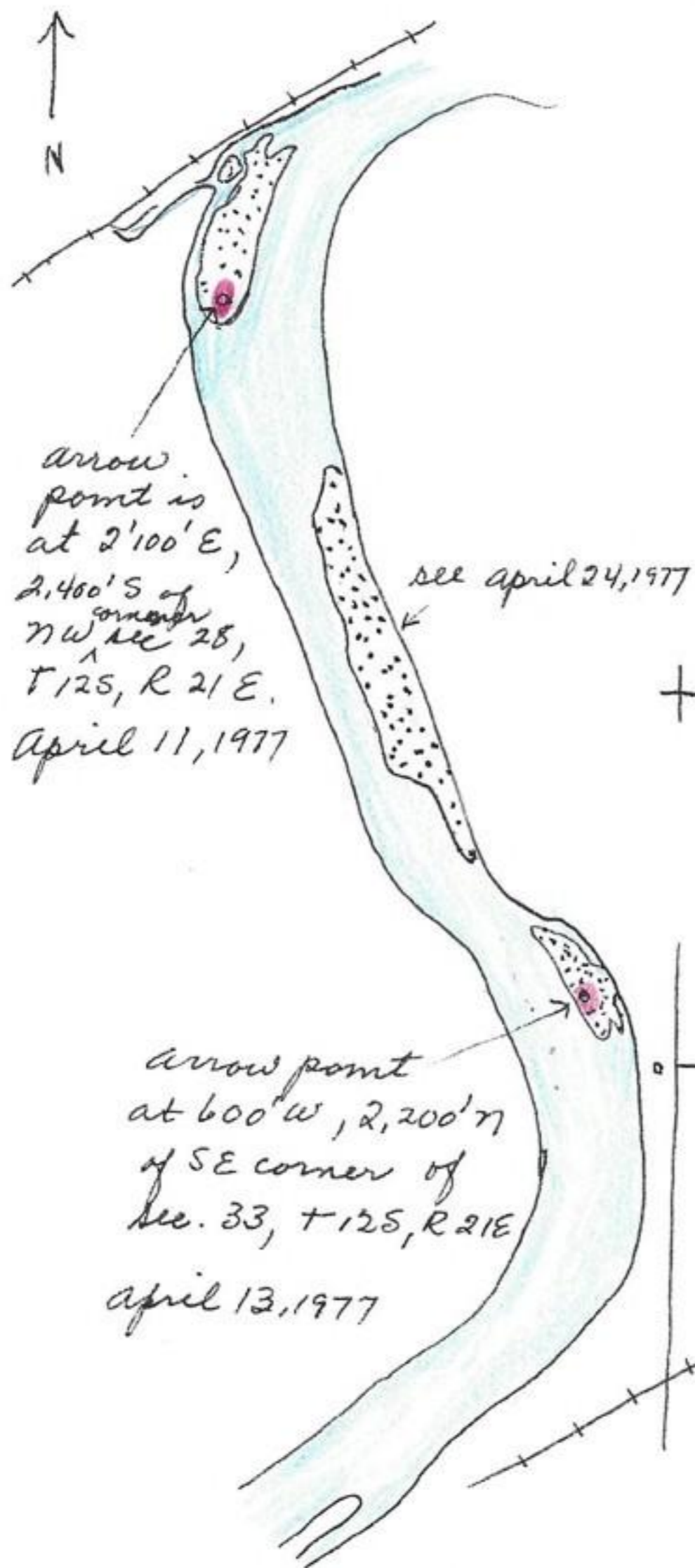
19/10 mi. down Kaw River from mouth of Wakarusa River, Douglas Co. Kansas.

April 11, 1977

Annette and I took Jim & Liz Malseed onto sand bar to check on bones and artefacts. Recorded relative position of this one bar we examined. Specimens are:

- 770411-1 arrow point. Coll by Elizabeth Malseed.
- 770411-2 rib
- 770411-3 rib
- 770411-4 rib
- 770411-5 thoracic vertebra.
- 770411-6 vertebra.
- 770411-7 3rd phalanx
- 770411-8 humerus, bird
- 770411-9 humerus, bird
- 770411-10 femur, bird,
- 770411-11 tibia.
- 770411-12 distal seg. ramus,
- 770411-13 fish vertebra
- 770411-14 2nd phalanx
- 770411-15 vertebra (dest.)
- 770411-16 " (dest.)
- 770411-17 " (dest.)
- 770411-18 " (dest.)
- 770411-19 " (dest.)
- 770411-20 cervical thoracic vertebra, fossilized.
- 770411-21 Fenestrellina (Bygonia)

Killdeer and *S. godwaldi* area. ↓ damp sands
coal on feet.



8/10 mi. down Kaw River from mouth of Wakarusa River, Douglas Co., Kansas.

April 13, 1977

Collected bones and artefacts from sand bar. The river has shifted east of its former bank and is now a sand bar that formerly was the main current of the river. Original rock barriers are now in middle of river. Lesser yellowlegs remained in area and flew over me several times to inspect me. 2 killdeer also. (see map of April 11, 1977 for position of sand bar).

Specimens are:

- 770413-1 arrow point
 770413-2 lower jaw & teeth
 770413-3 ~~potsherd~~
 770413-4 ~~potsherd~~
 770413-5 left mandible, teeth
 770413-6 meta-carpal or tarsal
 770413-7 radius-ulna
 770413-8 meta-carpal or tarsal
 770413-9 ~~rib~~ meta-carpal, tarsal
 770413-10 ~~skull~~ rib, Canis
 770413-11 skull, Canis
 770413-12 radius-ulna
 770413-13 max + teeth
 770413-14 cervical vertebra
 770413-15 rib
 770413-16 distal femur condyle
 770413-17 tibia
 770413-18 thoracic vertebra
 770413-19 femur
 770413-20 thoracic vertebra
 770413-21 atlas
 770413-22 rib
 770413-23 scapula
 770413-24 lumbar vertebra
 770413-25 bone of skull
 770413-26 vertebra (dist.)
 770413-27 tibia
 770413-28 thoracic vertebra
 770413-29 thoracic vertebra
 770413-30 Castor skull
 770413-31 2nd phalanx
 770413-32 Calcaneus
 770413-33 tooth, Equus
 770413-34 skull frag. Homo
 770413-35 pelvic bone
 770413-36 tooth frag, artio
 770413-37 tooth frag, artio
 770413-38 humerus
 770413-39 humerus
 770413-40 vertebra
 770413-41 potsherd
 770413-42 potsherd
 770413-43 potsherd

- 770413-44 scapula
 770413-45 distal humerus
 770413-46 bone
 770413-47 femur, bird?
 770413-48 left rami & teeth
 770413-49 lower jaw & 2 teeth
 770413-50 " " " " "
 770413-51 femur
 770413-52 artio, tooth
 770413-53 lower rami, tooth
 770413-54 tooth
 770413-55 "
 770413-56 tarsus, bird
 770413-57 lower mandible, 2 molars
 770413-58 calcaneus
 770413-59 lower jaw & teeth.
 770413-60 lower jaw & teeth
 770413-61 thoracic vertebra
 770413-62 lig bone
 770413-63 fibula
 770413-64 humerus
 770413-65 rib
 770413-66 rib
 770413-67 lumbar vert.
 770413-68 thoracic vert.
 770413-69 thoracic vert.
 770413-70 " "
 770413-71 cervical vert.
 770413-72 leg bone condyle
 770413-73 astragalus
 770413-74 "
 770413-75 phalanx 3
 770413-76 pelvic
 770413-77 atlas
 770413-78 fish vert.
 770413-79 femur
 770413-80 humerus.
 770413-81
 770413-82
 770413-83
 770413-84
 770413-85

8 1/10 mi. down Kaw River from mouth of Wakarusa River, Douglas Co. Kansas.

April 14, 1977

Checked sand bar here and the one 4 1/10 mi down river on some side thinking that this bar would reflect the artefacts from the eroded field upstream. At the abandoned house met the owner of the field who stated that he has lost approx. 60 acres of the field, 20 of them in one month. He believes as I that the only erosional control of the river edge is by complete rock ramp. Anything else merely enhances erosion of the bank. The old dike that was made to hold out water is now eroded away and only remnants remain on the S & N end of his property.

On approach to the edge of the high bank there were three Canada geese and one snow goose resting on the shore at the base of the perpendicular cliffs. They immediately left and flew out into the river channel on other side of river. As they left I saw the fully extended wings of these birds and thought what an impressive sight this would have been on movie film. The position of these birds was precarious and if the bank of sand had collapsed which it frequently does, the birds would have been immediately buried by the sand. Measured the length of the middle toe of the Canada goose as 98 mm.

I am recording the information of a band collected ^{yesterday from here} from a Canada goose on the sandbar below: This bird was caught on base of log on sandbar and had been partly consumed by animals. The ^{leg} band is: Avise Fish and Wildlife Service, write Washington - D.C. U.S.A. 578-22 463. A plastic band (adjustable tension) had KB on two sides and measured 45 dia. x 60 length. BK. The goose measured 57 ex. culmen, toe 90, tarsus 100. Leg bone shattered as if by shot.

The yellowlegs were still in area on edge of sandbar and the bank swallows were still concerned with nesting cliff just W of house.

Today checked sand bar next down stream. On sand nearest E bank noted approx 30 holes dug 1" to 4" deep in sand between the bank and 30' out on sand and dug by fox squirrels. Just S of this area were 40 small stones which were turned over, presumably for insects or food. I have observed meadowlarks do this some thing and would attribute this behaviorism to birds rather than mammals. Stones from 3/4" to 2" in diameter. Middle toe of a great blue heron 120 mm

Lawrence, Douglas Co., Kansas.

April 14, 1977

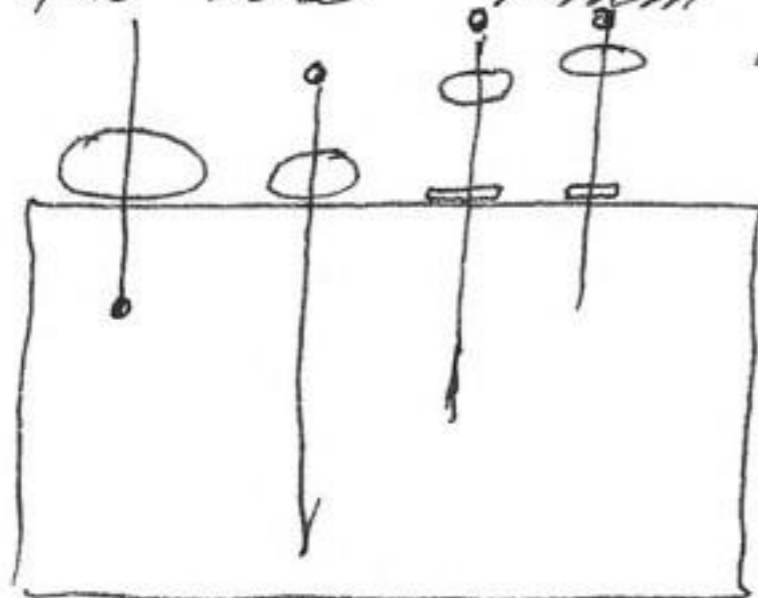
Recorded the measurements of a pinning block that is considered standard at the Snow Entomological Museum

First hole 10 mm deep and used to align large insects to proper height by inserting head of pin into hole.

second hole 25 mm in depth and aligns insect to proper height.

3rd hole 20 mm for locality label.

4th hole 7 mm for identification label.



Museum Natural History, Snow, Kansas, Lawrence, Kansas

April 15, 1977

Mr. Ron Clarey of 2424 Brighton, K.C., Missouri. brought a turtle to museum and reported some interesting facts about this animal:

It is a hybrid between *Perrapene Carolina trumquini* and *Perrapene o. ornata*, and has been in his family for the last 18 years. It has not grown since that time. It weights 1 pound, curved carapace 166 mm x 113, plastron 131 x 78, length bell 14 mm, height 68 mm. It lives in his basement and there is no light except when bulb is turned on. When one enters the basement it will follow you around. It is less aggressive than the 3 toed. At one time it went thru a complete wash in washing machine and one year from Oct to Nov it was rolled in an ownering.

Catches mice. Eats hamburger, dog food, bananas, water bugs, lettuce, ^(principal food) and most everything else. Hibernates a week at a time then becomes active. In warm parts of house does not hibernate. It has lost color with age. It is said that they will live for as long as 100 years. It yawns. Skin is now thin and paperlike and wrinkled.

Skim is now thin and paperlike and wrinkled.

Lake View, Douglas Co., Kansas

April 18, 1977

Lake pond now 2 feet lower than when last checked. many specks of surface agitation from either insects or gas bubbles. No fish surfacing.

3/10 mi down Kaw River from mouth Captain Creek, Leavenworth Co., Kansas

April 21, 1977

Checked mouth of Captain Creek to determine takeout point for canoe trip on April 23. From the south side of river about 4/10 mi. E of mouth of Captain Creek can see a common egret feeding in the shallow water at edge of a sandbar on N side of river. The locality as in title above. It feed slowly but with slightly more activity than great blue heron. Other birds in same area are: 18 spoonbills, 13 blue-wing teal, 2 lesser yellowlegs, 2 crows feeding on sandbar. In forested areas along edge of river observed redhead, cardinal, titmouse, bluejay, robin. In open field 2 lark sparrows and 2 horned larks. The takeout require permission of land owner and canoe must be taken thru his backyard. The old county road to tracks has been discontinued and is impossible.

Eudora to Captain Creek via Kaw River, Douglas, Johnson and Leavenworth Counties, Kansas

April 23, 1977

Took 5 students on canoe trip down the Wakarusa and Kaw River. Left ^{Lawrence} Eudora at 12:10 P.M. and after car shuttle left Eudora at 1:20 P.M. At point on N bank of Wakarusa near mouth is a new piracy thru bank into the Wakarusa, now filled with a log jam. This must have occurred last year. In the new channel behind the log jam were 3 wooducks, 1 green heron, 2 bluewing teal. Bank swallows generally distributed over all water. There is considerable beaver activity along banks. 1:40 mouth Wakarusa, sand bar beyond and water now following S bank of Kaw. 8 bluewings. 2:00 middle long sandbar of eroded field area. At NE end of meander were 11 Canada geese and one snowgoose on sandbar. They allowed us to pass without them flying away. This would never have happened in the fall season so they must develop confidence in man during the winter season. At sand bar located at (center) 1/2 mi. E, 3/10 mi. N of Sec 26, T12S, R21E, NE side Kaw River collected 23 artefacts. This is the large dune on the ^N east side of river just upstream from Captain Creek. There has been considerable change in the physiography of this area, especially the old log jam and the channel on the NE side of the river. This has always been a favorite shooting grounds for geese (Canadas and snows & blues).

770423-1 skull
 770423-2 thoracic vertebra
 770423-3 Cervical vertebra
 770423-4 pelvic bones
 770423-5 vertebra
 770423-6 humerus
 770423-7 pelvic bone
 770423-8 humerus
 770423-9 ulna
 770423-10 astragalus
 770423-11 phalanx 2
 770423-12 " 3
 770423-13 " 2
 770423-14 vertebra
 770423-15 phalanx 2
 770423-16 vertebra
 770423-17 phalanx 1
 770423-18 tibia
 770423-19 tibia
 770423-20 astragalus
 770423-21 part. skull & horn bases
 770423-22 atlas
 770423-23 antler.

Helen Foresman Spencer Museum of Art, Univ. Kansas, Lawrence,
Douglas Co., Kansas.

May 4, 1977

Photo 770504-1 of museum, front completed.

402 Yorkshire Dr., Lawrence, Douglas Co., Kansas

May 4, 1977

A whitetail deer, doe, observed in middle of street under light on corner. Two dogs interested and curious at 20' but neither aggressive toward the deer. The deer left to S down street. This was about 12:30 P.M. at night. Tracks are frequently observed in wooded area 1/10 mi. to N.

Gap Point (Devil's Gap), Perry Reservoir, Jefferson Co., Kansas.

May 6, 1977

Made overnight trip to Perry Reservoir with Museum Technicians Class and camped on E side of the ridge on what was the old County road. Left museum at 1:30 P.M. at mileage 69337.2. This late afternoon set 50 museum traps on top of ridge at point in deciduous trees on the brink of the flat top ridge. This area excluded the grassland-shrub area on flat part proper. Traps set 20' apart at base of the larger trees. The flat area at one time was cultivated and years ago I trapped this grassland. Now the trees are growing in area and some of them quite large. There are sufficient grass in area to house meerkats but I could not determine the species from the few well used trails we found. The redheaded woodpecker was one of the conspicuous birds on top. Bluejay also here. On a benchland on N side of ridge just above the beach noted several large sheets of plywood on ground and many trails developed. There were some nests and my guess would be that they are Microtus pinetorum nemoralis as the area was deciduous forests, low shrubs and grasses. Along this same level on W side noted 2 Natrix sunning on rocks. The erosion of rocks on S & W side is considerable realizing that they have been exposed to wave action for only a few years. Croppie were caught with live minnows at about 50' from shore, fewer with worms and none by fly on N side. The poor-will called several times from the ridge to the E on other side of the bay. Did not observe either ducks or gulls in area. Photo 770506-1 of morel mushrooms.

19/10 mi. down Kaw River from mouth of Wakarusa River, Douglas
Co., Kansas

May 15, 1977

Collected the following artefacts from up river end of sandbar
(see April 11 for the position of this place). These items came from
the same place as those of April 11, 1977:

- 770515-1 pot sherd, rim, horizontal striae.
- 770515-2 pot sherd.
- 770515-3 " "
- 770515-4 " "
- 770515-5 " "
- 770515-6 " "
- 770515-7 " "
- 770515-8 tooth
- 770515-9 pot sherd,
- 770515-10 atlas
- 770515-11 canine
- 770515-12 tooth
- 770515-13 tooth
- 770515-14 tooth
- 770515-15 astragalus
- 770515-16 rami frag, Castor
- 770515-17 antler tip.
- 770515-18 lumbar vertebra
- 770515-19 " "
- 770515-20 rib.
- 770515-21 ulna
- 770515-22 3rd phalanx
- 770515-23 1st phalanx
- 770515-24 " "
- 770515-25 calcaneus
- 770515-26 "
- 770515-27 humerus
- 770515-28 thin bone

Also collected a set of 4 ^{fresh} eggs of Charadrius vociferus. Nest on sandbar
of sand and medium gravel. Concavity 35 mm, diameter 120 mm and surfaced
with coarser gravel. Slight rim, 80 mm, of coarse gravel than sand of
sandbar and were placed there by the bird. The eggs were fresh.
One bird feigned at 10 feet, once over to nest. The mate was on R.R. tracks
some 2/10 mi away. The previous killdeer nest of 4 eggs was not
seen in ^{its} the area. Two other nests; old ones, in area of the set collected.

Lawrence, Douglas Co., Kansas

May 18, 1977

Recorded birds between 7th and 10th on main Street, 9:30 A.M.

	7 th	8 th	9 th	10 th
English sparrow	1			
Cardinal	1		1	1
Chimney swift	1		2	
Baltimore Oriole	1	1		1
robin		2		1
starling		1		
blue jay			1	3

Museum Natural History, Univ. Kansas, Lawrence, Kansas

May 19, 1977

measured the following elk antlers according to the official scoring system for North American Big Game Trophies - Boone and Crockett Club. (all in inches) Cervus elaphus

Tip to tip spread $39\frac{4}{8}$

greatest spread $53\frac{4}{8}$

inside spread of main beam $47\frac{2}{8}$

length of main beam (R) $60\frac{4}{8}$, (L) $59\frac{6}{8}$, diff $\frac{6}{8}$

length of first point (R) $19\frac{2}{8}$, (L) $19\frac{6}{8}$, diff $\frac{4}{8}$

" " second " " 20, " $22\frac{4}{8}$, " $2\frac{4}{8}$

" " third " " $20\frac{5}{8}$, " $24\frac{2}{8}$, " $3\frac{5}{8}$

" " fourth " " 17, " 18, " 1

" " fifth " " $8\frac{4}{8}$, " $6\frac{2}{8}$, " $2\frac{2}{8}$

Circum at smallest point between first & second points (R) $9\frac{5}{8}$, (L) $10\frac{5}{8}$, diff 1

" " " " " second & third " (R) $7\frac{4}{8}$, (L) $7\frac{6}{8}$, " $\frac{2}{8}$

" " " " " third & fourth " (R) $7\frac{5}{8}$, (L) $7\frac{6}{8}$, " $\frac{1}{8}$

" " " " " fourth & fifth " (R) $7\frac{1}{8}$, (L) $6\frac{7}{8}$, " $\frac{2}{8}$

Totals (R) $177\frac{6}{8}$, (L) $183\frac{4}{8}$, ~~difference $16\frac{2}{8}$~~ and inside of main beam $47\frac{2}{8}$

$177\frac{6}{8}$

$183\frac{4}{8}$

$47\frac{2}{8}$

$407\frac{12}{8}$

$- 16\frac{2}{8}$ difference

$391\frac{10}{8}$ or $392\frac{2}{8}$ which is 10th ranked in Boone & Crockett Club scoring (1958)

This specimen belongs to the Historical Society in Leavenworth where the collector William Cody lived at one time. Cody shot this specimen most likely E of Yellowstone Park prior to 1865. The head was originally mounted by Mr. F. F. Hill & recently reconstituted by Tom Swearingen.

and hair
A section of the skull of this elk is now in the museum collection.

Also measured two other elk antlers in the museum of natural history collection at K.U. The following one no 35034 K.U. from Wolf mountains, Big Horn Co., Montana (Crow Reservation) 1900-1910. ♂ collector J.K. Rankin.

Inside spread of main beams	36 4/8		
length of main beam	R 48 2/8	L 47 1/8	diff 1 1/8
length first point	R 16 3/8	L 16 7/8	" 4/8
" second "	" 19 5/8	" 18 7/8	" 6/8
" third "	" 15 5/8	" 14 5/8	" 1
" fourth "	" 22 1/8	" 18 5/8	" 3 4/8
" fifth "	" 11 3/8	" 4 1/8	" 7 2/8
" sixth "	" 16	" 11 4/8	" 4 4/8
Circum 1-2	" 8 6/8	" 9	" 2/8
" 2-3	" 7 1/8	" 7	" 1/8
" 3-4	" 7 2/8	" 7 2/8	" -
" 4-5	" 6 5/8	" 6	" 5/8
	<u>179 3/8</u>	<u>161</u>	<u>19 5/8</u>

179 3/8
161
<u>36 4/8</u>
376 7/8
- <u>19 5/8</u>

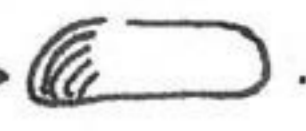
357 2/8 or 97th place in Boone & Crockett Club trophies as of 1958

The second antler of elk at K.U. measured: no 2413 K.U., collected by L.L. Snyche in Routt Co., Colorado in 1891.

Inside spread of main beam	43 2/8			
length of main beam	R. 41 3/8	L 41 2/8	diff 1/8	174 5/8
length first point	R. 20 2/8	L. 19 7/8	diff. 5/8	166
" second "	R. 20 3/8	L. 20 4/8	diff. 1/8	<u>43 2/8</u>
" third "	R. 14 2/8	L. 13 6/8	diff. 4/8	383 7/8
" fourth "	R. 13 7/8	L. 18 6/8	diff. 4 7/8	<u>19 7/8</u>
" fifth "	R. 8 2/8	L. 6 6/8	diff. 1 4/8	<u>364</u> or
" sixth "	R. 5 1/8	L. 5	diff. 1/8	71 st in
" seventh "	R 14 2/8	L. 5 4/8	diff. 8 6/8	rank
Circum 1-2	R 8	L. 8 1/8	diff 1/8	Tip to tip spread 42 6/8
" 2-3	R 7 3/8	L. 6 4/8	diff 7/8	Greatest spread 42 1/8
" 3-4	R 12 2/8	L. 11 2/8	diff 1	
" 4-5	R 9 2/8	L. 8	diff 1 2/8	
	<u>174 5/8</u>	<u>166</u>	<u>19 7/8</u>	

402 Yorkshire, Lawrence, Douglas Co., Kansas. 770523-97
Photos 770523-1 to 770523-8 of Mary Pauline graduation from Univ. Kansas, mother in two of them
402 Yorkshire, Lawrence, Douglas Co., Kansas

May 30, 1977

Photo 770530-1 of the red trailer with reflection of workshop.
A rather bold storm passed by today beginning with high clouds, then a lower cloud with advancing front that was, ^{bright} white in contrast to gray of other clouds and looked like a waterfall → 
Rain followed this cloud.

Byron Walters Lake, (SW sec. 16, R 18E, T10S), Jefferson Co., Kansas

June 3, 1977

Mr. Byron Walters reported a beaver taken from his pond that weighed 75 lbs. Taken in January of this year. Two other beaver were also collected by a young man that lives in Lakeside Village just to the W of his property (see Oct 11, 1975 for map of area).

Lake View, Douglas Co., Kansas

June 12, 1977

Rained last night. NE end of Lake View flooding the corn that was earlier planted on dry ground. Water circulating between E and W parts of lake under bridge on causeway. Water coming from Baldwin Creek.

Perry Reservoir, Jefferson Co., Kansas

June 19, 1977

Water over old bridge abutment at SW corner of Old Town Park. no gulls or ducks in area.

River Park, Lawrence, Douglas Co., Kansas

June 12, 1977

Hiked W from River Park (S side Kaw River W of Mass) to Alchum-Tapeba Santa Fe switch (to Commercial Park Area, before left hand curve); and return. Left 10:00 A.M. noted robin flying with 5" long piece of string. 47 grackles chased a dog. Red-bellied woodpecker feeding young. 2 yellow-billed cuckoos chased the other 1/10 miles across open cultivated field. At r.r. bridge ♂ woodcock in creek. 11:50 turnpike. no birds from last bridge. yellow warbler, redtail, 12 grackles, 1 mockingbird, W. Kingbird, great horned owl. 12:12 railroad turnoff to Commercial Park. first dickcissel, first meadowlark, bobwhite, redwing, robin, yellow-warbler, red-shafted flicker, mockingbird, indigo bunting. Started back at 12:30. beaver nest cavity 2 feet from railroad rails

Topeka, Shawnee Co., Kansas
June 21, 1977

Mr. Howard^{P.} Jackson of the Schendel Pest Control of Topeka presented me with a female ^{red bat} and her three young which he found on the ground under trees. The 3 young were clinging to the female. The female is now in the alcohol collection at K.U. and measures:

770621-1	<i>Sasurus borealis</i>	94-40-8-12-8 gms, w. sp. 271, ♀ ut. normal
770621-2	" "	85-36-8-11-6 gms, w. sp. 264, ♂ testes 1.5 mm
770621-3	" "	86-36-8-11-7 gms, w. sp. 266, ♂ testes 1.5 mm
770621-4	" "	105-49-9-11-10 gms, w. sp. 296, ♀ nursing

The red bat 770621-4 is the mother of the three young nos 770621-1, 770621-2 and 770621-3.

Kaw River, Jefferson Co., Kansas.
June 25, 1977

Made trip along Union Pacific Railroad tracks from mud Creek bridge (over R.R.) E to first jetty just beyond mouth of mud Creek and then return. Left 8:40 A.M. from bridge over mud Creek. Will list all birds and mammals observed. Horned larks in open field before mud Creek.

Dickcissel, cottontail rabbit, small lizards, Indigo bunting, indigo bunting, dickcissel, indigo bunting, redheaded woodpecker, cardinal, red bellied woodpecker, cardinal, red-headed woodpecker, m. dove. 8:55 road crossing from field. Great-crested flycatcher, Baltimore Oriole, cowbird, yellow-billed cuckoo, 2 cowbirds, 3 red-headed woodpeckers, cowbird, yellow-billed cuckoo, red-headed woodpecker, indigo bunting, cowbird, yellow warbler, 9:05 first drainage, 2 eastern kingbirds, m. dove, black-capped chickadee, cowbird, indigo bunting, 2 grackles. 9:13 major jetty just below mud Creek at bend of river.

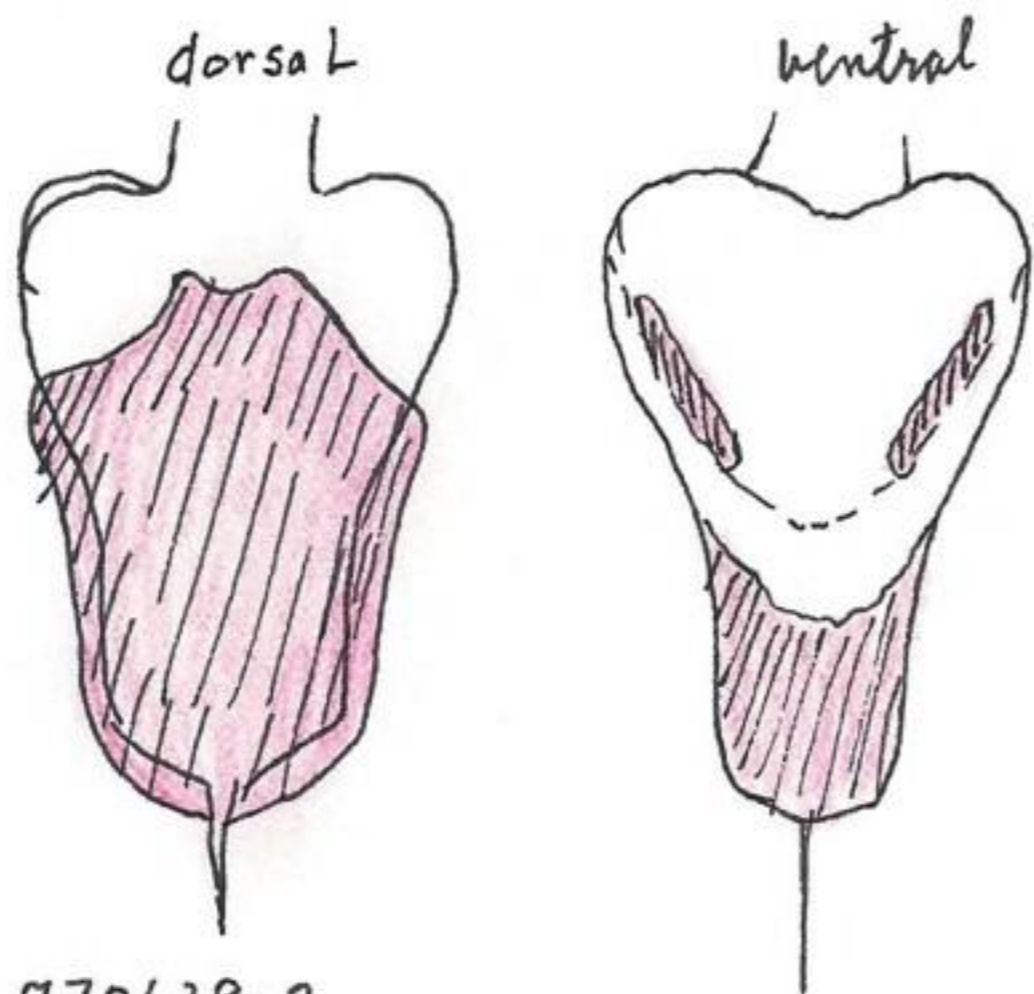
From here recorded movement of birds across river. 2 grackles (N-S), 3 bluejays (N-S), 4 blue-jay (N-S), cardinal (N-S), river 3' below large rock. Grackle (N-S), oriole, bluejay (S-N), bluejay (S-N), 4 bluejays (S-N), 4 grackles (S-N), whirlpool below jetty 1 foot deep, upwells 8 inches high. Left 9:40, Cardinal, titmouse, yellow-billed cuckoo, dickcissel, titmouse, yellow-billed cuckoo. 10:00 road crossing 2 grackles, red-bellied woodpecker. redtail in tree harassed by 5 bluejays, pines 200' from trees or shrubs. indigo bunting, Baltimore Oriole, indigo bunting, 5 Eastern bluebirds, red-bellied woodpecker, indigo bunting, yellow-billed cuckoo, 2 Baltimore Orioles, bobwhite, cardinal, bluejay. R.R. bridge (mud Cr.) 10:20 A.M.

9th and Louisiana Street, Lawrence, Douglas Co., Kansas

June 28, 1977

Mr. Greg. Kasler found an adult female and two young of *Lasiurus cinereus*, Hoary Bat, in his front yard under trees. The two young were attached. The adult was unable to leave the ground and was shaking. When picked up it flew eight feet and dropped one of the young. The three were placed in a cardboard box and the adult settled down and discontinued to shake. Collected at about 4:00 P.M. The specimens are as follows:

770628-1	<i>Lasiurus cinereus</i>	133-56-12-18-26 gms ♀	417 wing sp.
770628-2	" "	120-49-12-18-22 gms. ♀	388 " "
770628-3	" "	115-45-12-17-21 gms ♀	370 " "



770628-2
1.5 gms body
fat.
1/8" thick

It is interesting that the young were almost as heavy as the adult and were carrying a good layer of fat. The adult did not have this layer.

402 Yorkshire, Lawrence, Douglas Co., Kansas

June 30, 1977

Last night or rather early this morning a white-tailed deer walk by the house and continued 5 on Yorkshire. The dog reacted with a high pitched howl as if terrified. I have never heard this call from the dog. Since June 27 the cicadas have been calling. They started on that date. Have been waiting 3 weeks for a chance to pour cement without danger of rain.

Oskaloosa, Jefferson Co., Kansas

July 2, 1977

James R. Bee, Sammy Baxter and myself started to raise a barn E of Oskaloosa to salvage lumber. This barn is claimed to be the largest in Jefferson Co., measuring 100' x 60'. While working on

east part of barn deluged a nest of the barn swallow. *The*
Hirundo rustica

4 young measured:

770702-1 *Hirundo rustica* total L. 85, tail 3, wsp. 120, tarsus 17, ex C. 9, wt. 18 gms.
 770702-2 " " total L. 95, tail 7, wsp. 146, tarsus 17, ex C. 9, wt. 22 gms.
 770702-3 " " total L. 102, tail 12, wsp. 159, tarsus 18, ex C. 9, wt. 22 gms.
 770702-4 " " total L. 102, tail 11, wsp. 153, tarsus 18, ex C. 9, wt. 22 gms.

At various places in barn on supporting structures for studs and rafters found 6 shed skins of the Pilot black snake.

approx 1 mi. E Oskaloosa, Jefferson Co., Kansas

July 3, 1977

Took several photos of the largest barn in Jefferson Co, now owned by James R. Bee and presently being raised. The east side of barn has already been taken down (July 2, 1977).

Photo 770703-1 to 770703-⁶ (Annette in foreground) general view.
 770703-⁷ James R. & Debby Doster on east side.
 770703-8 " " " " on west side
 770703-9 James R. at door of barn.
 770703-10 James R. and Debby on E side barn.

Barn owned by Mona Farmer.

402 Yorkshire, Lawrence, Douglas Co., Kansas

July 4, 1977

Photos 770704-1 to 770704-² of Amy & Liza Bailey.
 Photo 770704-3 of pond taken yesterday.

Helen Foresman Spencer Museum of Art, Univ. Kansas, Lawrence,
 Douglas Co., Kansas

July 13, 1977

Photo 770713-1 of museum with lawn area graded but mat grass not complete series to Spencer Museum, K.U. 750507-1, 750527-1, 750712-1, yet laid, 750818-1, 750912-3, 750917-1, 750926-1, 750929-1, 751009-1, 751016-1, 751021-1, 751107-1, 760108-1, 760121-1, 760402-1, 760472-1, 760528-1, 761109-1, 770203-1, 770504-1, 770713-1.

Lawrence, Douglas Co., Kansas

July 21, 1977

Prepared for vacation to Utah and the Northwest. Some items included binoculars, telescope, camera film and flash batteries, gun & shells, traps bait, car registration, literature & maps, 2 pair rubber knee boots, deck shoes, radio, drying box, cotton, recorder, cassettes, emergency road lights, rain gear.

402 Yorkshire, Lawrence, Douglas Co., Kansas

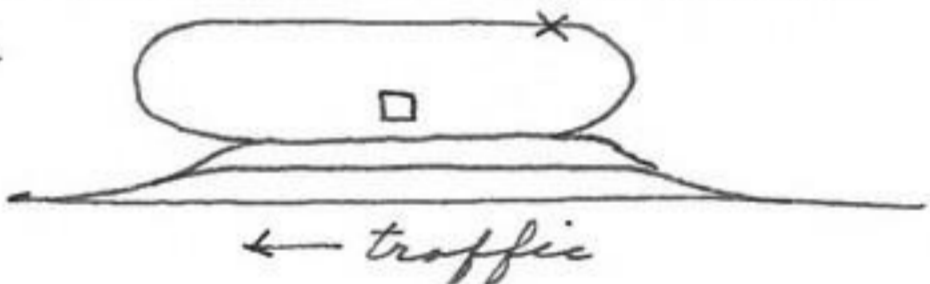
July 22, 1977

Left Lawrence this A.M. for the northwest. Annette and I and trailer (Starcraft) and mercury marquis. Mileage 71702.0 at Lawrence at 6:00 P.M. Trees and grass lush and green to Junction City, beyond some brown in grasses and weeds but trees still with green leaves. Ponds full all along. Hazy atmosphere causing sun to glow around its perimeter. Arrived ^{east west} at Ellsworth turnoff ^(just beyond 156 highway) area, 71874 mi, at 10:15 P.M., having gone 172 miles. Sky has been completely overcast and foglike condition all the way from Lawrence. Will use Interstate 70 to Denver. Birds few in number and species but includes robin, mourning dove, green heron, nighthawk meadowlark, barn swallow and just a few of these birds. No mammals. Temp at 10:30 P.M. 76°F, inside trailer 82°F. no wind.

Rest Stop west of Ellsworth turnoff, Ellsworth Co., Kansas

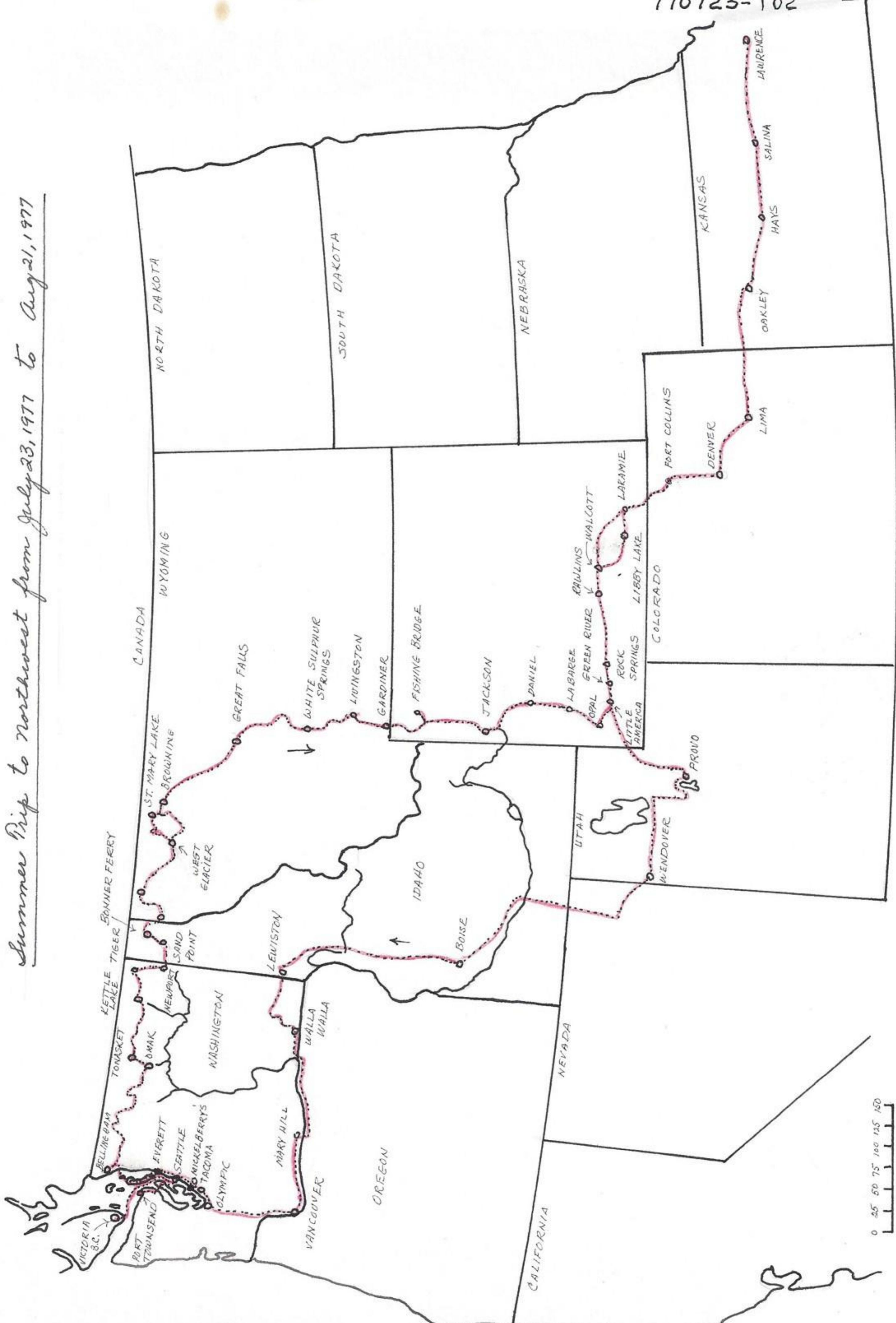
July 23, 1977

up at 6:20 A.M. Sky 80% clouds to east, clear to W. Min. temp last night 72°F. Best place to park trailer is farthest from the highway and rest rooms. Cars and trucks glide to restrooms off highway but make considerable noise leaving restroom area so select the area of incoming traffic. Near rest rooms there is considerable noise of car door slamming, loud talk etc. If a second road leads beyond restroom the area marked X is best



BP 140-90 Left 7:00 A.M. At mileage 71891.0 first Swainson hawk so far on trip. At 897.0 redtail hawk. Visibility approx. 1 mi. mileage is 11 miles per gallon with regular gas. meadowlark at 948.8 949.3 four barn swallows attacking sparrow hawk, meadowlark 949.8 swallow. 950.6 2 mourning doves. 951.7 mourning dove, cottontail road kill. 955.0 swallow, 6 swallows. 954.4 Ellis overpass, western kingbird. 955.7 cottontail road kill. 956.3 Trego Co. 957.1 swallow 958.5 2 swallow 959.4 Rega Road, 2 barn swallows. 961.4 marsh hawk. 963.3 two swallows. 964.3 2 barn swallow 964.7 Ogalla overpass 965.4 2 swallows. 967.6 2 barn swallows 968.7 swallow. 969.4 mourning dove. 971.5 swallow, raccoon road kill. 972.5 swallow. 972.9 exit 127 at Wakeeney at 10:15. western kingbird. grass tops brownish but under is green. 975.9 4 swallows, swallow. 979.0 swallow. 980.0 exit 120 ^{Vada} ~~Mona~~ Road. 980.9 3 swallows, mourning dove. 981.1 2 meadowlark. 984.1 pond almost dry, tumbleweeds green. 986.3 2 mourning doves. 987.2 entering Gove Co. at 10:30 A.M.

Summer Trip to Northwest from July 23, 1977 to Aug 21, 1977



0 25 50 75 100 125 150
SCALE Mi.

and end of complete census since 71874 this morning. Across Dove Co. noted approx. 15 monarch butterflies all travelling S. 9904.0 Badger road kill. 992.8 exit ¹⁰⁷ 207 to Quinter. Observed first pheasant at Oakley. The only other birds were redwing black-birds since end of census at 71987.2 72026.0 Thomas Co. at 11:20 A.M. 062.1 jack rabbit road kill and first one observed so far. 037.0 N Fork Salmon River and white-tailed road kill. 064.9 Brewster Overpass. At 12:20 P.M. Temp 94°F. 066.0 Sherman Co. line. 068.7 15 killdeer in one flock. & have seen others, marsh hawk. 100.9 cottontail road kill, 72102.1 Colorado State line, at 1:10 P.M. 123.4 13-lined ground squirrel associated with the first sage brush and yucca. 126.1 badger road kill. 132.7 Stratton overpass. All wheat has been cut. 166.5 first large group of mourning doves (36), others have been in pairs and singles. 171.7 redtail hawk just w of arriba, horned lark. 72176.1 exit 103. 182.0 dropping off plateau W of Genoa. 72190.4 second 13-lined ground squirrel just E of Limon. 72199.1 on Interstate 70 about opposite of Limon. 72275.4 redtail, Have seen approx 15 lark bunting between Colby ^{KS} exit and Agate, Colo. all females. Rocky mts enshrouded in fog, haze and low clouds. 72212.9 Agate 3:30 P.M. Most common bird is the western kingbird at about two per mile generally on fence wires and happens to be about the only bird. 72219.0 redtail. Few more mourning doves in this area, occasional meadowlark and usual barn swallows. E Bayou Creek with muddy water flowing to top of banks but not over onto flood plain, at 72228.6 West Bayou also high and with muddy water. 72238.4 opossum road kill. 72240.1 Swainson Hawk. 72249.4 sparrow hawk. Continued to Denver and then N on highway 25, took shortcut across to 25 from 70. 722~~87.4~~^{86.4} sparrow hawk 72289.8 Broomfield exit. 72277.5.4 sparrow hawk. 72272.86.4 and 287.4 3 ^{and 4} white-faced glossy ibis, cliff swallows in cliff area. 72365.6 ⁴ antelope at edge of pond. 72367.3 ^{mule} deer. Virginia Dale Camp ^{at} 72378.9 at 8:30 P.M. Rain most of way from Denver.

Virginia Dale Camp, Larimer Co., Colorado

July 24, 1977

Min. temp. 54°F last night. Rained last night. Left 7:10 A.M. 72380.9 Wyoming State line & Albany Co. 72382.5 hummocky field near top of divide and resemble gopher mounds of Washington. 72383.3 4 antelope near old mine shaft. 72384.1 antelope. 72385.0 what may be considered the divide but not the northern extension.

72385.5 top of last hill and now going down grade into Laramie Valley. 72387.4 seven antelope. Grasses are lush for this area. 72388.0 six antelope, all on south side of road. 72388.5 antelope, only bird so far is a horned lark. 72394.4 California gull, and two antelope. 72399.0 California gull. 72405.8 Laramie. at 8:00 A.M. White clouds covering Medicine Bow Range and to the N.W. Brewer Blackbirds in town of Laramie. 72418.6 24 antelope in one group, and unusual for summer period. near edge of lake. 72419.7 4 antelope. 72420.7 50 Canada geese and many ducks on lake. Cliff swallows under eaves. 72426.6 lake full of shorebirds around mudflats. Horned larks along way. 72434.6 4 antelope. First crow. 72439.3 Carbon Co. line. Low clouds on Elk Mt, one line at contact of forests and grasslands and other streamers covering ridge up & down mt. 72467.4 2 Citellus 72468.8 Coyote road kill. 72485.6 Walcott at 9:45 A.M. 72490.8 antelope. 72495.9 antelope. 4.4 at lake outside of Rawlins 150 ducks. ~~2000 hundred ducks.~~ 72511.5 Gay Johnson at Rawlins. 72522.2 Sweetwater Co. line. Start of complete bird census. at Co. line. at 11:05 sky overcast with closely formed cumulus, and considerable haze. rabbit rd kill. 72525.8 3 antelope. 72528.7 antelope 72529.8 2 antelope. 72531.5 3 antelope. 536.4 horned lark. 72559.1 horned lark. 72569.0 horned lark. 72576.3 3 antelope. 72593.0 Point of Lack. 72637.7 Green River and low enough to expose rocky beaches on each side of river. 72644.7 Black Fork River. Cliff swallows. Across Wyoming is close cumulus, then clear, then close cumulus with black stormy bases. 72655.5 Less Little America and leaving at 2:30 P.M. Will continue bird census to Evanston. 667.6 Uinta Co. 72667.7 2 cliff swallows. 72670.0 Black Fork River, full. 72680.8 Meadowlark. 72705.9 prairie falcon and jackrabbit. 72712.4 road kill mule deer. 72719.4 Bear River. 72725.4 Utah line at 4:00 P.M. 72759.6 Colville exit, at 4:50 P.M. and ^{first since trip.} magpie. 72764.6 2 Brewers Blackbirds. 72772.0 2 barn swallows, there have been at least 12 other swallows in the last half hour. 72874.0 sharp-shinned hawk. 72781.4 mule deer road kill. 72796.7 3 Brewers blackbirds. 72790.3 porcupine road kill, magpie, 8 Brewers blackbirds. 72793.2 3 Brewers blackbirds. 72798.4 Charleston. 72803.0 3 Brewers blackbirds, redwing. 72811.4 8 Brewers blackbirds Provo at 72825.4 at 7:00 P.M. while in Provo stayed at Mary & Dons at. 1465 E and 1575 N. This new home is 1/10 mi. W of the white one and overlooks the Utah Valley from the edge of the Bonneville level. Mary has a new oil of Timpunogoo. by a Provo artist as is comparable to Salisbury.

Provo, Utah Co., Utah

July 26, 1977

Jimmy Jensen, Don, Annette and I drove to Stewart Flats to inspect Jim's tree house on conifer mt. side S of the falls. The area S of Stewart's Flat in addition to supporting a sky development sponsored by Redford, has now extended toward Pimp in home development which has completely ruined this country with homes and roads on all slopes. One avalanche slide area are many *Spermophilus armatus*. Jim tells me that everyone in the area kills porcupines. Photo 770726-1 of one of the homes and Pimp (Stewart's Cirque) in background.

July 27, 1977

This morning drove down to the S end of Provo Air Port and photographed ⁷⁷⁰⁷²⁷⁻¹ Mud Lake to the south. Birds in area are avocets, black-necked stilts, green-wing teal, mallard, white face glossy ibis, Hudsonian godwit, Wilson phalarope, killdeer, California gull, great blue heron, pelican, barn and cliff swallows numerous, Brewers blackbirds. Photo 770727-2 of Pimpanogas. This area should be maintained for bird observation.

Later Mary, Annette and I made trip to ^{or left hand} N₁ fork of Hubble Creek to where creek must be forded then returned to S fork (right hand fork) to old vulture nest area (Canyon narrows & road steeper grade) where Mary & I collected Ammonites and other fossils ^{from black shales} and some peculiar rock structures in the Park City Formation which is upper Pennsylvanian or lower Permian. Noted several *Spermophilus variegatus* and *S. lateralis*.

This afternoon Mary, Annette and I drove to Provo City Cemetery and photographed Bee graves in the Bee plot.

- | | |
|----------------|--|
| Photo 770727-3 | William Frederick Bee - 1880-1937 |
| " 770727-4 | Howard Bengt Bee, Utah, Pvt. U.S. Army, World War I
Oct 24 1891 May 23, 1968 |
| " 770727-5 | Robert Bee 1848 18 1926 |
| " 770727-6 | Hannah Olson Bee 1870 - 1938 |
| " 770727-7 | Ferdinand J. Boorey 1863- 1940 |
| " 770727-8 | Mabel Bee Boorey 1877- 1903 |
| " 770727-9 | Lavina P. Bee 1853- 1888 |
| " 770727-10 | Florence Bee 1888- 1889 |
| " 770727-11 | Beatrice Bee 1890- 1891 |
| " 770727-12 | Frederick Farmer Bee. Born Nov. 26, 1846, London, Eng.
Died Nov 5, 1916 |
| " 770727-13 | Ettie Bee Irvine, 1876-1960. Helen Hope Irvine 1903-1924 |
| " 770727-14 | June Margaret Norris 1908-1964 |


- Photo 770727-15 Etoile E. Strickland, wife of F. F. Bee, Born Aug 16, 1857
Died May 10, 1904
- " 770727-16 In the memory of Jane, wife of Samuel Bee, born Jan 2
1820, died Sep 6, 1891, at rest.
- " 770727-17 Samuel Bee, died Sep. 11, 1887, aged, 68 yrs. 28 ds
He is not dead but sleepeth.
- " 770727-18 F. F. and E. E. Bee, died July 24, 1875, aged one week
Budded on earth to blossom in Heaven
- " 770727-19 Son of R. U. & M. E. Irvine, born Aug 31, 1899, died
Sept. 1, 1899, Born to be immortal.
- " 770727-20 Bee
- " 770727-21 Bee
- " 770727-22 Mary Culbertson Bee. 1884-1955
- " 770727-23 Robert G. Bee 1882-1967

Returned to marip place and assisted Don in receiving plots he
hopes to acquire for approx. 15 building plots, the third row ^{partly} situated on mt
side $\frac{1}{2} + \frac{2}{3}$ which in my mind are the most unique lots in the overall
plot. They are asking \$75,000 for this area.

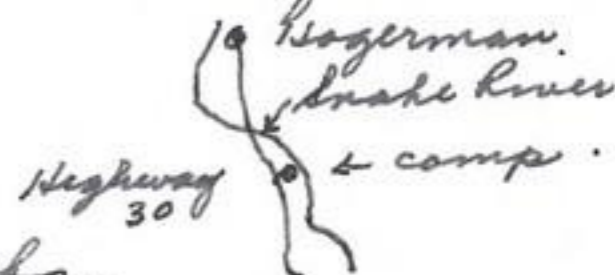
Provo, Utah Co., Utah.

July 28, 1977

Left Provo for Seattle at mileage 72932 at 10:00 A.M. at Lehi
visited Harold Hutchings. His father John Hutchings died June 1, 1977
He was 88. John was born March 11, 1889 in Lehi a son of William Lawrence
and Mary Wanlass Hutchings. Married Eunice Colledge on Sept 17, 1913
She died Dec. 29, 1975. John lived all his life in the home built by his
father. He was employed at the Lehi Sugar Factory in the mines at Scranton,
and at Highland Bay in Bingham. He conducted tunnel driving at the
Midnight Bell Water Tunnel in Alpine, Utah. From 1918-1948 employed
by U.S. Postal Service. On May 22, 1955 he established a private non-
profit corporation to which he donated his collection. The board of
directors are four of his children and four citizens of Lehi. In 1972
he was awarded the Second Miller award by Boy Scouts. In 1967 he &
Eunice were honored as Outstanding Couple of the State of Utah by the Sons
of the Utah Pioneers. In 1957 as Outstanding Citizens Award for Utah
by BYU. His children are: Harold Colledge Hutchings, John
Lamar Hutchings, Mrs J. Sterling (Eunice Laurel) Merrill and
Mrs Quey C (Ester) Hebrew all living in Lehi. Visited the old
home of John, now owned by the youngest ^(boy) child Buddy. The place is
overgrown by weeds. This place should be maintained in its original
home, workshop and surroundings as a tribute to John.

Continued to Cedar Valley via 73. Most of this valley now in wheat, no birds except occasional horned lark and no mammals. I always remember this valley as full of *Spermophilus armatus* and many hawks, prairie falcons, raven, etc. Thru valley to 5 mile Pass only 1 marsh hawk and 14 horned larks. From here can see nothing but air pollution from Salt Lake and Garfield Refinery Co. at N end Ophir range. Pollution so bad one could not see the mountains across valleys. Continued N on 36 to Tooele, thence 112 to 80 Interstate. Could not photograph Mary's research area NE of Tooele where she spent the summer with Vickie Schurer of 1227 Fenway Ave, Salt Lake, Utah 84102 (801) 582-5840. Vicki was working on her Ph.D. on structure of the Ophir Range N of Bingham. Prior to Mary's work here she visited House Range west of Hecla Utah and collected trilobites. June 6-8. It took a broad valley (Rush and Skull) to get rid of the Salt Lake Valley pollution. Continued on 80 to Wendover arriving there at mileage 73115 at 4:00 P.M. No birds observed across the Salt Lake Desert. In the Elko Valley in Nevada the air is clear with greasewood in flat valley, sagebrush on mt slopes and upper valley slope and is approx. 1 foot high. Mountains in this area are not as high as those to E, and pygmy forests of juniper and pinyon to top of mountains. Just before divide to NW evidence of fire scar on mts. to top of ridge. In retrospect noted a jackrabbit road kill in salt flats E of Wendover where the only possible refugia would be vegetation along the railroad that runs across these extensive salt flats. Noted several places where *Artemisia tridentata* has grown over old roadbed and except for structural difference in the topography, the sagebrush is indistinguishable from the areas beyond the roadbed. These mountains are rounded and not sharp like mountains nearer the Washatch Range and to that extent are older. At 73147 Oasis, 3 raven. Pine (Ponderosa) mixed with juniper and pinyon. No cattle or sheep grazing. 73158 valley to S without man made structures or roads. Not many of these places left. many whirlwinds. Pygmy forests on mts and end abruptly at bare  Only 1 horned lark across valley. 73165 to ^{right} fire scars to left none and solid timber. *Chrysothamnus* along road bed. 73166 Moor turnoff. Beyond Wells ^{on mt.} can see one patch of snow about 200' across and only snow on range. 73174 Wells at 5:30 P.M. now N on 93. at 73179.1 8 Brewer blackbirds and 1 mourning dove and first birds observed since the single horned lark noted previously. 73180.6 raven. This valley with typical sage brush two to three feet high. 73184.6 raven. 73193.3 raven. 73193.4 raven. 73193.6 H.D. Summit, 6274 elevation.

73196.4 magpie, occasionally a small Brewer's sparrow sized bird is seen. no rabbit road kills. 73201.4 woodland? 73206.4 ^{meadowlark,} divide into Columbia River drainage, can see high Idaho mts to N. 73212.4 raven, 73218.4 sage thrasher, 73225.6 Little Salmon River. 73226.6 2 Brewer's blackbirds. 73229.2 first rabbit road kill for a long time. 73230.6 raven. 73232.6 mourning dove. 73234.7 mourning dove. 73238.1 mourning dove. 73239.9 2 raven, mourning dove. In road cut are 20' of volcanic ash and elsewhere volcanic lava flows. 15 cliff swallows. 73242.9 Jack Pat at 6:50. 73243.8 Idaho state line, mourning dove ~~at 6:50~~ 73249.2 raven. 73253.4 mourning dove. 73254.3 raven. 73258.4 2 mourning doves. 73259.0 temp 91°F, jackrabbit road kill. 73261.4 5 mourning doves. 73265.4 redtail. 73266.8 mourning dove, 6 swallows. 73278.3 2 Brewer's blackbirds. 73282.6 4 Brewer blackbirds. 73282.0 4 Brewer's blackbirds. End of census just S of Snake River via 93-30. Continued to approx. 2 mi up river from bridge that crosses river below upper Salmon dam and camped along a lake at edge of river. Drove across bridge and on other side made 2 photo 770728-1 and 770728-2 of a small bay that opens into the Snake River. Poplar trees reflected in bay or lake. This is approx. 4 mi. S of Hagerman, Idaho. Mosquitoes most vicious biting I have seen for some time.



Snake River, S of Hagerman, Twin Falls Co., Idaho.

July 29, 1977

min. temp last night 62°F. Wind sporadic, ^{all night} and would blow all of a sudden to speeds shaking the trailer and then would stop to a dead still. Sky clear during the night. B.P. 170-98. 73328.1 at departure at 8:45 AM. The hundreds or (thousands) of springs issuing from side of canyon along here are presumably from a lost river. Calif gull, magpie, swallows, and mourning dove in area. 73329.1 Thousand Springs on N side of river. Over thousands of years volcanic activity repeatedly spread lava over the Snake River Plains. slowly forcing the river south in a great curve. The channels and tributaries were filled with lava forming underground conduits for water issuing to the north and to the east. Wind coming up canyon. Creosote bushes in river valley. 73330.8 Snake River bridge. 6 loon, 1 grebe, 20 Calif gull at river. 73334.0 marsh hawk. approx. 70 per cent of ^{Lombardi} poplar trees with upper branches dead but ^{new} green growing up thru dead branches. 73344.5 Bliss 20 cowbirds. 73347.8 now on Interstate 80. 73358.8 Snake River bridge on Interstate 80 73359.1 Paradise Valley overpass. 73362.1 4 crows 73362.6 Snake River bridge at Glenn's Ferry. 73374.5 first magpie since this morning. 73398.6 stopped W end mt. home for breakfast at Janadel Restaurant.


winds chilling to stand in. Sky clear, no clouds. 73 417.2 Ada Co line
 12:00. 500 gulls in field approx. 3 mi. S Eagle nw of Boise. 73 461.4
 3 horse corrals completely trampled of vegetation except the sagebrush.
 now on 55 N out of Boise. 73 467.8 Boise Co.. 73 471.6 redtail
 73 472.7 redtail. 73 478.7 Payette River, clear water. at Horseshoe Bend.
 73 486.0 Ponderosa pine principal tree along river, bare hills beyond.
 73 489.0 first aspens. 73 496. hillsides now solidly covered with shrubs
 and increase number of ponderosa pines. 73 500 W heelside covered
 with ponderosa pine, fir and maybe hemlock. E side not quite as dense.
 73 503.8 natural dam slow water above at Big Eddy Camp grounds.
 Seems to be more quiet water as one goes up canyon. 73 509. Country
 opens up and river now less cascading. 73 513.3 3 photographs
 of Cascades in river nos 770729-1, 770729-2 and 770729-3. in area
 of ^{N. Fork} Payette River just below arched bridge. 73 516.5 beginning of
 broad open valley of grasses, sedges etc. with sagebrush on sides of valley
 and then coniferous forests. Sides of valley a series of small round knolls.
 Robin only bird seen. No cultivation except harvesting of grasses for hay.
 few swallows. 73 527 first Brewer's blackbird. There should be
 many birds here but there are not. There are many old homesteads
 still standing and many of them are still being used. 73 529.0 No. Fork
 Payette River quite broad here. 73 530.3 Cascade at 3:05 P.M. These villages
 are strictly lumber company. About 30 gulls in river. 73 533. turkey vulture.
 Granites principal rock and very friable in nature. 73 536. Cascade
 Reservoir to left and filling a broad open valley. Robin. This is the
 widest and longest valley so far. 73 538 first 2 mourning doves,
 2 redwings 73 539.0 redwing. Cattails in barrow pits along side
 of road, swallow. Sagebrush on knolls. 73 552. two Brewers and
 3 cowbirds. all surrounding ranges are granite. 73 559.2 McCall,
 elev. 5021 ft. at 3:45 P.M. 73 560.4 North Fork of Payette at N end of res-
 ervoir. 73 563 3rd robin so far. 73 566. first chipmunk (*Eutamias*
minimus). 73 571.0 new meadows, now N, at 4:15 P.M. There are now
 fewer Brewer's blackbirds. 73 574.0 45° parallel. 73 575.3
 3 Brewer's blackbirds, 4 cowbirds, Brewers. 73 576.0 Brewers.
 There seem to be more Brewers across this valley of native grasses & hay.
 73 578 sparrow hawk. 73 578 sparrow hawk. 73 578.3 2
 Brewers and increase in numbers. 73 591 first robin since last
 recorded. 73 593.3 Idaho Co., now into semi arid with dry sidehills
 and a few ponderosa pine, cheat grass, fox tail. Salmon River only
 1/10 normal carrying capacity. 73 599 hills now bare and no ponderosa
 pine. 73 606.9 at Riggins at 6:35 P.M. 73 608.8 Salmon River
 bridge. 73 617.9 Salmon River and erosional benches in photo
 770729-4. with lighted ridges and ^{lower} barren sidehills in background.

There is evidence that this river has been 15' higher than at present. Considerable white sandy beaches and bars along the river. This river at one time, ^{15,000,000 years ago} ran across Miocene lava flows above the present river and Canyon and started to carve this steep canyon as the area started to rise in an uplift. This is true of many of these canyons especially Hell's Canyon 8 miles west of here. The above canyon is at 73622. Continued to Slate Creek Camp site along Salmon River at 73628 and camped along edge of river. In the evening Annette noted three river otter on W side of river, one was on a rock 1 foot above the river and the other two were swimming at edge of river along and in and out of the large boulders along the bank. The current was slow at this point. After two minutes the two that were swimming in the water left downstream while the third one remained on the rock which was now dark with the water carried there by the otter. In 1 minute this one left downstream. To continue down stream these others had to traverse about 300' of faster moving water. After a short while the rock dried and was indistinguishable from the rest of the rock. In other words, wet rock on shore are signs of otter in the area. We could not see deer on hillsides but halfway expected to see some in the evening as they came down to drink. Two robin kept flying back and forth across the river as if in the process of feeding young. Noted one young at camp and also an old nest of the robin. Family of spotted sandpipers ³ flew up river. 3 redtails soaring over mt to W. 5 Brewers blackbirds in area, 2 cowbirds came to drink on island in river. Skunk odor late tonight.

Slate Creek Camp, Idaho Co., Idaho

July 30, 1977

Left at mileage 73628.3 at 9:00 A.M. 73629.5 Salmon River bridge. At 73629.8 photo 770730-1 of river and peach orchards. Ranchers claim robins are most destructive to cherries. Also Brewers blackbirds and warblers do considerable damage especially the warblers. No gull damage. River could be run with canoe at this water level. 73637.4 White Bird bridge. 73638.5 Terminal of White Bird Canyon just above White Bird Village showing broad slope of mountain range as if a monocline. This is in the Nez Perce Battle Ground area. After killing 1/3 of the white army they travelled to Canada where they surrendered. up to 1921 only crude trails led thru this area. 73647. Kamas Prairie like dry farming. Only bird over pass was 1 robin 73649.6 redtail. No birds across Kamas Prairie. Area around Grangeville in dark plowed fields. 73658 Grangeville.

This area is so completely in wheat that there is no place for birds.
 73662 Eastern Kingbird. 73677 redtail. 73680 red-shafted flicker.
 at Lyers Creek. Entering Lewis Co. at 73680.1 at 10:00 A.M. This area
 with ^{Laubers?} conifers in contrast to flat country we have been passing thru.
 robin. 73684. 25 Brewer's blackbirds. 73685.4 Craigmont. 73686 in
 town. 15 Brewer's. 73698.2 Nez Perce Co. line at 11:25 A.M. $\frac{5}{4}$
 (all time is mt. time up to now although now in Pacific belt). 73703.
 Cuddesac, mourning dove, robin, 18 Brewers. 73711 28 Brewers.
 73718.9 Clearwater river and about same size as Salmon. 73729.5
 Lewiston. ~~at~~ Center of town ^{at river} 73731 at 12:45 73737. mourning
 dove and first bird since Lewiston. 73739.6 Alpowa Creek and
 leaving reservoir. Hillsides of fruit trees with spray systems. 73742.5
 Garfield Co. From Lewiston on just selective observation. Birds rare.
 73761.3 Pomeroy. 73774.3 roughleg. 73790.3 fire scars on sidehill
 and exposed gopher mounds that are otherwise hidden, also other trails.
 A whirlwind passed by and was 30' in diameter with sub secondary
 small whirlwinds along its edge  traveling clockwise. 73802.
 Area now with ^{cover of} good shrubs on sidehills. Prior to now relatively bare.
 73864.0 Oregon ^{along highway} at 3:50. 73877.0 first magpie since somewhere in
 Idaho. 73880.5 area of marshy lands and ponds on ^{lowa top to} left. more birds.
 73883.5 passing Umatilla bridge turnoff. Will follow 730 then 80.
 73895.3 Caspian tern 73935 across from irrigated orchard sheltered by
 poplar trees making an oasis on the N side of the Columbia river. Poplars
 are 100% alive. Continued on 80 west to bridge at Bigg hence ^{across Columbia R.} to the stone
 henge arriving at 73931 ⁹⁶⁸ at ⁶ 12:45. Took several photos here: (Klickitat Co., Wash.)
 770730-2 of river and mt. Hood in distance with trees & shadows in foreground.
 770730-3 from W end Stonehenge with mt Hood & Columbia River in background.
 770730-4 ibid
 770730-5 W side Stonehenge with Annette ^{one of the two} at principal opening for sighting.
 770730-6 Annette at east side thru sighting opening & stela. Note angle of shadow.
 770730-7 Marip. Castle just W of Stonehenge. Formerly a mansion of a retired
 railroad executive but now a historical museum with classical painting etc.
 Continued W on highway 14 to Horsethief ^{Lake State Park} ~~Camp~~ arriving at 73988.5 at 7:40 P.M.
 This is near the area where the river dropped over rocks and created (Clio Falls)
 places where Indians could net salmon as they, the fish, worked their way up
 the rapids. Lewis & Clark passed by this area in 1805 and commented on the
 village of Indians utilizing this fish resource. 18 Canada geese flew by
 and several gulls, also ♀ w. evening grosbeak, 2 nighthawks, 20 Brewer's blackbirds.

Lake State Park,
 Horsethief ~~Camp~~ Klickitat Co., Washington

July 31, 1977

Last night at 10:30 P.M. while looking at the moon, 4 gulls flew across the image

on their flight down river. I would judge them to have been 400' above the water. Left at 73988.5 at 7:40 A.M. Rock squirrel *S. variegatus* in cliffs near camp. 73992.3 striped skunk road kill. From Lyell, Hood looks like it has old dirty snow of last year on N face. and certainly less than previous years. 74013 first robin seen today. 74017 first Brewer's. 74018.2 Little white Salmon River. 74025.9 Wind River Bridge. 74028.6 first Crow. 74°F at 9:30 A.M. 74049.0 2 turkey vultures. 74050.3 at point on high road ^(highway 114) cut in cliffs at what would be considered to be the mouth of the Columbia River Canyon took two photographs to east up canyon along N side of river (Skamania Co.) ^{scenic} nos. 770731-1 and 770731-2. This is one of the classical vantage points along the Columbia River. The first high point on left was a frequent climb that I made when I was at Vancouver in 1941-42. Cliff swallows nesting in cliffs nearby. 2 turkey vultures. 74067 goldfinch. 74078 Vancouver at 12:10. More snow on Mt. Saint Helens on the south side than on the north side. 74158. crow 74171 deer road kill. 74227. crow. 74250 Seattle at Chris place at 3:40 P.M. Chris organized for us to stay at Ron's folks place while they were on vacation in Canada. We stayed in the trailer and used the bathroom and shower. This place is some 33 miles S of Seattle. (S end Killarney Lake, 35607 32nd Ave. S., Auburn, King Co., Washington.) Settled in the first evening and a cursory examination of birds at above residence included: mallards, Canada geese, towhee, blackheaded grosbeak, robin, Steller's jay, bob-white, crow, pied-billed grebe, song sparrow, barn swallow.

Seattle, Washington

(Chris) Aug 1, 1977
Drove to Annette Bee's place in Seattle at 810 NE 69th (98115 area code) where Ron & Chris live and visited most of the day then in evening returned to Auburn.

Aug 2, 1977
Visited Chris and Ron, drove around Seattle and as I recall who went to a soccer game in the new field house or dome in Seattle.

Aug 3, 1977
Spent the day in Seattle with a personal guide of the new Aquarium on the water front. Two innovations were live western sandpiper in one room associated with the visitors and secondly new hatch salmon that they hope will return to same area upon return from the sea. Returned to Auburn in evening and set 10 museum traps, 2 of them the underground runway of a mole, the rest among Douglas Fir trees.

S end Killarney Lake,
 35607 32nd Ave S, Auburn, King Co., Washington
 Aug. 4, 1977

From underground corridor of active mole, trapped the following
 Sorex:

770804-1 Sorex 102-43-12-7-4.5gms ♂ testis 6mm

From among Douglas Firs and understory shrubs caught the
 following:

770804-2 Peromyscus 195-98-21-17-24gms ♀ 4x1 plac. scars.

770804-3 " 182-92-21-17-20gms. ♂ testis 10mm

This evening set 2 more traps in same position in runway as above.

Aug. 5, 1977

770805-1 Sorex bendirei bendirei

From same mole runway as no 770804-1 above.

157-68-20-7-18gms. ♂ testis 8mm

Later this morning drove to Seattle and Chris, Annette and I spent the day
 checking out sailboats concentrating mainly on the Union Lake boat
 shops, especially on the west side. Talked to several people and took
 the following photographs:

770805-2 Rancer at right for \$14,000, O'Day on left for \$15,000

770805-3 Some larger boats, the one on right for \$9,000

770805-4 The orange boat is 25' long and sells for \$12,550. Annette on dock.

770805-5 Medium size boats. Note house on floats to left.

770805-6 Misc boats from same general area. (All prev. boats just S Ledge Marina).

770805-7 This sailboat is an ideal boat both in size and cabin arrangement
 especially for cold weather of SE Alaska.

770805-8 general view of misc boats

770805-9 ibid

770805-10 misc boats.

Return to Chris' place and in evening had a picnic on south side of
 channel directly across from the Univ. Washington boat house along
 Union Bay. All types of boats passed into Lake Washington, a real treat
 for sailboat enthusiast. ^{Stayed at Chris for night.}
~~Returned to Mecklenburg in Auburn.~~

Aug 6, 1977

Annette, Chris, Ian and I made trip via ferry to Victoria on Vancouver Island,
 Canada, leaving Seattle ferry docks at 8:00 A.M. on the TEV Princess Marguerite
 from pier 69. This is a British Columbia Steamship Co. did not take
 car as boat docks right in Victoria. Trip over a most beautiful trip both
 scenic and accommodations. Bird uncommon to Port Townsend
 but beyond in straits of Juan de Fuca they increase in number & species.

The boat docks practically in the City so it was only a short walk to all shopping areas, museum, Univ. etc. Victoria is being made over to accommodate tourists. Took several photographs:

- 770806-1 Annette, Ron & Chris with Princess Marguerite at dock in Victoria
 770806-2 Annette, Ron & Chris with public boat dock & Empress Hotel in background. Instead of a regular lobby it is now converted into a restaurant for tourists.
 770806-3 This dock is only across the street from above hotel and is used principally for temporary moorage. Anyone of those sail boats would be adequate for off-shore or inlet route to Alaska.
 770806-4 Another sailboat adequate for stability and safety.
 770806-5 Univ. of British Columbia, museum beyond.
 770806-6 *ibid*
 770806-7 general view of Victoria from boat leaving harbor.
 770806-8 Fishing boat returning to Victoria Harbor, public marina in background.

The Princess Marguerite left $\frac{1}{2}$ hr late at 5:00 P.M. so we arrived in the Seattle docks in evening with the city lighted and colored with evening lights. Drove to Auburn in late evening.

Aug. 7, 1977

Karen, friend of Chris.

Ron drove up into Cascades with Chris, Annette, and myself. This route is thru East gate and to beginning of mts and then to left up a long canyon that eventually leads to the beginning of the Pacific Crest trail 2000. Enroute took several photographs.

- 770807-1 Dingford Falls.
 770807-2 Dingford Falls. on bridge from left to right. Annette, Chris, Ron, Karen. This is in N. Fork River.
 770807-3 Start of Pacific Crest. Trail 2000. Ron, Chris, Karen.
 770807-4 5 $\frac{1}{10}$ mi down N Fork of the Snoqualmie from the start of the Pacific Crest Trail 2000.

First chipmunk 5 miles from mouth of canyon on return trip and only one observed on entire route.

Aug 8, 1977

Annette, Chris and I visited Max and Phyllis in Port Townsend. Boarded ferry at Edmonds N of Seattle, to Kingston and then by road & bridge to Port Gamble where we took several photographs, now a lumber terminal and park.

- 770808-1 Two Annettes at point overlooking bay and lumber mill.
 770808-2 Annette and me with house reconstituted. Museum to ^{right} of this shot.
 770808-3 From city park overlooking bay to west.

770808-4 Annettes in same place as above.

770808-5 Chris roosting in tree from park W of museum.

770808-6 Annette and games W.

770808-7 Bay W of Gamble from city park.

Continued S to Kitsap Co. State Park and took several photos:

770808-8 General view to SW with sailboat and Olympic mts in background

770808-9 ibid with more of Olympics

Continued S To Poulsbo and checked marina there.

770808-10 As I remember a gulf 32 which, to date is the most ideal sailboat for our needs. Has both inside & outside helms.

Continued to Port Townsend and stayed the night with Max and Phyllis.

They took us to a delightful restaurant at the S end of Port Discovery

Bay overlooking the water.

Port Townsend, Jefferson Co, Washington

Aug. 9, 1977

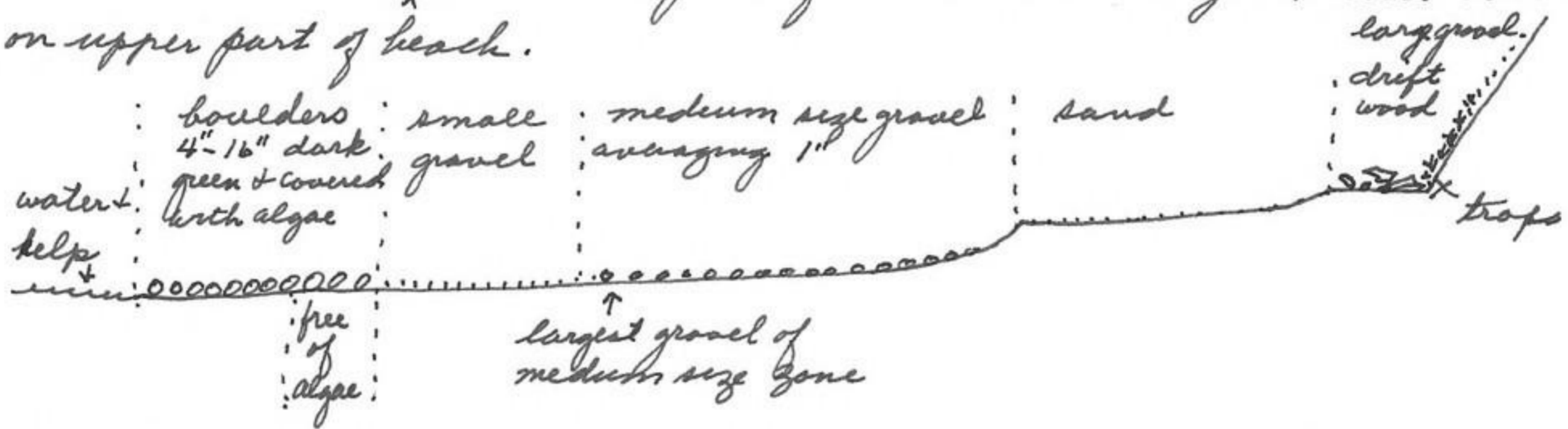
Max Bee took us down to the marina to check boats. Photo 770809-1 of a large sailboat just cast in fiberglass and to be used by a fishing fleet. The operator of the plant says that it takes as long to make a small sailboat as it does a large one so prices vary mainly by size. Chris, Annette and Max in foreground. Max advised electronic distributor which I will install in the Mercury when I return to Lawrence. Max and Phyllis plan to sell their home and travel by mobile home trailer after her retirement. Left for Bremerton, then ferry to Seattle. En-route photo 770809-2 of vegetation erud and debris, Mt. Rainier in background. Photo 770809-3 of approach to Seattle with large Walla Walla ferryboat in foreground. 770809-4 same area as above. Returned to Auburn to trailer.

S end Killarney Lake, 35607 32nd Ave S., Auburn, King Co., Washington

Aug 10, 1977

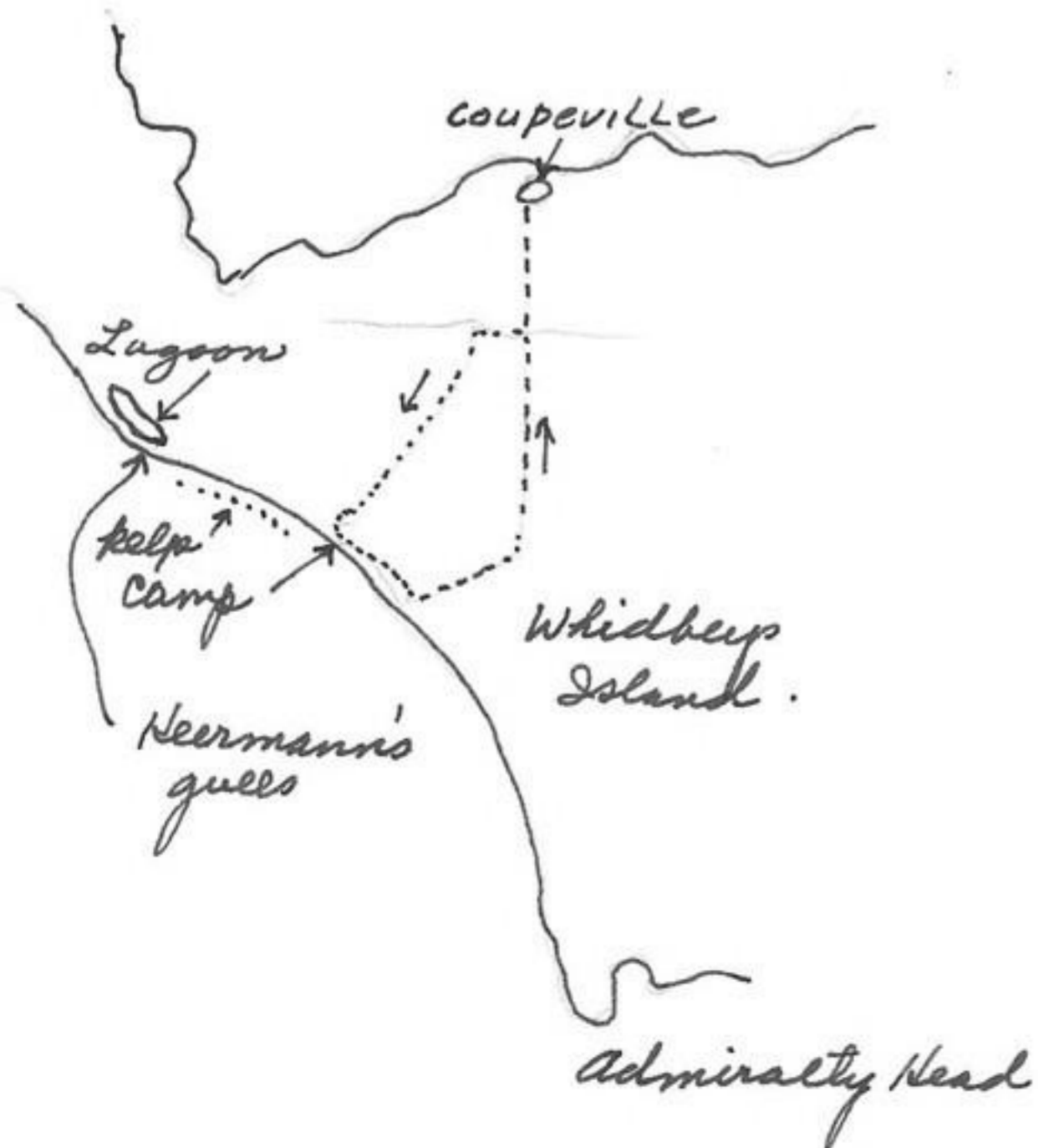
This morning took photo from trailer at Meckelberry's home on Killarney Lake. Water lilies, mallard ducks. Trees are Douglas Fir. This is the place we stayed while in Seattle. Photo 770810-1. Organized for return to Lawrence. Drove to Seattle and picked up Chris who was returning with us. Left at 4:00 P.M. at mileage 75030 and drove to ferry terminal at Mukilteo and ferried across to Whidbey Island to Columbia Beach in the Vashon Ferry. We remember of using this same ferry some 25 years ago in the San Juan Islands. Arrived 5:15 P.M. Crossed channel to Whidbey Island and continued N to Coupeville thence back SW to W side of island along beach where road travels along the water edge for approx 3/10 mi. Camp at edge of beach. With the remaining time made trip NW along beach to turn.

to the right at inland pond. At this pond some ~~3~~ mi. NW of camp. noted 350 adult *Neermann's* gulls and one immature. These gulls and 40 herring gulls including 20 immatures were on driftwood at the SE end of bay or pond. The one immature *Neermann's* gull seemed like a small percentage of young to adults and indicates poor breeding success of this species. One heddler in same area. On return noted two groups of surf scoters (one of 5 and the other of 12 birds). These scoters feed in roosters just soundward from breakers. 3 cormorant also flew by. Other birds in the area included song sparrows, swallows, Bonaparte gulls and robins. The hillside is gravel sealed in with grasses and at gravitation repose. The beach consists of small stones near water, ^{just beyond boulders} on lower part of beach and larger stones landward on upper part of beach.



Set 5 traps at base of hill in high grass. At just after sundown took photo 770810-1 to NW of camp showing beach to NW point mentioned above with slope at gravitational angle and evening colors. The uppermost part of hill has an extension upwards of sand.

2 naut. mi. SW Coupeville at Ebeys Landing, Island Co., Washington
Aug 11, 1977



Last night caught a *Sorex* v. *gracilis* and released it. There was considerable flight of gulls this morning at sunrise especially Bonaparte gull. They fly much like a bat and systematically search the water for food. Collected small pebbles along beach and then left camp at 9:00 AM. Continued north and at Deception Pass took road to left and descended to the camp grounds on beach and then returned to bridge. From bridge took photo 770811-1 to E showing Strawberry Island and turbulence of tidal change.

Pigeon guillemots flying in and out of cliffs directly below bridge using the cliffs for resting areas. Black oystercatcher also in area.

Continued to Bellingham along coastal road and there visited Robert and Virginia Skaley at 730 N Garden Street. (733-6907). Virginia is collecting shells and has many good museum specimens. The collection is integrated ^{as a} ~~in a~~ decorative theme in her home. She gave me two drawings made by Nelson Vaughan (nos 770811-2 and 770811-3). Left ^{south on 5} and crossed to 20, thence E into Cascades. at 3 mi. above Skagit Generator plant below gorge canyon too photo 770811-3 of large boulder strewn river bed in section of river in which the water was 100% diverted. One can imagine how beautiful this section would have been with cascading water. Continued to Diablo Dam and camped along river just above bridge that crosses E over river. Nighthawks flying high above canyon and white-throated swift lower in canyon. Muskrat in river by camp.

Skagit River below Diablo Dam, Whatcom Co., Washington

Aug. 12, 1977

Left 75254.1 at 8:45 A.M. At 75260.7 at Vantage Point on east side of inundated canyon about half way between Diablo Dam and Ross Lake down took several photos:

770812-1 of the inundated arm of lake shooting S with green water and high mts in background.

770812-2 Annette and Chris on vantage observation point looking N.

770812-3 Chris (Annette C Bee) jogging along edge of cliff with arm of lake in background (to south).

770812-4 Ibid.

770812-5 Ibid but returning up canyon (to S).

770812-6 Same area as above and to the west. These above photos are in Whatcom Co. *Spermophilus lateralis* here.

Continued E of 20 and at S end of Ross Lake took photo 770812-7 of the lake to N,

at 75283.8 photo 770812-8 of mts ^{to SW} from top of road cut. Deer had extensively used the edges of this manmade graded slope.

Crossed Rainy Pass (Chelan Co.) at 75286.9, elev. 4855 ft., Continued to Washington Pass (5477 ft.) and took several photos:

770812-9 Annettes at overlook point & to S.

770812-10 Annettes with Bell Peak in background (to right)

770812-11 Bell Peak (right)

770812-12 Chris and fence with E side of Washington Pass in background.

770812-13 Mts E of Washington Pass showing sandy accumulations.

770812-14 ibid

770812-15 ibid with telephoto lens.

at campgrounds the Canada jays were aggressive and would take a slice of bread from your plate if it was not held down. These jays were the most aggressive I have ever observed. Their preference was meat. Left Washington Pass. and continued down grade out of the cascades. First ^{E.} Kingbird at 75398 E of Tonasket at milepost 266. To this point followed highway 20 to Tonasket ^{on} thence 77 on 97 to Tonasket. Continued E to just beyond Republic where we turned 77 off main highway to Curlew Lake, one buck in velvet and 2 does along this road. Arrived E side Curlew Lake 75445. Across Washington E of Cascade are many log cabins, mostly in good condition, some inhabited and most of them vacant. but still standing. Considerable hummocky terrain across Washington. At sundown took photo 770812-16 of sunset from camp. Temperature east of Cascades 110°F today and all the natives are talking about the unusual condition. Coyotes called late tonight & early morning before daylight.

Curlew Lake, Stevens Co., Washington

Aug. 13, 1977

Min temp last night 55°F. Left 75445 at 8:25 A.M. 75447 sparrow hawk. at 75460. at beginning of Colville National Forest observed a mule deer in velvet. It was crossing the forest among the conifers. 75462. dead marmot road kill at 4³000 ft elevation. 75453, 2 raven with small mammal in beak. Now into spruce zone at 5000 ft. 75465 raven. ⁴⁸⁷⁷⁵ ^{75465?} Sherman Pass. Spermophilus ⁷⁵⁴⁷⁵ Tamiasciurus at pass. 75470 raven. 75477 raven eating mammal road kill. mainly Coniferous forest, some deciduous trees. 75483. raven associated with six cows. 75483 raven 75489.7 east side of bridge at ^{Franklin} Roosevelt Lake, raven. 75496 redtail hawk. 75497 sparrow hawk. 75507 25 baldpates in one of the kettle lakes. 75516 immature Tamiasciurus. 75582 Cooper's hawk. on way to Newport. 75585 Idaho line. at Pend Orielle River. 75667 montana border. having passed thru Priest River, Sandpoint, Bonner Ferry and Leonia. (New time 4:30 P.M). Photo 770813-1 of Kootenai Falls with water at a rather low level. This falls is ^{west} east of Libby on the Kootenai River. ~~7095~~ a great blue heron flew down river over these falls. 75709.5 Libby. 75713 gull. first one observed today. 75720. second gull. It seems like more of the old cabins are being used than in eastern Washington. 757^{23?} Libby dam. At dam are swallows. 40 seagull, great blue heron and 5 American mergansers raven. 75793 sparrow hawk. After having passed thru Eureka Continued SE on highway 93 to Murphy Lake. arriving at 75796.

Camped on w side of lake on lateral road approx 1/10 mi w of road.
 At this service road turnoff is an osprey nest of 2 adults & 2 young. One
 adult circled the nest from 30' to 60' and called ^{and circled} up to late twilight which
 was 9:30 P.M.

Murphy Lake, Flathead Co., Montana

Aug. 14, 1977

min. temp last night 56°F. Rained, lightning & thunder all night. A
 group of 8 Oregon junco at camp. At 8:10 A.M. photographed the nest of
 adult and 2 young and the other adult in top branches of adjoining dead
^{larch} hemlock. Photo 770814-1. Nest being supported by 3" limb. This nest
 at camp at south west side of Murphy Lake and only 80' from main highway
 and is conspicuous. Pied-billed grebe at South Dickey Lake, also 4 gulls.
 At Stuyker 2 people told us that it hailed there last night but at
 Murphy Lake it only rained. 75822 sparrow hawk. Skies to S
 seem to be clearing. This area has gone thru transition of low fog
 to low cloud to low cumulus. In the area of Columbia Falls at
 11:30 three photos 770814-2, 770814-3, 770814-4 of bank of clouds
 rolling down over ^{west} top of Swan Range as part of a temporary clearing of
 the storm. In this area (from Whitefish to West Glacier are many
 log cabins being used as home sites. River in canyon greenish-blue like
 many of the man-made reservoirs. Wind definitely down canyon. 75849
 South Fork Flathead River bridge, water low. Clouds about 1/3 way
 down from mountain tops. 75860 Middle Fork of Flathead River. 75861.4
 at West entrance Glacier National Park. at 11:50 A.M. Temp. 60 degrees. As
 we were not allowed to take trailers over park road were returned to
 highway 2 and circumnavigated the park. Strata dipping 45° to east.
 Will make complete census of birds and mammals along this route. Many
 beaver in creeks. Clouds now 1/2 way down mts. 75891 two photos
 770814-5 and 770814-6 of an adult and young mountain sheep. These
 animals descended to feed on natural salt licks at edge of river but
 in trying to return to their higher retreats were blocked by 20-30 cars
 and dozens of people with cameras on the highway. They tried several
 escape routes but each one was blocked by a fence of humanity.
 75906 Glacier Co. line at 1:20 P.M. at Marias Pass. 75911 six ducks on
 pond. 75912 two roven. 75913 one duck, roven by pond. Aspen trees
 now occupying burnt over area and light greens of aspen in contrast to
 dark colors of conifers. 75916 roven. 75923 ^{Flower Two Medicine Lake} ~~St Mary Lake~~ and low
 clouds in the distance in photo 770814-7. Temp at this point is 47°F.
 Clark Crow. 75935 Redtail. 75944 4 small birds, now raining.
 Continued to St. Mary's Camp ground on N side, lower end of St Mary Lake.

Leaving trailer at camp we drove up the "Going to the Sun" highway. The clouds were low and lights poor because of late afternoon time but hopefully we could record some of the stormy atmosphere. At Goose Island in St. Mary Lake. photo 770814-8 of St. Mary Lake bordered by a large conifer with mts & low clouds in distance. Goose Island to lower right, Photo 770814-9 same as above. Photo 770814-10 just beyond but shooting down lake. Tamiasciurus ran across road. 75959.3 Eutamias. At upper end of lake took several photos of peaks & clouds both to N & W. 770814-11 peak enshrouded with clouds on all sides. 770814-12 ibid 770814-13 on N side canyon. 770814-14 ibid 770814-15 same general area 770814-16 " " " "

We had ~~tried to~~ ^{tried} to continue up road beyond the upper end of lake but clouds became so thick that it obscured vision ^{10'} so we returned to St. Mary Camp. Temp this afternoon about 47°F. At camp rain.

St. Mary Camp, Glacier National Park, Glacier Co., Montana
Aug 15, 1977

min. temp last night 44°F. This morning clarks ^{crows} ~~stacos~~ called at camp. clouds still low like yesterday but chances of clearing skies are good. Service berries are at their peak, are in perfect condition and plentiful in contrast to eastern Washington where they are dried and friable. The N side of Mary Lake valley is characterized by confluent fans from small canyons. Left at 9:25 A.M. and drove up the "Going to the Sun" road to divide, thence down other side to Lake McDonald where we turned around and retraced our steps. Enroute on this trip made the following photographs.

Photo 770815-1, 770815-2 and 770815-3 at Logan Pass, 6664 ft shooting S across valley with fog and clouds pushing up the valley of Mary Lake. Photos 770815-~~4~~⁴ and 770815-5 of Hoary marmots approx 3 mi. down grade east of Logan Pass. Photo 770815-6 of avalanches tracks on ^{and glaciers} mountain on east side of main valley. Photo 770815-7 of prominent peak ^{or 5} on W side McDonald Canyon. Photo 770815-8 of dominant green and red boulder in lake. Chris' hand and arm shadow. These colors of rock are in equal combination in most lakes and rivers in park. Photo 770815-9 of Mc. Donald Lake shooting to NE. Annette and Chris in foreground. Photo 770815-10 one of the many falls on return trip above Mc. Donalds Lake. mi. 76030.2 moose along side of road. Photo 770815-11 of adult & 770815-12 of young.

Photo 770815-13 of scalloped edge of road in river bed from action of water. Photo 770815-14 from hairpin curve and telephoto of peak to S showing reflection of sun from snow and rocks. Same as photo 770815-7 but under different lighting conditions. This is from mileage 760409. At 76043 photo 770815-15 of peak to NE of Logan Pass. Photo 770815-16 of slide on lateral moraine on S side of Canyon. Photo 770815-17 beyond hairpin road in McDonald Canyon with road leading to Logan Pass in upper left hand corner. Photo 770815-18 same as above with yellow flower in foreground. Photo 770815-19 east from Logan Pass. Left car here and hiked W to Hidden ~~Valley~~ Lake some 1 1/2 miles from the Logan Pass. Took several photographs enroute:

- 770815-20 Peak to SW of Logan Pass
 770815-21 Peak to S of Logan Pass with alpine meadows in foreground.
 770815-22 Ripple marks in sandstone rock along the trail, in direction of Hidden Lake.
 770815-23 Alpine meadows W of Logan Pass shooting E. Green mosses in foreground associated with spring. Headwater springs have reduced water flow during snow melt-off and thereby preserve the aquatic plants. Leucosticte and pipit in this area. Vegetation not luxuriant.
 770815-24 Spermophilus columbianus. These squirrels inhabit the open alpine meadows. Family of ptarmigan nearby. Squirrels common.
 770815-24⁵ Spermophilus Columbianus, same as above and SW of Logan Pass between there and Hidden Lake.
 770815-26 Hidden Lake from NE end of lake on divide.
 770815-27 Outlet of Hidden ~~Valley~~ Lake and mt slopes to N. and W.
 770815-28 James W and Annet P. Bee at vantage point. NE of Hidden Lake looking S. Temp short-sleeve and warm.
 770815-28a Near divide between Logan Pass and Hidden Lake shooting E across moss line spring waterway and small alpine lake.
 770815-29 Logan Pass alpine meadows to E of S showing Krumholz in background and marmot (Hoary) on rock in foreground.
 770815-30 Annette Christine and Annet P Bee on alpine meadow SW Logan Pass, photo to W.
 770815-31 Dominant peak S of Logan Pass across alpine meadows. A very peculiar rock formation in middle distance of parallel outcrops when viewed higher on mt. Most if not all above photos taken from trail between Logan Pass and Hidden Lake.

Returned to Logan Pass and thence E down Canyon. A short distance from Pass photo 770815-32 of diabase sill (Purcell sill) sandwiched

between limestone. Tracing this sill down slope it passes irregularly across light colored layers of the upper Siyeh limestone. The dark gray diabase, some places almost black, is composed of white crystals of plagioclase about the size of rice scattered thru a matrix of black pyroxene. Water coats them with green minerals. The diabase collected is no. 770815-33. Just above and below the sill is white marble formed where organic matter was driven out of the Siyeh limestone by heat from the molten magma of the Purcell sill. Fossil algae are easily observed in this marble. Specimen nos 770815-34 of marble above sill and 770815-35 of marble below sill. In some places the limestone is in direct contact with the diabase. A short distance down from here observed 4 mt sheep on high slopes above. Formations in the Glacier Nat. Park are

Kentla, Shepard, Siyeh, Grinnell, Appokunney, Altyn, Waterton. Continued down canyon to Mary Lake Camp.

Mary Lake Camp, Waterton - Glacier International Peace Park, Montana

Aug 16, 1977

Left this A.M. for Yellowstone. Min temp last night 37°F, no wind, visibility 200'. First photo at S end St. Mary Lake as we were leaving, showing entire st Mary Lake under clouds in photo 770816-1. (Blackfoot highway)
 → 76072 at 8:50 A.M. 76082, Coyote jumped down into middle of road and remained 10 seconds before it return to some side as its original came and continued across slope at its usual gait. Photo 770816-2 of this animal. Its original intention was to continue across the road and join a second coyote just below us in an open field. This coyote was first observed in its normal gait and then as it approach a series of Spermophelus ~~and~~ holes and some animals, it reduced its gait to a slow walk as it passed by the squirrel digging. It leaped forward at one of the squirrels but without effect and then after urinating(?) it continued at its usual gait across the field and into the aspens. These coyotes passed by 8 adult and 3 young horses, passing by not more than 20' without reaction from either the horses or the coyotes. Magpie in some area about 150' from coyotes. This area can be tied in with mileage 76088.7 at highway 89 and Kiowa junction. 76091 marsh hawk, redtail. Blackfoot area overgrazed. If this prairie were to be returned to natural conditions it would be a luxuriant growth of grasses, forbes and flowers. Ponds (artificial) low. 76101. at Browning 20 quills in field. 76203 redtail. 76~~20~~¹²4 sparrow

hawk, 76130 magpie at Birch Creek. 76132 striped skunk road kill.
 and first one since last one recorded. 76144 marsh hawk. 76157
 young sage hens about 4 1/2 inches long. 76177 first meadowlark
 since last observed which is just about a mile beyond the
 Teton River. 76180 Lake on left with approx. 200 gulls evenly
 distributed on west shore. Entrance to Lewis and Clark National
 Forest, magpie, another 2 miles further south. Sparrow hawk
 approx. 3 miles south of entrance to Nat. Forest. Spermophiles
 richardsoni along road. Road kill sparrow hawk 4 miles south
 entrance. ^{323.} 76232.4 3 golden eagles. In last mile 12 dead
 Spermophilus road kills. In the next mile were 7 dead and 1 live
 squirrels and one marsh hawk. Junction 89 + 12 is 76359.9.
 Squirrels on sidehills and when we came out onto lowlands of
 damp grasses, they disappeared. 6 crows. Many squirrels and
 birds shortly after leaving junction 89-12. 76329.5 City limits of
 White Sulphur Springs. at 5:25 P.M. Valleys are characterized
 by unusual conifer trees on mt. sides which run in strips on
 ridges from base of mt to top of mt. Raughleg & 2 magpies at 76336.
 Spermophilus still along side of road. 76338.7 South Fork Smith
 River. Will keep complete census for a mile or so starting at 76338.7.
 live Spermophilus, dead road kill Spermophilus, magpie, live sp.,
 dead sp., dead sp., live sp., live sp., dead sp., dead sp., dead sp., live sp.
 live sp., live sp., live sp., dead sp., dead sp., dead sp., these groupings
 are localized, dead sp., redtail, sparrow hawk, dead sp., dead sp.,
 magpie, dead sp., dead sp., dead sp., 3 crows, live sp., live sp.,
 live sp., dead sp., dead sp., 5 greenwing teal, dead sp., dead sp.,
 dead sp., dead sp., striped skunk road kill, prairie falcon, 14
 dead sp. in localized area. (junction 294 and 89 at 75346.9, dead
 sp., live sp., 16 dead sp., marsh hawk, 3 dead sp., live sp.
 Ringling at mileage 76351.3 at 6:30 P.M. and end of census. In
 summary (in 12.6 mi):

dead Spermophilus road kills	53
live "	13
marsh hawk	1
magpie	2
prairie falcon	1
green-wing teal	5
crow	3
redtail	1
striped skunk rd. kill	1
sparrow hawk	1

8 Brewers blackbirds in Ringling. Decided to continued Spermophilus road kills as we continued S on 89. dead sp., 5 magpies, 2 magpies. (all live). Slopes sagebrush, valley ^{wild} grasses used for hay. live sp., live sp., sagebrush covers old road + same size. dead sp., dead sp., dead sp., dead sp., dead sp., live sp., dead sp., magpie road kill, 76359 beginning of new and wider road, live sp., 3 dead sp. together, marsh hawk, live sp., dead sp., dead sp., live sp., dead sp., live sp., dead sp., dead sp., out of valley at road cut at 76365 and end of census.

Summary: (13.7 miles)

dead Spermophilus road kills	15
live "	7
magpie	7 live, 1 road kill
marsh hawk	1 live

Continued S. 76369 marsh hawk, 76370 prairie falcon, 76403.9 Wilsall. One flock of approx. 1000 Brewers blackbirds. There are more crows and ^{Brewers} blackbirds as we approach ^{Clyde Park} Livingston. The greatest number of Spermophilus are in the Ringling area where we made census. The valleys now are characterized by large cottonwood trees. 76395.9 Yellowstone River, at 7:30 P.M., sparrow hawk, Spermophilus at least all the way to Livingston. 76442.0 sparrow hawk. Continued to Mustang Camp N of Gardiner at mileage 76450 at 8:30 P.M. This camp is in the form of a fort and was originally used as a health institute. It is now surrounded by another camp that features most of the big game of area as well ^{some from} as Eurasia.

Camp Mustang, Park Co., Montana

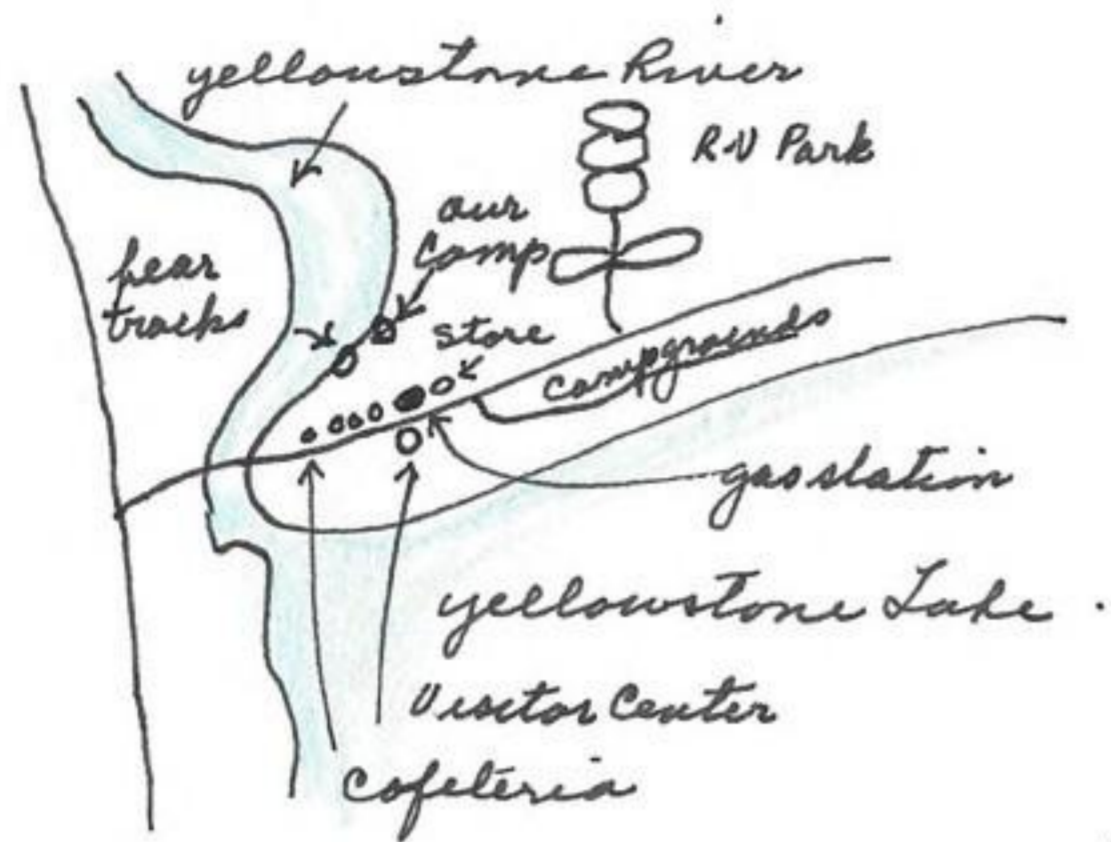
Aug. 17, 1977

Left and continued to Gardiner 76459 at 11:40 A.M. Will keep complete census thru Yellowstone National Park. at gate noted one group of 4 antelope. They moved to kills to W. 76464 Clark's Crow. 76465 2 rosen and Clark's Crow. At Mammoth Hot Springs noted 2 rosen, 4 Clark's Crows, 3 pine siskin, 1 redwing blackbirds in the spring area proper. ^{also 770817-2 and 770817-3 (Minerva Springs)} Photo 770817-1 of one of the hot springs. There has been a decided deprecation of spring activity in this area by at least 50%. As we continued S we noted a patch of snow perhaps 300' x 300' on the Gallatin Range and the only snow visible. (beyond the falls). at 76470.7 at Swan Lake, 2 trumpeter swans, 200 ducks and 4 Canadian geese in area. Interesting cone-shaped mountain to E of here. All three this platform are other extinct lakes filled with grasses, bordered by

and then sagebrush slopes. Lodgepole pine and other pines surrounding the savannas. This same platform or valley has a hummocky physiography in some parts covered with soil from outwash plain and covered with larger rocks. 76477.9 Obsidian Point forms obstruction for broad flat valley above. Obsidian black & shiny. Meadows all in brownish and yellow grasses with a few conifers standing in the middle. One large lake held back by beaver dam grown to vegetation. Approx. 10 ducks on lake. meadows and vegetation choked streams all along. One lake with severe burn on mountain side. Creeks filled with a bright greenish-yellow grass or moss and only a fraction of creek in running water. Water is greenish. ~~76481.7~~ 76481.7 North Twin Lake, formed by travertine from mountain slope by thermal activity ^{slipping off the} at mouth of canyon. Trees have roots surrounded by an ashlike material. So far no road kills. One lake filled with cattails instead of grasses and darker green than other meadows. Had not observed ducks in these lakes but they undoubtedly use them. Water in lakes a greenish brown and are generally shallow. 76489.2 photo 770817-4 of *Cervus canadensis*. Elk tracks all thru the area. Seems to be feeding on grass. 2:30 P.M. meadows have good meanders bordered by yellowish green grasses. Some lodgepole stands show burnt trunks at base. 76500.0 thermal springs producing a large alluvial fan of precipitated rock. At Gibbon Falls noted 5 Clark Crows, 5 ground squirrels and two chipmunks. 76502.2 Firehole Falls in photo ~~770817-5~~ 770817-5, 4 Clark crows, 2 *Eutamias minimus* and 3 *Spermophilus* here. 76503.6 raven along Firehole River. 76507.6 raven. now going thru a broad grassy meadow with thermal activity to the S. and one can see how these springs put out broad accumulations of precipitated minerals. 76509.4 at Fountain Point Pot. noted 2 sandhill cranes to the west ^{of thermal activity} and 20 Canada geese just S of thermal activity. 76511.5 photo no 770817-6 of brown and ^{green (nearest H₂O)} yellow algae along edge of stream that enters the main river. ^{hot water} 770817-7 partition ^{770817-8 yellow-green algae from flowing spring.} 76515.3 raven. 76517. Basin this side of Old Faithful photo 770817-9 of geyser that shoots out over the river. Also 770817-10 of boiling water of one geyser and ^{30 pingers & 15 redwinged blackbirds} 770817-11 of deep quiet pool showing color change with depth. Continued to Oldfaithful and took 2 photos 770817-12 and 770817-13 of this geyser at an early and late stage of activity. This area is completely out of control. They now have a partial clover leaf in highway. I predict that the time will come when all this artificial influence will be eliminated from the park. Continued to West Thumb, thence north to Fishing Bridge where we camped along river just n of the

Old abandon housing units. All camp sites were full but we had this area all to ourselves. Noted enroute 1 elk 210 mi. N West Thumb, Along route 5 raven & 4 gulls.

Fishing Bridge, Yellowstone National Park, Wyoming.
Aug 18, 1977



This morning measured a bear track just outside of camp at 9" length. 3 pelicans and 2 gulls in river by camp. Water lower than usual. Left and just before bridge noted 3 raven. At Lake noted a large mouse with heavy antlers in understory brush not over 30' from road. 5 raven and 6 gulls. At West Thumb took photo

770818-1 of mystic atmosphere of early morning mist and steam of main shore of thermal springs. No 770818-2 of Annette at Cove in lake where fishermen used to catch fish in the lake and with fish steel on line took in cone hot spring. No 770818-3 of hot spring with reflective conifers. Colors in this area are produced by bacteria and algae according to their tolerance to different temperatures. Travertine is white and is produced by lime or calcium bicarbonate which is precipitated as the result of the saturated lime is no longer able to remain in solution. As the carbon dioxide escapes into the air the carbonic acid is reduced. White and bright yellows of bacteria live in the hottest section of the runoff channels. As the water cools orange, brown & green algae predominate. There are 65 species of algae in the thermal pools in some areas of Yellowstone. 3 raven & 2 chickadees at West Thumb. Left West Thumb and drove S to Grand Teton National Park, and having seen 8 raven and 1 *Peromyscus* road kill. At N end of Jackson Lake noted 185 Canada geese in area of recessed shoreline which is at least 2/10 mile exposed. Lake unusually low. Also 3 mallards, and one flock of shorebirds of the size of western sandpipers. Other birds in area are 1 great blue heron, western kingbird, white crowned sparrow, common loon, robin, spotted sandpiper and swallows. Left N end Jackson Lake at 76621.5 at 10:20 A.M. 76631.3 Pilgrim Creek, no water. Raven eating a snowshoe rabbit road kill. Open savannas are sagebrush and a ^{dry} yellowish-brown ^{short} grass surrounded by lodgepole pine. 76633.7 at Jackson Lodge. 8 Brewer blackbirds in area. 76635.3 magpie. 76640.2 sparrow hawk. At south end Jenny Lake Cottonwood

trees turning yellow, probably from lack of summer moisture. 76652.7 photo 770818-4 of dike cutting perpendicular thru mountain peak. It is remarkable how such a thin uniform dike can maintain such regularity for such a distance. Look more like someone had pointed this line on the peak.

76654.9 roven. at S entrance of park observed a chipmunk. 76666.4 2 roven. 76666.5 roven. marsh hawk and roven. Approx. 80 ducks just N of Jackson, Wyoming. 76670.3 at 1:15 P.M. 20 Brewers on lawn in village. End of census.

In Jackson discovered a Paul Salisbury Oil Painting called "~~the~~ Taking a Breather" at the Trailside Gallery. The picture is numbered (their number of 77-122, 18-20. It was purchased from a client in Texas. Made \$110. hold and will finalize purchase when I return to Lawrence. The art galleries here are featuring western cowboys and western scenes, especially scenes of the Teton area; most of them acceptable but expensive. Left Jackson and continued S and 187 Highway to Hoback Junction, thence SE on 187. 76695 Coyote road kill. 76705 redtail. 76713. redtail, most birds in valley. 76717 redtail. 76718 redtail. 76719 redtail. 76720 redtail. 76722 3 antelope, ² redtails on fence separated by 2 feet, one of them feeding on a kill. 76723 roven. 76724 marsh hawk. Elevation around 8,000 ft. 76725 6 antelope, roven 76725 5 antelope, 2 of them crawled under the fence rather than jump over it. roven. 76727 redtail. 76727.4 Green River, sagegrouse. 76729 6 antelope, 76733 redtail. There is a purple flower mixed among sagebrush. 76734 4 antelope. 76754 antelope. 76756 roven. 76774 roven. 76775 roven. 76776 redtail. 76776.9 adult male, adult female and 2 young, together. It has been raining intermittently across the desert all afternoon. 76827 ² redtail, 13 antelope. 76828 2 large ^{adults} & 2 young antelope. 76831 17 antelope. 76835 12 antelope. 76837 antelope. 76857 2 antelope. 76877 at 8:30 P.M. 38 Brewers blackbuds in field at Camp. Route this afternoon was 187 to 240, thence 30 to 80 to camp on W side of Green River on S side of road, now a City Park. Park attendant was hunting striped skunk.

W Green River City, Sweetwater Co., Wyoming
Aug. 19, 1977

Mileage at Green River Bridge 76877.5 A prairie falcon flew along with car at 35 miles an hour for about $\frac{3}{10}$ mi. River is low. 12 ducks so far. 76879 ^{magpie} at exit to ^{South} Superior. at mileage 76917.2 Took 12 photos of road cut (N. side) showing stratification:

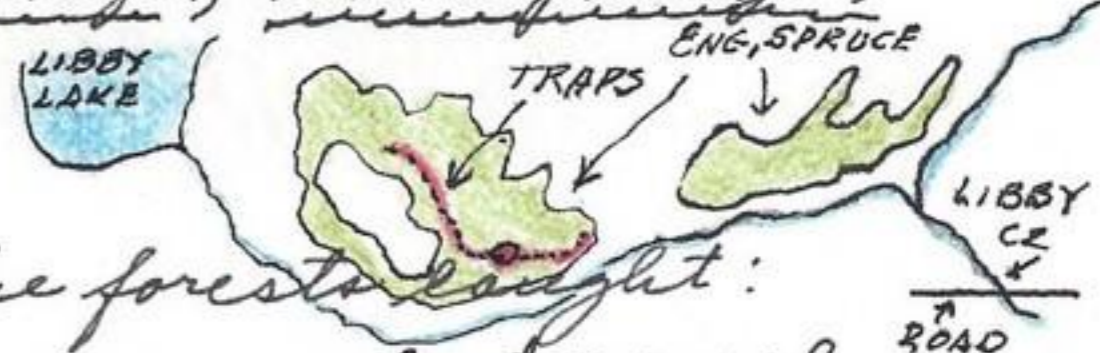
- 770819-1 Simple anticline in medium sandstone stratification
- 770819-2 syncline and complex structure between horizontal beds and syncline, may be overturn and sliding
- 770819-3 Complex folding between horizontal beds
- 770819-4 Complex faulting and folding
- 770819-5 anticline.
- 770819-6 Complex folding between horizontal beds.
- 770819-7 Complex folding and unusual contact with horizontal beds above.
- 770819-8 Resistent mass in horizontal layers.
- 770819-9 Horizontal bedding.
- 770819-10 " " " for measurement of bedding or stratification.
- 770819-11 ~~Cross section~~ Cross section of erosional gully ~~no in unconsolidated~~ stratified rocks now differentiated as slightly stratified but mainly unconsolidated rock of different size pebbles.
- 770819-12 along road cut showing general character of stratified sediments. This site would be good for measurement of width of layers. Next time the face should be taken with telephoto to reduce distortion from bottom to top and to give closer view of the stratification for measurement. Several shots would be required to include the total height. Redtail circled above cliffs.
- 76938 2 antelope resting on sidehill. 76971.5 one adult and one young antelope 1/2 to 1/2 size of adult. 76980.7 Continental divide 9 antelope on left side, 2 on right side. 76981.7 young antelope feeding at a bush on right-of-way and an adult about 100 beyond. One mile this side of Boggs ^{turnoff} 4 adults and 4 young 1/2 size of adults. 76983.3 overpass to Boggs. In summer antelope travel in family groups or small groups whereas in winter they form large herds. 76988.8 seven antelope. ~~77020.7~~ ^{76993.2}
- 9 antelope, 5 antelope, 2 antelope 76996.8 antelope 76997.6 3 antelope. 77020.7 2 antelope. 77025.8 North Platte River full and muddy. 77031.7 at 2:08 P.M. at Walcott junction. Will leave Interstate 80 and go south on 130 toward Saratoga.
- 77035.4 jack rabbit road kill. 77039.2 rabbit road kill, 77036.3 77037.3 rabbit road kill, 77037.4 rabbit road kill. 7737.7 rabbit road kill (most of these rabbits are jack rabbits). 7737.9 rabbit road kill, redtail. 7739.4 rabbit road kill. 7739.7 rabbit road kill. 7740.7 rabbit rd. kill. 7742.0 live Spermophiles. 7742.1 rabbit road kill. 7743.0 ² small sparrowlike birds flew across road. 7743.7 rabbit road kill. 7744.1 rabbit road kill. 7744.3 rabbit road kill. Day with cumulus clouds, some compacting into dense masses, otherwise sky blue above.

77 46:3 lone antelope on ridge. mainly sagebrush from dense to sparse, lowland with rabbitbrush mixed in with sagebrush. The *Corydalis* in blossom. One lake looks like normal height others down 50-60%. 77052.3 Crossing North Platte River just N of Saratoga. The above rabbit census was complete and can be compared with censuses previously made and recorded in the journal. This area between Walcott & Saratoga has always supported jackrabbits. An informant at Saratoga said that ~~last~~ ^{this} year they put fences along each side of road from Saratoga to Walcott and this may explain why there were so few jackrabbits and antelopes. Continuing S. 77055.3 rabbit road kill (continuing complete census). 77057.7 2 antelope. 77058.8 striped skunk road kill and live Spermophiles. 77060.0 numerous prairie dog mounds but no prairie dogs. 77060.6 now to left on highway 130. 77060.9 numerous prairie dog hole on right but no prairie dogs. I am wondering if they have been poisoned as we always have seen many live ones in this prairie dog towns. 77061.5 Bridge over North Platte River. River slightly lower than usual. At pond where we cross Elk River, 4 small ducks. No birds or mammals across the slopes from N. Platte River where they are usually common. The fields that at one time were in good fields of grass are now 80-90% willow. 77069.8 mouth of canyon of valley ridge. One live ground squirrel and one *Eutamias*. 77077.4 mule deer ran across road. 77077.5 2 Canada jays. 77077.6 pine siskin. 77098.4 small bird. 77086.4 marmota road kill and *Eutamias minimus* ran across road. ~~77086.7~~ 77088.6 2 young marmots feeding on edge of road not over 4 inches from macadamize edge. 77096.9 Adult marmot along road. 77087.4 Marie Lake, no water out of outlet but creek channel dry. Beyond, the small ponds along side of road are way down or completely dry. Snow banks that are associated with slopes along road are now gone and only a small cornice visible on main ridge. At Libby Flat divide a *Eutamias minimus*. 77090.3 Turnoff to Sugar Loaf. A redtail dropped freeflight to meadow and picked up a mouse. Now can see 4 or 5 patches of snow (cornices) on top main ridge to west. 77090.5 *Eutamias minimus*. 77090.7 marmota. At 77091.1 Libby Lake Campgrounds on knoll east of road. Camped in same place as on previous trip. *Eutamias minimus* here. Set 50 mus. sp. traps among pine and spruce east of camp, in practically all cases at base of conifer or under log. numerous

deer tracks. On return on trapline caught a Canada Jay that called like magpie. It was unharmed and was released. The latest chipmunk observed was 8:00 P.M. white-crowned sparrows and Oregon juncos along trapline. Estimated that Libby Lake is down 2 feet. Can see major snow mass on E side of Sugarloaf mt. Other ponds and creeks dry. Photo 770819-13 of me and Annette at S end of Lewis Lake with Sugarloaf and Medicine Bow Peak and ridge in background. At 5:30 Chris took camera and hiked to near top of Medicine Bow Peak. At last flat spot on upridge before abrupt ascent to top she took photo 770819-14 to S showing 4 alpine ponds in foreground and Lookout Lake in distance. The lake on left is associated with hummocky grasses much like the arctic tundra. Photo 770819-15 from same area below Medicine Peak showing Browns Peak to the N.E. It appears to have faulted recently on W end. Someday I hope to ascend this flat peak via these fault lines. Photo 770819-16 spider web and flies captured by the web. This is above timberline. Chris returned later in the evening. She reported on two marmots and three haw near Lewis Lake. On trail a pika ran down trail to within 5 feet of her before ~~she~~ ^{the} pika noticed her. She also saw two or three dozen other pika in rock slides along the trail. Two prairie falconlike birds flew high over Libby Lake. Observed the small chipmunks to be common below timberline and fewer above timberline. Deer tracks at first pass between Klondike Lake and Lookout Lake. This year there is decidedly less snow and runoff than in previous years when it was questionable whether some of the camps would be open because of snow banks over the road. This year the roads were clear & dry and the growth of vegetation had not been retarded by snow banks that covered many exposures during normal years. Springs & rivulets were dry especially those coming off the slopes E of camp. The dry summer was also noticeable in dry ponds and lakes that I had never known to be dry and the lack of ^{usual} snow on the upper slopes of the Snowy Range. General observations would indicate an increase in pika populations. Birds did not seem to be in as great a number as in previous wet years. Blood pressure at this high altitude camp (approx 10800ft.) was 160-90. Noted several *Eutamias minimus* in the camp area. The trapping area is indicated for Aug 20 date and is in the same area as one set in previous years so a direct comparison can be made.

3/10 mi E, 1/10 mi S outlet Libby Lake, 10720 ft, Snowy Range,
Albany Co., Wyoming.

Aug 20, 1977



From trapline of 50 traps from timberline forests caught:

770820-1	<i>Eutamias</i>	196-93-30-16-48gms. ♀ ut. normal
770820-2	<i>Phenacomys</i>	132-29-18-11-31gms. ♀ 3x2 plac. scars.
770820-3	<i>Eutamias</i>	190-87-30-14-38gms. ♂ testes 2.5 mm
770820-4	<i>Clethrionomys</i>	140-39-19-12-30gms. ♀ 4x3 emb. 10 mm
770820-5	"	136-38-19-12-21gms. ♂ testes 11 mm
770820-6	"	137-39-19-12-21gms. ♂ testes 10 mm
770820-7	"	141-34-18-13-26gms. ♂ testes 11 mm.
770820-8	"	145-41-19-13-28gms. ♀ 3x4 plac. scars,
770820-9	"	145-43-18-13-25gms. ♂ testes 10 mm
770820-10	"	143-41-17-12-26gms ♀ ut. normal
770820-11	"	151-45-18-12-34gms ♀ 4x4 emb. 16 mm.
770820-12	<i>Peromyscus</i>	155-65-20-17-21gms. ♂ testis 9 mm
770820-13	"	152-64-19-17-19gms ♂ testis 9 mm
770820-14	"	154-63-20-17-21gms. ♂ testis 10 mm

Min temp last night 38°F. Before leaving camp took several photographs of upper end of Libby Lake. Photo 770820-15 of reflection of Sugarloaf mt. Photo 770820-16 same as above but with quartz boulders in foreground. with 2 marmots on rock in left hand side of photo. The peak is Lookout Schist of Precambrian age whereas the base of the peak is Sugarloaf quartzite. Photo 770820-17 in same area about with Chris in foreground. The white quartzite boulders are glacial deposits of the Medicine Bow Peak Quartzites from crest of ridge in distance. These quartzites give one the impression of granite rocks, especially at a distance. Photo 770820-18 of general view with Medicine Peak Quartzites (Precambrian) in foreground, Sugarloaf Peak in middle ground and Medicine Bow Peak on distant ridge.

Left at mileage 770922 at 10:10 A.M. dominant birds are pine siskin, junco, Canada jay. At Hourglass Lake noted the lake is dry between the two segments and the shorelines are out 50-60' from shore. 77096.9 chipmunk. at Wyoming Summer Camp. (Univ. Wyo) a marmot some distance from rock slides. 77106.2 rabbit road kill. Continued to Centennial thence 130 to Jacks Place. Lake there down 1 1/2 feet, water muddy, 3 ducks and 20 Canada geese. 77113.7 prairie dog diggings but no prairie dogs in sight. 77114.7 rabbit road kill. also eleven antelope. 77115.5 rabbit road kill.

77115.9 10 antelope, all safar on n side road in short grazed vegetation and although closely cropped the area is green. 77119.8 5 antelope, rabbit road kill. 77119.9 rabbit road kill. 77120.7 5 antelope. 77122.1 antelope, small mammal road kill. 77123.6 seven antelope. 77124.5 4 antelope. 77126.1 7 antelope. 77126.2 11 antelope. 77126.6 14 antelope. 77127.5 2 antelope. 77128.1³ antelope. 77128.9 first horned lark, at airport W of Laramie. and end of census from morning camp to here. Arrived interstate at 11:35 Continued S from Laramie and at 77138.5 redtail. 77139.4³ antelope. 77150.6 19 antelope. 77151.6 Tie Siding, 77154.5 antelope. 77155.3 15 antelope. 77155.5 Top of divide. 77157.0 antelope at old mine (E) on top. 77159.9 Colorado line. 77163.2 Clark's Crow. 77245.4 redtail and first one observed for some time. 77346.9 redtail. Continued 25 to 70 at Denver, thence 70 to Colley where we camped.

Colley, Kansas

Aug 21, 1977

This morning raining to E. Min temp. last night 62°F. Left 7:35 A.M. sunrise about 7:20 A.M. Rained last night. 150 ducks flying S. In a temporary pool, ^{1 acre} in cut corn field approx. 200 blue wing teal. Temp at 7:45 A.M. 64°F. Mileage 77504.4 exit 62 at wings. Will start complete census for a while from here (starting at 7:50 A.M.) Sky clear to N but rain clouds to S. mourning dove, lark sparrow and recording by road side mileage markers. 66(77507.8) 6 swallows. 12 Eng sparrows. 77513.8 redtail. 2 mourning dove. 74 - mourning dove. 2 swallows. ponds full, meadowlark. 83-84-85-86 - not much prairie land left. 87-88-89 - many temporary ponds from rain last night and covered with ducks. 90 3 mourning dove. 91 mourning dove. 92 - 93 purple flower well developed around marsh areas. 94 flowing water in natural drainage systems. 95-96-97-98-99-100 swallow fields all in cultivation except some swales. 101-102 - swallow. 103(77546.1) marsh hawk. 104 2 swallows. 105-106 - some animal road kills not recorded, 2 mourning doves. 107, mourning dove. 108 - mourning dove, 6 swallows. 109-110-111 112 - swallow. 113(77555.9) Trego County. 114-115-116 - 6 swallows, swallow. 117-118 swallow, 4 swallows, 2 swallows, 2 swallows, 3 swallows 119 - swallow. 120(77563.3) marsh hawk. 121 swallow, 4 swallows. 122-123 - swallow, 2 swallows. 124-125-126 mourning dove. 127 (77169.9) Wakeeney at 9:15 A.M. 128-129 two swallows. 130-131-132-133 mourning dove, 134-135-136-137-138-139-140 mourning dove, 141-142 mourning dove, 143 2 mourning doves. 144-145-146-147-148 - 3 swallows. 149-150-151(77595.2) turkey vulture. 152 3 swallows 153.(77596.7) redtail, opossum rd kill.

154 30 redwing, 2 mourning doves, 155 3 meadowlarks 156 2 helldeer,
 swallow. 157-158 (77602.7 epit 159 Hayes) at 10:35 A.M. 160 swallow,
 2 swallows, 161-162-163 swallow 164 2 mourning dove. 165- swallow,
 166 meadowlark. ~~167-168-169-170-171~~ ducks. 172-173 swallow, swallow
 174 meadowlark, 4 swallows. (77618.7 Russell at mileage Post 175).
 6 swallows, mourning dove, swallow, 5 mourning doves, mourning
 dove. 176-177 mourning dove. I have never seen this country so green.
 (77662.0 redtail), 3 swallows, 2 swallows, some ponds covered with
 duckweed, mourning dove, swallow. 188-189-180 2 mourning doves.
 181-182-2 swallows, 183 mourning dove, 6 swallows, 3 swallows.
 184-185-186-187-188-189 swallow, swallow. (77633.4 redtail) mourning
 dove, mourning dove. 190-191-192-2 swallows 193 mourning dove. 194
 swallow, swallow. 195-196-197-198- more wheat in area than western
 part of Kansas. 199-200-201-202-203-204 6 swallows, (77649.2 entering
 Ellsworth Co.) 776 51.3 striped skunk rd kill. 205-206-207-209-210-
 211-212-213-214- (77658.2 maybe ~~toad~~ ^{fox} Lepus townsendi road kill).
 215-216-217-218-219-220² mourning dove. 221-222-223-224-225. (77670.0
 Elkhorn Creek) 226-227 ponds full², has been the case all across Kansas.
 228- (77672.7 Lincoln Co) at 12:10 P.M. 229- swallow, swallow, gull.
 230-231-232 Conifer trees reacting to wind as is true throughout western
 Kansas 233-234 unusual ^{butterfly} flights. 235 (77680.0 Saline Co)
 236-237 swallow. 238-239-3 swallows. 240-241-242-243 swallow
 244-245-246-247. swallow. 248-249-250-251-252-253^{to 256} (77702.2
 Saline River). 1:00 P.M. 257 mourning dove. ~~77706.0~~ ²⁵⁸⁻²⁵⁹⁻²⁶⁰ swallow. 261-
 262-263-264 (77712.4 Salomon River. muddy and moderately full.
 265-266-267-269-270-271-272- unusual number of signs that have
 been damaged by wind. 273-274- (77723.0 striped skunk road kill).
 275-276-277. 278-279-280-281-2 swallow. 282 meadowlark. 283-284
 My estimate is that there has been 90 monarch butterfly across
 Kansas so far and all of these flying south. 285-286-287-288-
 289-290 many field from 1/2 way across Kansas to E have a Queen
 Anne lace type flower. (white flower on 1 foot high stalk). 291 (7774.3
 Turkey vulture). 292-293- red-headed woodpecker. 294-295-296
 Clay Center at ⁷⁷745.0 at the turn off. ²⁹⁷⁻²⁹⁸ 77747.1 Smokey Hill River at 1:50
~~297~~ 298-299 mourning dove, 321 Flint hills very green & productive
 looking. 77709. Wabaussee Co. mourning dove, 324. at
 329 mileage on car is 77777.7, 4 mourning doves. ³/₈ 38 at (77788.3
 Turkey vulture) at 3:00. 777855 210 mi beyond bypass for 70 ^w at Topeka
 8 grackles at milepost 3. Epit 4 at 77812.1 at 3:30 P.M. Temp 83°F
 and first starling observed across Kansas! mourning dove. This is
 at Topeka at White Lake area. On our trip to W in July the

water in Shawnee lake was low, exposing bay to S end and channel
 on east side at S end. now water normal height and entire lake bed
 covered with water. 77817.5 S end Shawnee Lake where Creek passes
 under road, 77818.8 meadowlark, cowbird. ^{77824.4} ~~77822.4~~ Douglas Co. line.
 77825.4 2 mourning doves, fox squirrel road kill. 77832.4 highway 40.
 (from the Skull Rd). Lawrence unusually green, lawns, trees, flowers etc.
 77838.3 Kasold & Peterson Rd, seven starling. 77839.2 home at
 402 Yorkshire, Lawrence, Kansas. at 4:10 P.M. having travelled
 6137.0 miles this trip.

Helen Foresman Spencer Museum of Art, Univ. Kansas, Lawrence, Douglas Co., Kansas.

Aug. 26, 1977

Photo 770826-1 of museum with grass sod in place. but no shrubs yet.

James Robert ^{Bee} Barn, 4/10 mi E and 1/10 mi N of SW sec 34, T9S, R18E, (1 mi. E Oskaloosa), Jefferson Co., Kansas.

Aug 28, 1977

Progress photos:

770828-1 James Robert Bee and Annette Christine Bee feeding the fire. NE corner of barn in background.

770828-2 SE corner barn.

770828-3 James Robert pulling a wall plate from area with tractor. A similar plate was used for our porch at 402 Yorkshire, Lawrence. 15' x 9' size. Today noted 3 Turkey vultures in area. Enroute to barn from Lawrence noted a decided increase in redtail hawks.

[see next page for Sept 5, 1977]

Along Interstate 70, 1/10 mi. NW Curtis 100 Inc, Iowa Street, Lawrence, Douglas Co., Kansas.

Sept 9, 1977

From a trapline of 10 live traps caught 2 *Peromyscus maniculatus* and the following three *Sigmodon hispidus*.

770909-1 *Sigmodon hispidus* 225-93-32-16-68 gms ♂ testes 16 mm

770909-2 " " 249-100-32-17-100 gms ♂ testes 19 mm

770909-3 " " 265-110-31-17-109 gms ♀ 5x3 emb. 17 mm.

One of the embryos of 770909-3 was 8 mm and lodged in part in the upper part of the cervix.

Lawrence, 402 Yorkshire Dr., Douglas Co., Kansas

Sept. 11, 1977

Oil painting by Paul Salisbury "Taking a Breather", arrived by Trailway Bus from Trailside Galleries (Trailside Two Galleries) Jackson, Wyoming, 83001. This gallery is the one furthest to the S on the town square. (20 Center Street.) and managed by Florence Petrovic. Price of painting \$1,110. (See Aug. 18 for initial arrangement for painting).

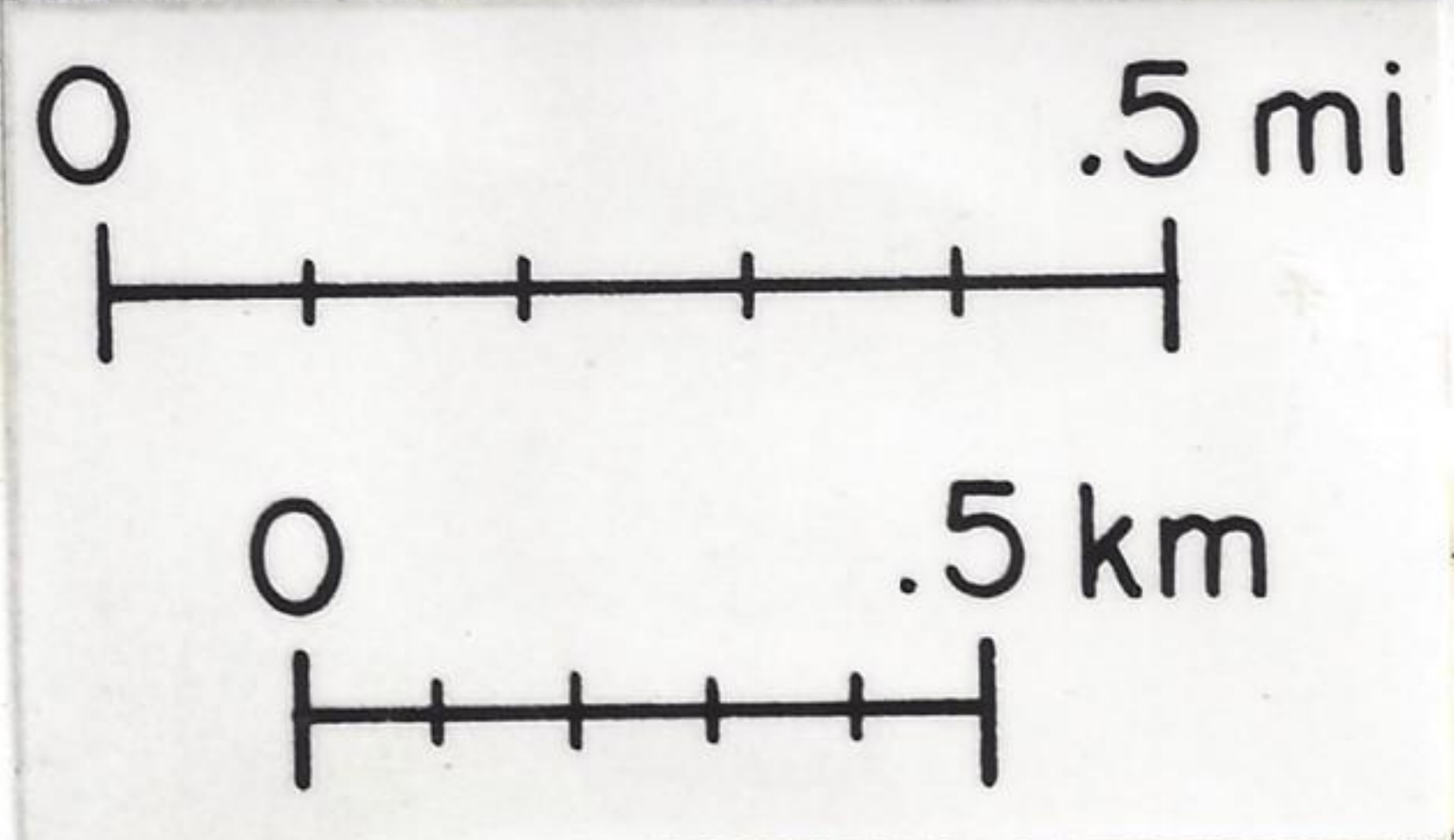
This oil painting receives the Catalogue no. 770911-1 JWB
See Aug 25, 1977 for completion of paintings

which will now include the above oil painting and associated information as well as measurements and photos etc. According to Springville bank, Utah, where Mrs. Paul Salisbury has two dozen or so originals of Salisbury, this oil now sells from \$8,000-\$12,000. Paul Salisbury died sometime last year.

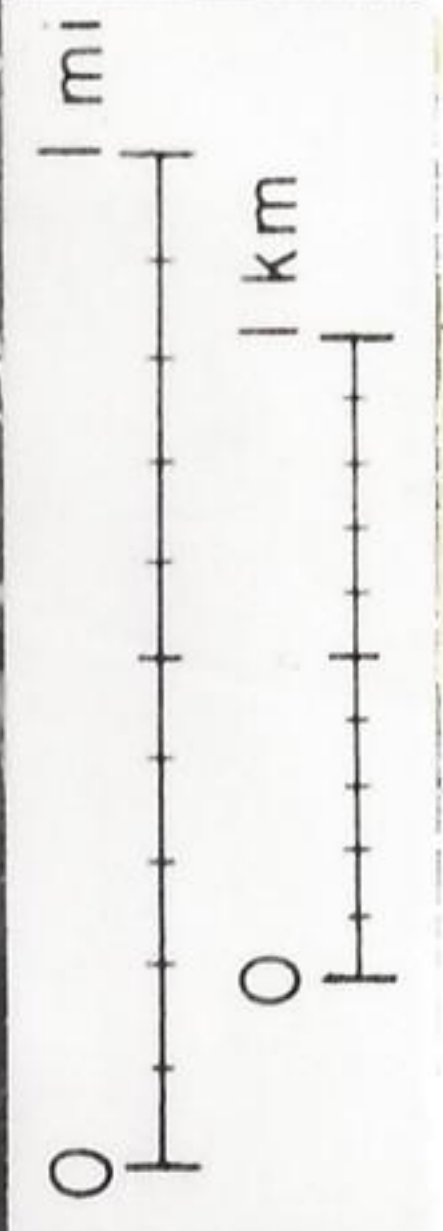
Boats

see page 770826-135
for proper entry

[INSERT] 770911-136



TAKEN SEPT 5, 1977 BY
GRADUATE STUDENT AT KU.



James Robert Bee farm, 1 mi. E Oskaloosa, Jefferson Co., Kansas

Oct 2, 1977

Photos 771002-1 West side barn now with N 1/2 down.

Photo 771002-2 SE corner. 1/2 barn (N) already down.

Photo 771002-3 showing W end barn with overhang down and center cut out and dropped.

Photo 771002-4 ibid with a familiar weed in the foreground.

402 Yorkshire Dr., Lawrence, Douglas Co., Kansas

Oct. 6, 1977

Photo 771006-1 of pond completed this fall. Taken 8:10 A.M. to E from new window.

Photo 771006-2 ibid. taken 10:30 A.M.

Lawrence, Douglas Co., Kansas

Oct 7, 1977

Noted at least 30 Franklin gulls in groups of 2 and 3 flying S over City between 4:00 P.M. and sundown. They were generally distributed some NW part of City, some Heeler Center and some over Univ. of Kansas.

402 Yorkshire Dr., Lawrence, Douglas Co., Kansas

Oct. 10, 1977

Took several photos of our oil paintings (Refer to Aug 25, 1977 for inclusion of these photos in Composite information on paintings).

All in color, Kodachrome 25, 35mm. and 35mm Kodacolor of original oil painting

Kodachrome Kodacolor color	771010-1	1/2 of Paul Salisbury, "Taking a Breather, cat. no. 770911-1 and"	"	"
	771010-2	"	"	"
	771010-3	"	"	"
	771010-4	"	"	" (selected for enlargement)
	771010-5	"	"	"
	771010-6	"	"	"
	771010-7	"	"	" (selected for enlargement)
	771010-7a, b, c, d, e, f	"Destiny", 2 Navaho Indians, Cat. no. 620827-1 710825-7	"	"
	771010-8	"	"	"
	771010-9	" (part of picture)	"	"
	771010-10	"	"	"
	771010-11	"	"	"
	771010-11a	Harvest scene		cat. no. 710825-8 (enlarge)
	771010-12	"	"	"
	771010-13	"	"	"
	771010-14	Charles Adams Snyderville area.		cat. no. 620827-1
	771010-14a	"	"	710825-2
	771010-15	"	"	"

			of original oil
771010-162	Charles Adams	Horse, hunter & bear on narrow ledge.	Cat. No. 710825-3
771010-16a	"	"	"
771010-17	"	Hunter, dogs & bear	Cat no. 710825-5
771010-17a	"	"	"
771010-18	"	Fisherman, canoe at base falls	Cat no 710825-4
771010-18a	"	"	"
771010-19	"	Hunter, canoe & moose	Cat no 710825-6
771010-19a	"	"	"
771010-20	Secondline	Keeper of game on white elk	Cat no 751209-1
771010-20a	"	"	"
771010-21	R. Pester	Courtyard scene in Italy	Cat no 710825-13
771010-22	"	Pauline Lister Sainsbury, Italy	Cat no. 710825-12
771010-22a	"	"	"
771010-23	U.S. Forest Serv.	Loas Ceops, Mt Timp., Utah Co., Utah	cat no.
771010-24	"	"	cat No.
771010-25	Reed Biddulph	Am Fork Curgue, Mt Timpanogas, Utah	Cat no.
771010-26	"	Aspen Grove Terraces " "	Cat no.
771010-27	"	ibid	Cat no.

Lawrence, Douglas Co., Kansas
 Oct 11, 1977

Last year the grackle, robin, starling, redwing roost just N of home (402 Yorkshire) was keenly organized as to arrivals in the evening and departure in the morning. This year they seemed to have come to the roosting area earlier than usual but later at what would be the height of the roosting season, the birds diluted the total numbers by coming in to the area and then flying out again or by passing over the area on their evening arrivals. The arrival routes, however, were similar to those of previous year.

James Robert Bee Barn, 1 mi. E Oskaloosa, Jefferson Co., Kansas:
 Oct. 15, 1977

Took several photos of barn:

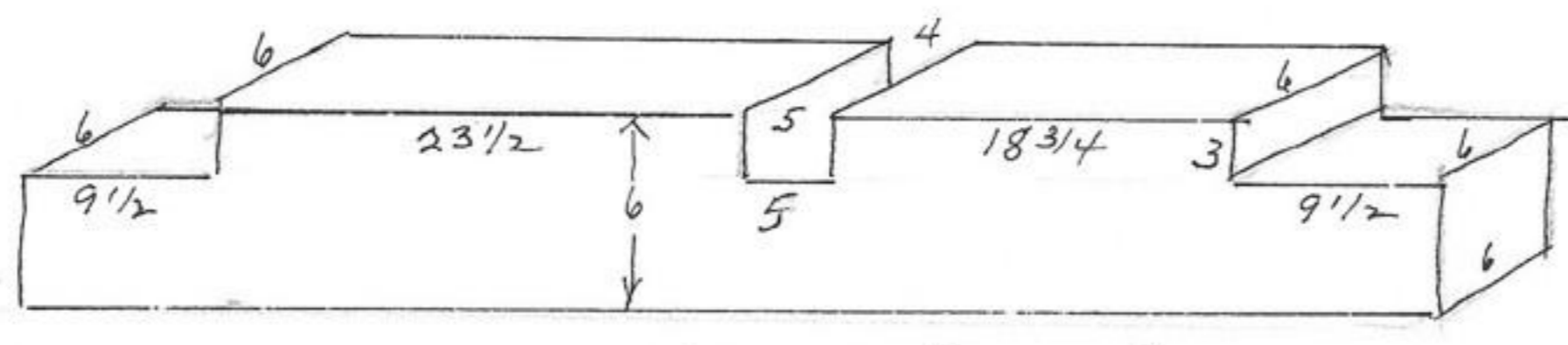
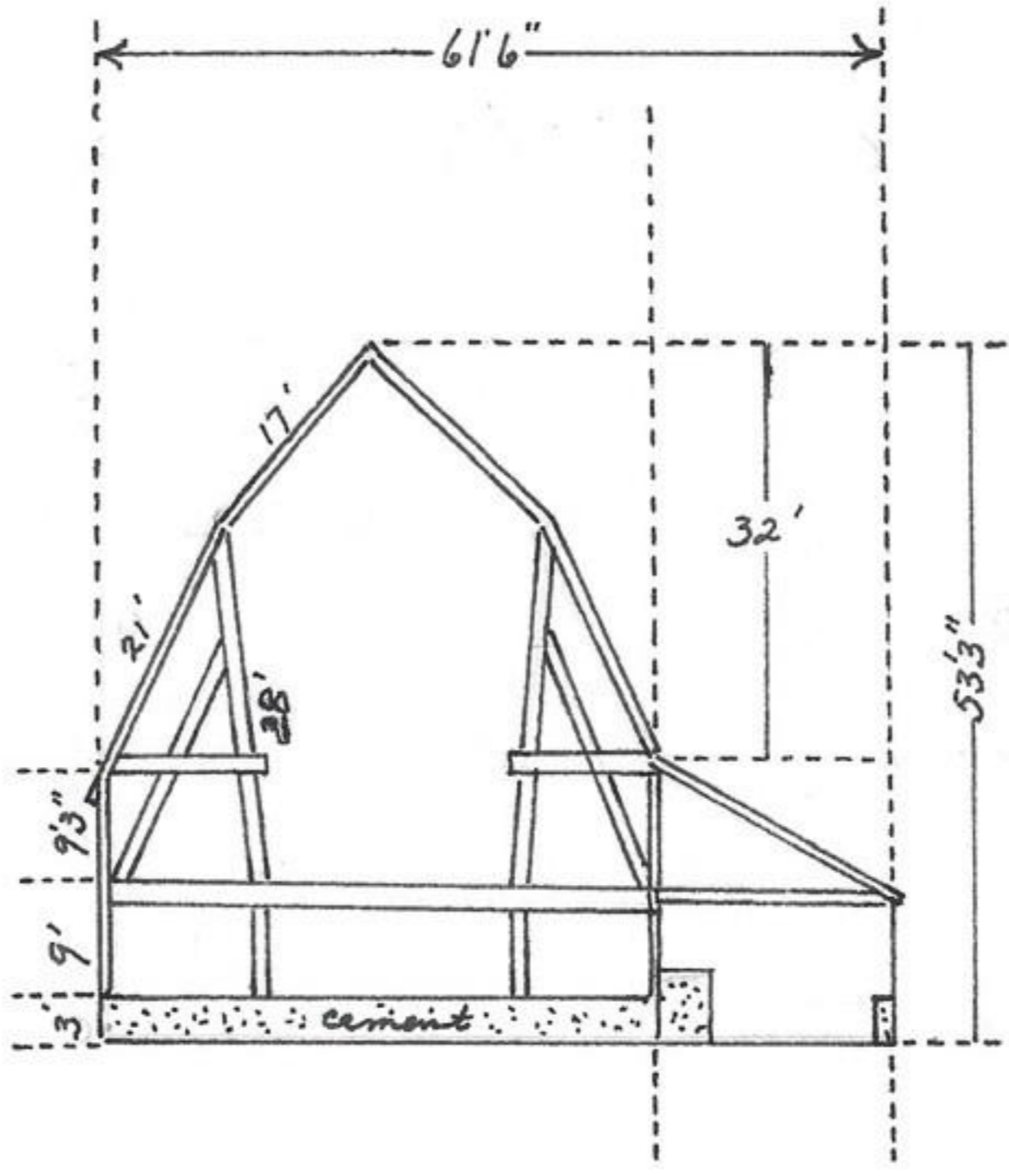
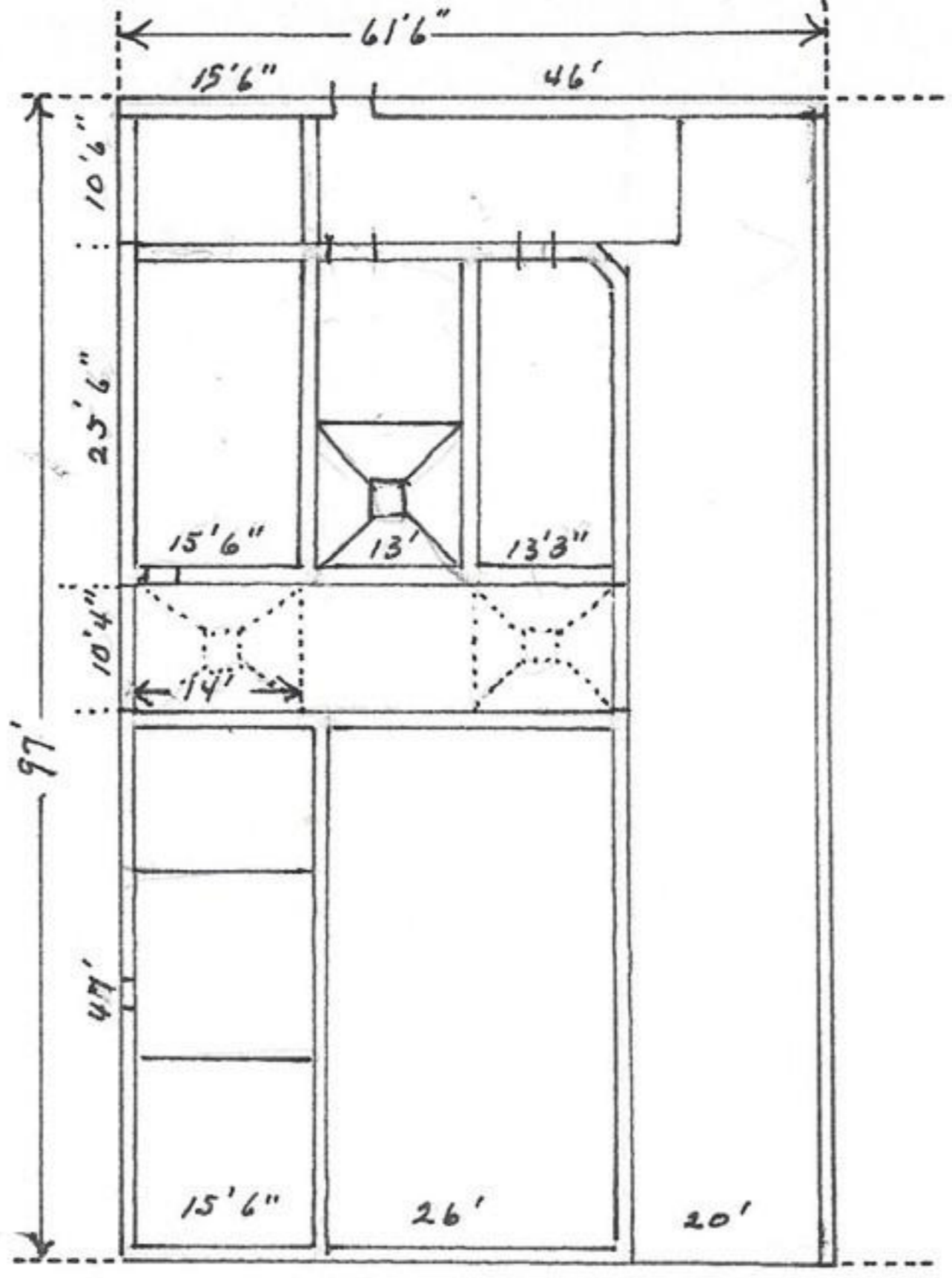
771015-1 Roof frame supports,

771015-2 ibid

771015-3 crew working on barn including Debbie Foster left end.

771015-4 upright roof supports still in position but being taken down.

Roof shingles and sheathing down with 2"x6" in place on open. These will be removed and the 10"x10" supports will be lowered to second floor where they will be removed by tractor to ground level. The scales, many square nails, part of the basal scales, runner of overhead doors and Channels, old wrench have been saved for Jays new house. measured the barn for future reference. (see next page).



2 BASAL PLATES (SCALES)

James Robert Bee Barn. 1 mi. E Oskaloosa, Jefferson Co., Kansas
Oct 26, 1977

Six photos jays barn with all sides down to first floor. The floor joists were removed and main floor walls removed for final state today.

771026-1 E. wall with ^{upright} joists and some first floor joists in place

771026-2 ibid

771026-3 from front of barn with floor joists being removed.

771026-4 joist removed and side walls down.

771026-5 further salvaging wood, barn for all tense + purposes down

771026-6 Debbie Baxter pulling nails. 771026-7 further salvage

The country side show maximum color of leaves.

402 York Street Dr., Lawrence, Douglas Co., Kansas
Oct 27, 1977

Rained all day. Several species of trees have yellow leaves or brown inside trees but green leaves on outside or terminal branches. Maples (soft), thornless locust, willow, poplar are some of these kinds of trees.

Lawrence, Douglas Co., Kansas
Oct 28, 1977

The color (yellow) in leaves of trees is disappearing and the trees are becoming grey and fuzzy in appearance. There are, however, many trees that are still green. The morrons of oaks are at present dominant. The reflection pool in backyard is of low profile and leaves enter by blowing into pond unimpeded by lack of tall vegetation around edges. In nature there is a tendency for high growth to grow around the edge of a pond and thus keep out material that is blown across the area. Our reflection pool is a natural trap for leaves and different kinds appear seasonally. The leaves of the ^{locust} rain tree occur first, then the leaves of the rain tree followed by leaves of the sycamore. Large flocks of blackbirds (grackles, starling, few redwings & sawbird still in area,

First cold weather. 20°F Nov 1, 1977

Lawrence, Douglas Co., Kansas
Nov. 20, 1977

Three photos of clouds and sun to east in A.M.

771120-1 sunrise to E from home

771120-2 clouds fringed

771120-3 " "

Temperature changed abruptly from 56°F to 46°F in 20 minutes.

James Robert Bee Barn, 4/10 mi. E, 1/10 mi N of SW Sec. 24,
T9S, R18E (1 mi. E Oskaloosa), Jefferson Co., Kansas

Nov. 25, 1977

Trip to James' barn. Complete census 80206.3 mileage at midland. Slightly cloudy sky. Temp 53°F. Wind from S and gentle. Alpha fields green and up 6 inches. 208.8 3 redtails circling together above ridge. Other grass fields green. Deciduous forests on sidehills with 98% leaves off trees and remaining dry in appearance. Mud Creek mainly in green on ground. 210.2 redtail on updraft of promontory, circled 3 times then flew straight up canyon to next favorable ridge and continued circling. On three occasions this hawk hovered in the air but definitely a redtail and not a roughleg. Striped skunk road kill. 211.6 Starling (will keep record of starling and Eng. Sparrows today). 211.9 red-bellied woodpecker. Oak trees about the only trees with leaves and these are dead and dry. 213.5 *Sabinawa* (sp.?) turnoff. 214.2 American roughleg flying and hovering over native grasses in grazing lands. 215.4 Another American roughleg hunting over native grass in one of the best areas for these grasses. 215.9 another American roughleg, meadowlark. 216.9 15 Eng. Sparrows 2 starling. 219.6 now W to James' barn which is 1 mi E of Oskaloosa. 221.6 James' barn. Albert Brune and James have been working on barn this A.M. We drove to Oskaloosa for lunch and return to barn. Photo 771125-1 final clean-up of barn and end of salvage. Rest of wood burned.

Perry Reservoir, Jefferson Co., Kansas

Nov. 27, 1977

80469.4 mileage at midland. Perry via Oskaloosa. Temp. 34°F. sky clear. 472.4 redtail. 473.4 2 Am. roughlegs hovering and about 1/10 mile apart. 475.4 sparrow hawk. 476.4 sparrow hawk. 476.4 *Sabinawa* turnoff. 477.9 roughleg, hovering. 478.2 redtail on post 25' from road. 478.7 am. roughleg, hovering. Wind from N.W. 481.5 left turn to Oskaloosa but continued north. 482.6 now W to Oskaloosa. 484.6 James' barn. 485.1 2 eastern bluebirds. 485.9 Oskaloosa, now going W on 92. (12:20). Some ponds iced, others open. 487.8 sparrow hawk. 489.1 redtail. 491.6 sparrow hawk. 494.2 boat ramp Old Town. Redtail and one ring-billed gull only. In bay N of causeway, 1 redtail and 25 ring-billed gulls. 3 deer (white-tailed on hillside to NE of causeway. One larger and darker than other two, slate-colored junco. 496 back to 4 corners and now 5 toward Little Slough Cr.

497.8 redtail. 500.2 sp. hawk - 501.2 Apple Valley Farm. 501.3
 water in bay yellowish-brown. 50~~7~~².2 approx. 30 quail in one
 group. 502.7 ^{yellow} red-shafted flicker. 503.8 leaving Longview,
 Park. 506.1 now on Ferguson Rd & to south. 507.9 sp. hawk.
 509.5 2 yellow-shafted flickers, redtail. 511.1 Entrance
 Big Slough Park 510.8 now left. 511.5 redtail in tree, 4 juncos,
 511.8 shrike 512.2 yellow-s-flicker 512.5 head of bay, redtail, at
 Gap Point area old county road now completely covered with water.
 513.7 Gap Point. 514.8 leaving Park. 515.4 redtail. 517.3 Big
 Slough Cr Bridge. 520.9 ♂ & ♀ mallard, 3 ♂ on shore. 521.2
 E end dam (beginning of guard rail). 522.0 Outlet water 893.0 feet,
 NW outlet approx. 200,000 mallard ducks. May have been other
 kinds but did not have power to see details. masses of ducks
 control height of waves to lee of duck rafts, 522.7 W end dam,
 523.4 from Overlook can see 10 snowgeese among the 5016 rafts
 of mallards which extend N to peninsula. Temp. 2:30 P.M. is
 34° F. Considerable ice still on trees, grass and rocks. 28
 goldeneye ducks near dam. at bottom of hill at pond to W
 8 scaups and 4 mallards. 525.0 Thompsonville. 527.4 sparrow
 hawk. 528.4 Delaware bridge, water muddy and about normal
 level. 540.3 5 crows. 541.2 sp. hawk. 541.8 sparrow
 hawk at Kusald and Peterson Road, 54~~7~~².6 home at 3:10 P.M.

Lawrence, Douglas Co., Kansas

Nov. 27, 1977

Photo 771127-1 of reflection pool at home. Frozen. Last
 night rain turned to ice and roads & trees covered with ice,

Dec. 10, 1977

nights of 9th & 10th pond froze. First sunshine in a week and a half.
 Three photos nos 771210-1, 771210-2, 771210-3 of jayhawk.

Dec 24, 1977

Dennis Dailey reported his observations between Lawrence and Wichita
 on turnpike at beginning of cold weather approx. 5 weeks ago. 56
 hawks (Am. roughlegs and redtails) in trees and 20 in air, between
 1/2 hour before sunrise to 2 hours after sunrise. On a later trip
 he saw 16 hawks in the same area. He also observed 6 coyotes,
 several white-tailed deer and sparrow hawks. There seems
 to be more wildlife in the early mornings than later in
 the day.

Lawrence, Douglas Co., Kansas

Dec 25, 1977

Left for New Orleans, Corpus Christi trip (Dec 25, 1977 to Jan 10, 1978). Annette and I made ^{with trailer} trip. Left Lawrence under cloudless blue sky, temp 22°F, gusty winds out of the north. Departed 1:00 P.M. Polly called from Casper just before we left. Mileage 81241.3. Leaving town noted a roughleg flying over Country Club Golf Course near home. 81246.8 mileage at Wabasha Bridge south of town on highway 59. Will keep record of all raptors and other noteworthy observations. 246.9 sparrow hawk and roughleg. 249.5 sparrow hawk. 254.4 sparrow hawk. 258.9 sparrow hawk and opossum road kill, 4 crows. Some ponds partially open, all country brown, trees without leaves and no snow on any exposure. Most ponds, however, are frozen. 265.8 Santa Fe tracks at Ottawa. Mass de Cygne flowing. 272.7 sparrow hawk. 273.4 redtail. 276.5 crow. 280.7 marsh hawk, sp. hawk. 284.0 redtail. 285.8 sp. hawk. 287.8 Pottowatomie Creek, striped skunk road kill. 289.4 many junipers in deciduous forest on left side road. 291.6 Garfnett. There is a noticeable increase in juniper after crossing Pottowatomie Creek. 296.6 redtail. 299.5 now more prairie like, sparrow hawk. 312.7 Allen County line. 315.4 crow. 320.8 Moran, now E on highway 54. 327.6 sparrow hawk. 328.7 redtail. 330.7 redtail, 2 crows. meadowlarks and starlings seem to be the only other kinds of birds and these not very plentiful. 335.5 sparrow hawk. 338.9 redtail. 339.8 first mockingbird and a redtail and a striped skunk road kill. As usual am recording all birds of prey and today, crows, all other observations selective. 342.4 redtail, sp. hawk. 343.3 redtail. 349.0 Fort Scott. 353.4 Missouri line. 356.2 redtail. Temp. 29°F. Across country have noticed 5 or 6 barns that have recently collapsed as if results of a heavy wind. 368.5 Nevada overpass east of town on highway 71. at 4:45 P.M., temp. 28°F. 373.0 redtail. 376.5 redtail. 378.2 redtail. 388.9 sundown at 5:10 P.M. still no clouds in sky. and not much wind and from N. Arrived at Joplin 81438.2 at 6:55 P.M.

Joplin, Missouri.

Dec. 26, 1977

Left at 8:30 A.M., 81438.2, min temp. 14°F, slight wind from W. Four mockingbirds at camp. Clouds bank of alto overhead but clear to N + to the S, wind from SW or W. Sparrow hawk ^{1 mi.} outside Joplin. 464.2 sp. hawk. fruit on ground. 474.6 sparrow hawk at Indian Creek, open and flowing, few meadowlarks. Country flat valleys, hills and deciduous forests. 479.8 Elk River, open, moderate flow.



So far have seen 3 groups of 3 crows and 2 group of 5 crows. Osprey on cliffs along the way. 484.6 sp. hawk. 488.8 Little Sugar Creek, 2 crows. 492.2 8 crows. 496.5 6 crows. This area is dominated by deciduous forests. 518.5 redtail, sparrow hawk. Muscles in trees in Fayetteville area. Clouds increasing in extent and density but still clear to S and N. 534.8 West Fork White River. 540.3 bald eagle. 542.4 Mill Creek. 546.2 beaver activity along creek. sp. hawk. Parallel rows of clouds and grayer and many times wider than first set. 557.6 redtail. 564.0 redtail. 565.3 Clear Creek and Mountburg just beyond, sp. hawk. Osprey still from spring water on cliffs. 572.4 Cotton along side of road. 575.5 first turkey vulture at Alma. and first flock of grackles. 587.1 Arkansas River. 594.6 Fort Smith, leaving 1:00 P.M. Wind chilly but wind probably around 40°F. 602.4 sp. hawk. 614.6 turkey vulture. 629.6 turkey vulture. 630.5 Turkey vulture, few more shrieks than before. temp 47°F. 650.0 Fourche River. There are no crows, hawks or turkey vultures thru this pine belt. at least as far as Mena. 667.5 Ouachita River. 677.0 turkey vulture. 690.1 2 turkey vultures, ponds open. In the De Queen area there a green leaf gardens. Have seen ^{some} 6 flocks of 2-5 crows but no large flock. grass green and ^{some} deciduous tree with green color. 729.0 13 turkey vultures. 741.9 striped skunk road kill and the first one today. 746.1 Little River and Little River County line. at 4:55 P.M. Have passed beyond main cloud mass of this morning skies clear to S. Country definitely getting greener. Little River a small town and most houses on cement blocks. 753.9 Ashdown. at 5:05 P.M. temp. 46°F. First large flock of crows (120) so far on trip at Ashdown. 764.4 Red River, low at 5:20 P.M. Flock of grackles, & some redwings (3000). 767.7 open coastal area just N of Felarkana. Arrived Shreveport 81853.1 at 7:50 P.M. The highway thru Arkansas is slow and many curves with too heavy a traffic for convenience of pulling a trailer. To get to New Orleans one should go thru Little Rock. Travelled 415 miles today.

Shreveport, Louisiana

Dec. 27

Left at 9:10, min temp last night 24°F. temp 8:00 A.M. 30°F. The loblolly pine is the dominant tree. 889.7 turkey vulture on highway 1 SE of Shreveport. 891.3 2 redtails, cottonfields common. 892.3 2 redtails, 1 sparrow hawk. 896.9 sp. hawk, redtail, turkey vulture. 897.8 2 turkey vulture, redtail flying with the two turkey vultures.

898.7 redtail, redtail. This area flat and savannas among deciduous trees, some live oak trees around homes. 900.5 Caspiana. Soil reddish and plowed for cotton. 902.1 turkey vulture. Clouds similar to yesterday but centering over this area, and of lesser extent. 903.2 4 turkey vultures. 2 teal on duck weed bayou like pond. Have seen 3 opossum road kills since Shreveport. 905.2 redtail. 905.5 Red River Parish, 8 vulture (turkey) in tree. 907.2 redtail and turkey vulture. 908.2 redtail. 909.4 redtail. 913.6 first screech, skrike and mockingbird the two dominant birds. 915.0 redtail, crow. 916.5 junction 84. 917.4 redtail. grasses in field are short and brown like W Kansas. 921.2 redtail. 924.5 Armissstead. 925.4 two turkey vultures. 928.6 redtail. 930.2 redtail. 931.5 sp. hawk and redtail. 933.5² redtail and one hawk that is smaller (brooding hawk?). 933.9 2 turkey vultures, redtail. 934.7 ~~Natchitoches~~ Natchitoches Parish, first meadowlark since Shreveport. Artificial ponds reddish in color. ~~Natchitoches~~ 940.0 sp. hawk. 940.8 turkey vulture. wherever spanish moss occurs it is general profuse. 943.0 redtail. 944.7 4 crows, sp. hawk, 3 turkey vultures. Some ponds are not red. 944.4 Bayou Pierre. and just going into sandy hills covered with pine and some deciduous trees, flock of about 500 grackles, and first one observed since Shreveport. Left Natchitoches at 1:00 P.M. 955.4 turkey vulture. 956.7 redtail. 961.4 2 turkey vultures. 968.4 Old River 969.6 redtail. 975.7 Cane River. 978.3 first egret (American) that is Common egret, flock 150 crows. Clouds increasing 979.6 redtail road kill. 984.8 4 turkey vultures. 992.7 Colfax. 996.2 first palm tree (palmetto), striped road skunk road kill. 997.7 beginning of mounds (1 foot high and 1 1/2' wide) and are gophers. These gophers are localized. 014.3 redtail. 015.6 redtail. Since Alexander on now on highway no. 1 in fact all the way since Shreveport. At 2:30, 50°F. 028.2 now in sugar cane country. Some fields bright green; more palmettos now. 045.1 sp. hawk. 050.3 sp. hawk. first killdeer since Lawrence, redtail road kill. 067.5 first armadillo (road kill). 075.6 junction 190 E. 079.4 Atchafalaya River & Pointe Coupee Co line on bridge. This river is larger than the Kansas River, at 4:10 P.M. 081.3 Bogans? spillway, redtail. 091.8 redtail, flock 200 grackles. 100.3 Erwinville. 109.1 redtail. 114.6 redtail. 116.0 Mississippi River. Continuing E on 10 and 12 highway to Denham Springs where we camped, arriving at 82132.7 having travelled 279 miles today arrived 5:30 P.M. This camp is approx. 12 miles E of Baton Rouge.

12 mi.
Blenton Springs, E of Baton Rouge, Louisiana
 Dec 28, 1977

min. temp. last night 35°F. Overcast, no wind. Mileage 82132.0
 Left 8:10 A.M. Most deciduous trees have green leaves but have other
 fall-like colors. 137.8 redtail. 143.0 redtail. Pine trees along road
 right-of-way vary from one foot to 7 feet high and do not show
 the emsocioes of the first growth after original removal of trees.
 This difference is correlated with soil differences. 154.5 up to
 now have seen 3 single crows and one group of 3. Arrived at
 Camp Fontainebleau E of Mandeville on N side of Lake Pontchartrain
 at 11:00 A.M. Camped in same spot as in a previous visit. This is an
 old estate that has been converted to a State Park. This is one of
 the most convenient places to stay while visiting New Orleans which
 is just 5 across the Pontchartrain Causeway. Arrived camp at
 82198.0. Left camp for New Orleans at shortly after 11:00 A.M.
 made census of ducks and gulls across the Pontchartrain Causeway
 by listing the birds as observed starting from contact of causeway
 with N shore of the lake. Ringbill gull (all gulls are ringbills unless
 otherwise specified, 2 ducks, duck, duck, duck, 15 ducks (these
 ducks so far are scaup.) duck, duck, duck, 8 ducks, duck, duck,
 duck, duck, 12 ducks (now top of ^{elevated} bridge), 3 ducks, 30 ducks,
 5 ducks, 10 ducks, 20 ducks, gull, swallow, 6 ducks, 2 ducks,
 2 ducks, duck, 6 ducks, gull, (elevated bridge). ~~Then~~ gull,
 gull, 2 ducks, tern, gull, gull, gull, 8 ducks, ducks, 20 ducks,
 4 ducks and at end of causeway meeting S shore of lake. Mileage 240.0
 at French Quarters. Visited area and returned to Fontainebleau
 Camp at arriving at 8:10 P.M. at mileage 281.0 or ^{one way} ~~round~~ trip of 41
 miles

^{side}
Fontainebleau State Park, N of Lake Pontchartrain, Louisiana
 Dec 29, 1977

82281.6

Rained last night and looks like rain today. Left 10:45¹ for New Orleans.
 Counted ducks between mileage posts (1-24).

24. 2 ducks
 23. 2 ducks, 3 ducks, 2 ducks, 1 ducks (all scaups), duck, 3 ducks.
 22. 3 ducks,
 21. gull, duck, 2 ducks, 3 ducks, 2 ducks
 20. 1 duck, 4 ducks. gull, duck, 2 ducks.
 19. duck, duck, duck, 6 ducks.
 18. 5 ducks, duck, duck
 17. 2 ducks, 1 duck, duck, 8 ducks, duck, duck, gull, 4 ducks.

16. gull, (drawbridge), 4 ducks, 3 ducks, duck, 6 ducks, 5 ducks, duck
5 ducks, 1 duck.
15. 2 ducks, ducks, 8 ducks, 5 ducks, 4 ducks,
14. duck, 2 ducks, 5 ducks, 3 ducks, 2 ducks, 2 ducks, 3 ducks, 8 ducks,
13. 1 duck, 15 ducks, 3 ducks, 8 ducks.
12. gull, gull.
11. duck, duck
10. none
9. 5 ducks
8. 3 ducks, 3 ducks.
7. 2 gulls, gull
6. 3 ducks
5. 2 ducks, 2 ducks, gull, gull, 3 gulls, 2 ducks 1 duck
4. gull
3. 3 gulls
2. none
1. gull, 15 ducks, 4 ducks
0. 6 ducks.

Temp 11:00 53°F Include ducks (all sloup only) across causeway it look like this:

2-12-3-8-8-9-7-18-26-20-26-27-0-2-0-5-6-0-3-7-0-0-0-19-6

high
(half) concentration

more on N side of lake than S half of lake. On side side as we approached show there was an increase in ducks. In New Orleans, 90% of trees are in leaf, the others are strictly deciduous. First boat-tailed grackles on Lake Shore Drive. From E end Lake Shore Drive turned S to St. Bernard State Park which is not complete, rains have inundated area and caused the park to be regraded and drained. This area not especially appealing and definitely inferior to Fountainbleau. On way visited Chalmette National Historical Park where Jefferson battled the English in a decisive battle, their losses in the dozens whereas the English lost several thousand. The Beauregard Estate has been reconstituted but interior cold and unimpressive as no attempt has been made to bring it back to its original condition. Killdeers numerous on the cut field of the battle fields. Continued S on highway 39 to Pointe a la Hache & ferried across the Mississippi. On the E side there were many killdeer ^{one group of 18 and averaging 3 per mile} on dike and on open fields. Only snowy egrets were 120 in a field with some gulls. 5 Common egrets near point where we ferried the river, otherwise birdlife scarce. Returned via highway 23 to French Quarters, thence back to Camp at mileage 82473.8, ^{8:30 P.M.} having travelled 191.4 miles today. Rained all day. Many streets in New Orleans inundated.

Camp Fontainebleau, N side Lake Pontchartrain, Louisiana

Dec. 30, 1977

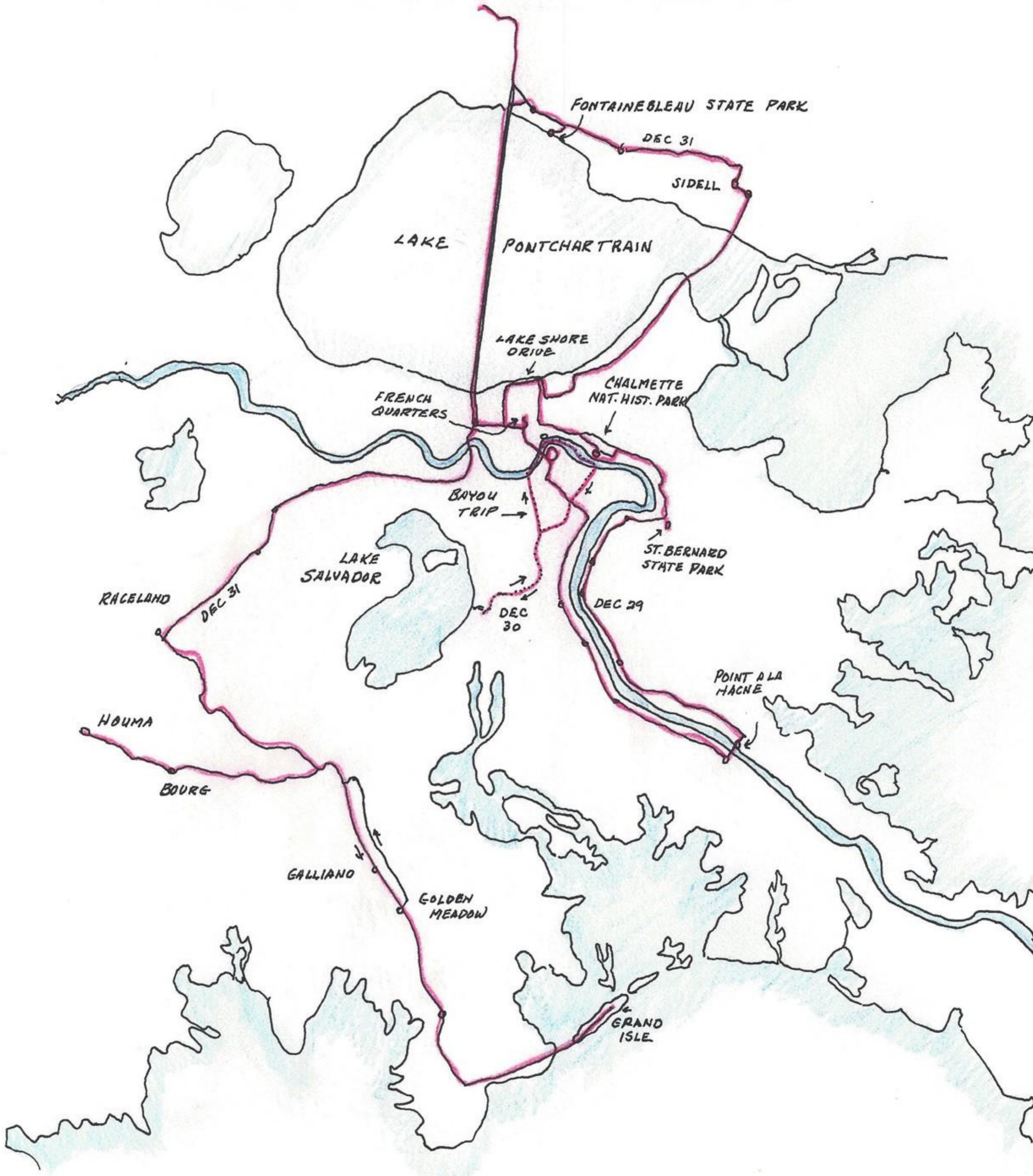
min temp last night 52°F

Today will take boat trip on Mississippi and New Orleans bayous. Left Camp 7:30 A.M. at mileage 82473.8. Rained last night and travellers warning of fog in area. Counted ducks across Pontchartrain Lake causeway without reference to miles. Water under white cap surface. 5 ducks up against shore, gull, 4 ducks, 5 ducks, 8 ducks, 2 ducks, duck, 2 ducks, duck, 2 ducks, duck, 2 ducks, 3 ducks, 1 duck, 2 gulls, visibility about 3/10 mi, 4 ducks, 2 ducks, gull, duck, duck, duck, top of bridge, 2 ducks, gull, 7 ducks, duck, duck, duck, duck, 3 ducks, duck, gull, 5 ducks, 2 ducks, duck, 2 ducks, duck, sun shore thru clouds but been obscured up to this time, tern, gull, gull, tern, gull, duck, duck, 4 ducks, gull, tern, gull, gull, gull, duck, 2 gulls, rise in bridge, tern, gull, gull, gull, 8 ducks, 4 ducks, 2 ducks, 3 shorebirds, within 1 mile of S end of bridge, 2 ducks, end of bridge.

Summary of birds observed across Pontchartrain causeway in last 3 days is as follows.

	Ducks	sculp ducks	tern	shorebirds	swallow
Dec. 28.	8	167	1	0	1
Dec. 29.	16	214	0	0	0
Dec. 30.	17	93	4	3	0

Arrived at ferry at end of Canal Street to board boat for trip on Mississippi and local bayous at mileage 520 at 9:40 AM. Left on mark Twain at 10:15 A.M. Before departure from boat noted 1 sculp, 15 flocks of ducks (10-40 individuals) flying down^{up} river and 2 flocks flying down river. At any one moment saw see approx. 6 gulls (ringbill) but at other times as many as 20. First blue sky at 10:50 A.M. This is to be a 5 hour trip. Guide says that it is 110 mi. to mouth of Mississippi by river but only 60 by air. As we moved down river passed many large boats ~~up to 200'~~ from all parts of the world, some moving but most of them waiting anchored in river for place in line so to speak to be loaded with grain, oil or other items of commerce. River in some places as deep as 200'? and good depths to Baton Rouge but too shallow beyond for larger boats. The current is always fresh water at New Orleans and does not have tidal phases. Dikes 25' high but water seldom floods to more than 20'. Fluctuates according to rain. Level also controlled by gates into Lake Pontchartrain. Outside of the main Mississippi dikes the water is contained in 6' dikes and beyond the New Orleans area there are no dikes. Water does not mix with gulf water and does not have tidal influence. It is on these bodies of water that are stabilized that most of the marine commercial establishments are located. Continued down river to locks which drops the boat to normal coastal water levels and thence down the



150

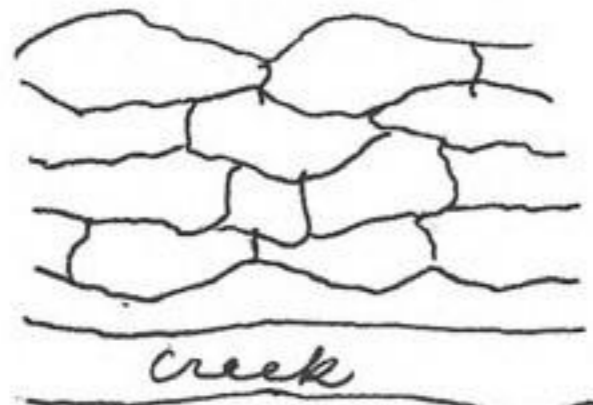
entracoastal waterways to a point where the canal leads to Salvador Lake or to Barataria which was the place where La Fitté the pirate held sway. At this turnaround junction too photo 771230-1 down Channel. These are dredged out bayous. Photo 771230-2 of cemetery on right hand side of river on return trip and claimed to be the oldest in New Orleans. It is on an elevated mound with trees. It is evident that waters have never been as high as the top of the mound. Such mounds are also created by hundreds of years of habitation by Indians. Birds along the route consist of boat-tailed grackles, kingfishers, 2 red-shouldered hawks, herring and ring-billed gulls, laughing gulls, redtail. Much of the canal is inhabited by people living in a sub-marginal existence. Several had 6-10 metric skin drying on lines. The guide said that there are 2000 per sq. mile of marshland. We did not see a live one on the trip. At the beginning of the 6' dike on right side noted 5000 common egret in an expansive marshland in what one could consider a single flock. These were the only herons or egret observed on the entire trip. Photo 771230-3 of Annette at steering wheel.

At the upper end of canal there are miles of marine establishments, mostly constructing oil rigs for drilling in the gulf. One never realizes how extensive is the influence of the oil business. In time commercialization could take over the entire Mississippi River delta region. After entering locks to Mississippi River. Continued down river to Ferry Terminal. Photo 771230-4 and 5 from top of Trade Mart Building at end of Canal Street in New Orleans. Visited French Quarters for some final purchases and then returned to Camp at Fontainebleau State Park. Frog Calling at Camp.

Fontainebleau State Park, N Lake Pontchartrain, Louisiana

Dec 31, 1977

min. temp. last night 47°F. At 8:00 A.M. 50°F. Cloudy, ^(complete) and rain forecast. One of the drainage ditches overflowed into low grade slope and produce a mudcracklike formation of pine needles




The largest segment was 10" whereas most of them averaged 2" or 3". If this condition were covered with mud and preserved it would appear as if formed from a body of water drying up. Left camp at mileage 82561.5 at 9:25 AM for Grand Isle.

Will follow E around Lake Pontchartrain, thence along north beach and thence thru city to highway 90, thence to Grand Isle. Crossing highway 10 over lake observed the following birds: 5 scaups, tern, gull, 2 boat tail grackles

along Lake Shore Drive on S side Lake Pontchartrain noted ¹⁰⁻³⁰~~30-40~~ scarp ducks along lake every ^{3/10}~~1/2~~ mile. Some flocks as many as 60. At Yacht Club marina I got two photographs of sail boats. nos 771231-1 and 771231-2. At 11:00 AM these sail boats were coming out of the harbor like bees from a hive, most of them tacking up & out of the channel under sail. We had seen one 50' sailboat in drydock which has dropped its sails before entering the channel and then had motor trouble. It drifted onto the rocky jetty where it lodged on the rocks and for 15 hours it wore itself on the rocks to the extent of about 5 holes (1' to 2' in diameter) on the side, the keel worn like a coarse saw tooth and the rudder half gone. One should never drop all sails in entering a channel or marina.



Photos 771231-4 and 771231-5 of sail boats just off marina. These boats remained near shore rather than range out into the Lake. Annette in one of the photos. At Yacht Club noted a 40' ketch on sail for \$19,000. One large sailboat had been reduced from \$13,000 to \$8,000.

A sign or navigation aid cannot find in white  orange common in area but any book or chart, from marine S thru park, thence S across city and Mississippi River. at Paradise noted first snowy egrets. on our way to Grand Isle. Country side poorly drained and water hyacinths in most ponds and canals. Group of cypress trees just N of Laceland, all dead except a bushy top. Continued S and camped at Grand Isle.

[Grand Isle, Louisiana.]

Jan 1, 1978
(see new journal, 1978)