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Hidalgo, Mexico

Jan 1, 1972

Left 45716 at 9:00 A.M. for Monterrey. Sky 90° in clouds. Palm cacti increasing in number and size as one travels S. The sparrow hawk becomes increasingly more common and between here and Monterrey would estimate there being 80 birds. Telephone lines were special places for perching and where present contributed to greater number of birds observed. There were approx 8 mourning doves and small birds on the average of 10 per mile. At the top of the canyon where road runs observed 6 black vultures and 18 crows. The crows were more common from here to Monterrey than elsewhere and increased in some direction. Boat-tail grackles common. At Monterrey visited Arturo Jaimérez of the Universidad del Nuevo Leon. Also at the Univ met Dr. Philip an ornithologist from Mexico City and the Ichthyologist Sever. Bob Patterson and John Pizzimenti were also there and organizing for a field trip S of Castillos for prairie dogs. Had dinner of Arturo's father's home. Fernando is a promising student for graduate work, has grant support and good academic standing. In evening 3 Turkey vultures flew or rather sailed on motionless wings to east on way to roosting site. Release at Monterrey 45772. Slept in trailer in front of Arturo's home.

Monterrey, Mexico.

Jan 2, 1972

Crows moved N from city at daybreak to about 8:30 A.M. Boat-tailed grackles common in city. Annette recorded the following as impressions of Monterrey. "A rising middle class, but still a preponderance of poverty. There are many potentially good houses in disrepair or standing empty and disintegrating while in the same neighborhood the poor live in makeshift shacks. There are many beautiful homes in the city and on the outskirts. Many new homes and business buildings and industries are being built. Apparently there are no

zoning laws. There is a rapidly developing pollution problem from vehicle exhaust and industrial waste and emissions. There are many older cars on the streets obviously kept functioning by great effort, but also with great pride as they are repainted and extremely clean.

The Jimenez family is a good example of the rising middle class. The immediate family is of the first importance with the larger family group closely following. The home comes third in importance - sometimes fourth when a man's personal interests and work are involved. This presents a problem when the position of the wife and children are considered. While each home observed had a maid to help out, the maid was a very young girl who was a "jack of all trades", and since food is prepared mainly from "scratch", the wife spends much of her time preparing it. The maid spends much of her time at mealtimes running to the neighborhood grocery store for forgotten items. The quality of the foods served was excellent. Apparently this stratum of Mexican society prefers the wife in the house, and places her in a limited and rather secondary place of importance.

- Today we visited the home of the father of Arturo Jimenez Guzman for a full day of new year fiestas. The following pictures were taken.
- 720102-1 prior to fiesta we visited the home of Arturo's twin brother ^(a doctor) on the SE side of town at base of ^{Saddle} ~~mountain~~ mountain. Annette with dog in backyard of his home. Arturo will build near here.
 - 720102-2 Arturo & twin brother at backyard of above home.
 - 720102-3 Insect common in area.
 - 720102-4 ^{Saddle} ~~mountain~~ mt. and poinsetta in above yard.
 - 720102-5 Street band entertained the group. Moracas a can with stones.
 - 720102-6 Father of Arturo.
 - 720102-7 member of above band.
 - 720102-8 Robert Patterson of Lawrence.
 - 720102-9 Raymond, Arturo's child. Named for E. Raymond Hall, and maid.
 - 720102-10 4 nephews (Arturo's son in yellow)
 - 720102-11 Cow head just retrieved from pet fire. Cooked 24 hrs. in ^{agava} leaves and burlop.
 - 720102-12 " " being retrieved of meat.
 - 720102-13 Arturo's twin brother finishing the cleaning of meat of head.
 - 720102-14 Children served first of meat, then adults.
 - 720102-15 " " " " "
 - 720102-16 Arturo and twin brother
 - 720102-17 " and 3 brothers, left to right - Arturo, the dentist, Arturo's twin brother and in background is Fernando ^{second}
 - 720102-18 initial removal of agava leaves of ^{second} cow's head.
 - 720102-19 Arturo dancing with the children - Heyland fling
 - 720102-20 Children lined up for penata.

- 720102-21 Fernando and wife
 720102-22 wines dancing with children. (yellow) arturo's wife.
 720102-23 children dancing.
 720102-24 Arturo's twin brother & his brother's wife cleaning table.
 720102-25 Pinata and children. From smallest to largest child.
 720102-26 " " "
 720102-27 " " "
 720102-28 Fernando on wall controlling pinata position.
 720102-29 Children scrambling for candy of pinata after the bag was broken.
 720102-30 Arturo's father at the pinata
 720102-31 " " and children dancing.
 720102-32 children at pinata.
 720102-33 Adults playing cards.
 720102-24 Raymond, son of Arturo Jimenez (no negative)

The Jimenez family hospitality was warm and family friendship within the "clan" close. Arturo said they tried to have a family "fiesta" once a month to keep up the old Mexican custom of family solidarity. For the new year's midnight celebration they stuffed a large pork roast by making numerous slits ~~in~~ in the muscles & stuffing olives, and peppers, and small onions in the slits. It was roasted in a normal fashion in a regular stove - (electric?). This was prepared entirely by the women of the family with much social reaction and interaction, family gossip, etc. The ~~next~~ ^{same} day the men prepared 2 barbecues - the first a simple "kabob" type on metal sticks & chunks of pork! and beef alternated with onion and green peppers cooked over an open pit in the court yard using charcoal. The ^{same} day before the men ~~had~~ prepared a cow's heads by skinning them, then washing them, then pickling them and wrapping them first in agave leaves & placing them in gummy sacks. These were then placed in a deep pit with hot coals?

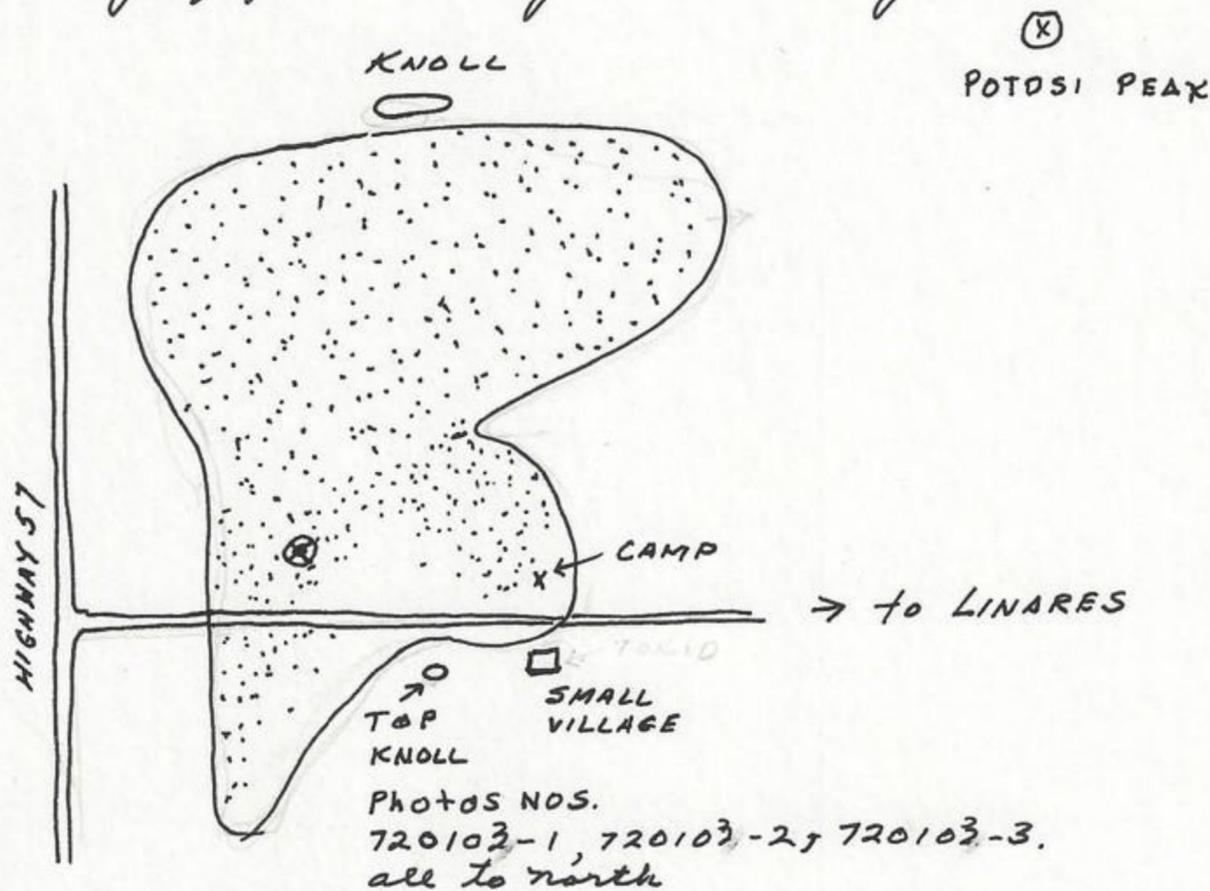
and were steamed for 18 hours in the covered pit. This "barbacua" was for the family fiesta the next day. While this was being prepared, another group prepared beef tripe, cleaning it and cutting it into small pieces, then it was simmered in a huge pot in the courtyard in water with numerous spices. This was another dish served with the barbacua, called manuda. It all proved to be most tasty, and James was given the delicacy of one of the cow's eyes which he said tasted indistinctly different from the other muscles!

After the feasting a little street band of a grandfather who played the saxophone, and 2 grandsons, one with a tin can containing stones for a maraca, the other with a small set of drums. They played Mexican folk songs that the children danced to. Arturo and a few of the other adults joined in and taught some of the children the steps. Then Fernando and another of the adults strung a colorful pinata on a rope + swung it from the house roof to the opposite wall shaking it while the children tried to break it with a stick. The youngest and smallest tried first, but it was the older ones who were successful. As soon as the candy fell out there was a wild scramble to get as much as possible.

Left Monterrey at mileage 45772 at about 6:00 P.M. Drove in dark to Linares turnoff where we camped at 3 mi. to E. at mileage 45913.9 Patterson, Pizzimenti and Jimenez camped with us. From our camp the village of Tokio is 1/2 mi. to the S.

Highway 57, Linares turnoff, Mexico. (1/2 mi N Tokio, Nueva Leon)
Jan. 2, 1972

Breakfast for group before departure. Prairie dogs become active by sight and sound at approx 9:00^{A.M.} when sun out from overcast. Counted 6 animals at that time. Left camp at 9:15 A.M. and from top of knoll on S side of road made survey of prairie dog ~~with~~ colony. Temp last night 46°F

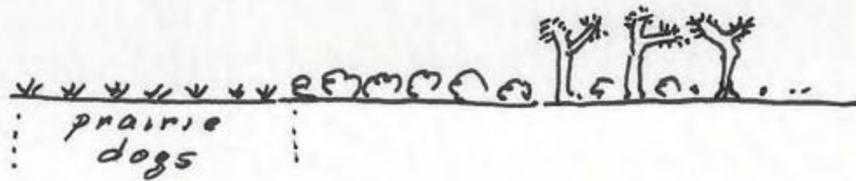


(45914.5)

From the knoll estimated number of large conspicuous mounds by three different methods and came up, in each case, with a total of approx one million. The colony is characterized by uniformity of community, noted 15 prairie dogs active nearest road but area beyond was too far for 10x. Photos 720103-1, 720103-2 and 720103-3 all from top of knoll (first level) showing extent of colony and general topography of the land. No hawks noted in area. Noted one colony of holes closely spaced and of newer construction than other surrounding areas (see map marked ⊗). mounds stop at edge of brush growth except where ^{narrow} peninsulas of brush invade the open grass valley in which case the mounds are near to shrubs.



a transect from grassland to palm cactus is thus:



all areas are heavily grazed by sheep & goats. Horned larks in area of colony. no predators observed

This colony of prairie dogs is the most compact and extensive I have ever observed of any species of *Cynomys*. It is such a unique area with such well defined limits that it could and should be made into a protected area. One-half a mile of vegetated area surrounding the grass valley would be sufficient to act as a buffer area for ^{future} encroachment of human habitation. A wider buffer area would make the area a complete biological unit for preservation of this animal. I will talk about this problem to Bernardo Vella in Mexico City. Left knoll area and at mileage 45.9/5.6 counted 32 prairie dogs in area just before grass or open valley changes to a light fine-leaved shrub at which point the colony ends abruptly. These prairie dogs were em-fiding and closely spaced in the 150-200 feet linear area of habitation. The grass is short and the animals are very conspicuous. ^{at 17.3 observed 2 crows & 3 ravens} Continued W to main highway 57 and thence to S. at mileage 17.8. at 9:50 A.M. At 23.3 5 turkey vultures fed on dead animal 50 feet from main road. 23.7 entire valley in a greasewood type vegetation and questionable whether prairie dogs here unless in lowest part of valley to the east. 24.1 turkey vulture. 24.5 extensive area at San Jose Raices that could be used by *Cynomys*. This area extends from center of valley to east to the opposite side of valley to the west, and thence to S on west side. 26.0 end of open valley but in cultivated but abandoned corn field. 27.8 cultivated corn all along (to left) and prairie dog could inhabit. Corn fields are cut and stacked and now grown to weeds (sunflower). These weeds are also cut and placed in blocks. 30.6 valley to extreme east and thence S looks favorable for prairie dogs. Sparrow hawk. 31.7 flat ~~part~~ part of valley and looks favorable for prairie dogs from one side of the valley to the other covering some 10-15 miles. There are a few mounds but probably not bonified prairie dog. 33.4 sparrow hawk. 33.8 S side valley & beginning of bush. 34.5 turkey vulture. area to W stops at El Refugio at 35.4, but favorable areas even S beyond. 36.2 sparrow hawk. 37.4 turkey vulture.

38.2 turkey vulture. 38.4 sparrow hawk. 39.7 sparrow hawk (3)
 41.8 turkey vulture. 42.5 valley to W could support prairie dogs but
 is not as favorable as the one previous or the one at Linares
 turnoff. 43.9 sparrow hawk. 46.1 turkey vulture (4), 50.6 crow.
 Palm cactus on stable areas are larger. 55.2 crow. Some
 jumpers in area. 56.8 valley to W not to favorable for prairie
 dogs but by Utah standards could be used. 67.8 sparrow
 hawk. 73.0 areas now unfavorable for prairie dogs. 73.1
 sparrow hawk. 74.6 sparrow hawk. 75.7 sparrow hawk.
 77.4 sparrow hawk, 2 turkey vulture. 83.4 turkey vulture,
 83.7 turkey vulture (2) Matchula at ~~45.5~~^{45.9} 95.6. Boat-tail
 grackles and first ones seen since this morning. 46011.5 turkey
 vulture. 14.4 turkey vulture. 16.0 turkey vulture at San
 Chapparal turn off. 18.7 3 turkey vultures. 19.3 2 turkey
 vultures. 20.6 turkey vulture. 22.3 2 turkey vultures. 25.6
 Santa Rosa, turkey vulture. 28.1 turkey vulture. 45.0 Hui-
 Cache. 49.3 caracara offered for sale by native. 50.0
 turkey vulture, ^{52.2} first ^{abrupt} occurrence of a cactus . 54.2
 ring-tailed animal road kill. 57.0 redtail hawk. 59.2 turk
 vulture. 63.4 turkey vulture (3) and a roven. Palm cactus
 bend to west. 65.0 Charcoal Blanca. 65.4 turkey vulture.
 66.8 3 roven, 1 turkey vulture, 68.1 roven. 69.4 turkey
 vulture. 70.6 Caracara? 71.3 turkey vulture. 73.8
 San Lorenzo. 74.5 turkey vulture. 81.6 Vella Hedalgo.
 85.6 area of severe erosion. 88.8 Ventura (mining operation)
 90.4 vulture. 93.3 Afrucalike area of savannas & higher
 trees. 94.7 divide overlooking broad valley to SW. 95.5
 roven. 97.5 roven. 46102.4 boat-tailed grackles &
 associated with habitation (never seen in other areas).
 46115 outskirts San Luis Potosi. Photo 720103-4 of car
 and trailer being repaired at Ford garage. Left about 6:00 P.M.
 8 flocks (average 50 per flock) passed overhead at garage.
 46146 camped for night.

Approx. 30 mi. S San Luis Potosi, Mexico

Jan 4, 1972

at camp photo 720104-1 of cacti wren nest. Left 9:25 A.M. 60.8
 area of desert but more irrigated agriculture and extensive
 rock fences. 61.4 sparrow hawk. 62.7 roven. 63.1 2
 roven. 64.3 sparrow hawk. 66.2 roven. Farmers bring in
 dried shocks of corn by 4 wheel wagen, most commonly 2 wheeled,

frequently on human back. 67.9 sparrow hawk and roven.
 69.3 roven. 69.9 2 sparrow hawks (these birds are mostly singles).
 70.4 first large flock of crows (approx. 100). 71.0 roven. 72.7
 Las Cabona, roven. 75.5 sparrow hawk. 78.0 roven. 79.8
 roven. 80.2 2 crows. 82.6 crow. 83.4 20 crows. 84.8 2
 roven. Boat-tailed grackles in area. 94.2 Harris hawk.
 94.6 sparrow hawk. 94.7 sparrow hawk. 95.8 sparrow hawk.
 96.3 sparrow hawk. 96.9 sparrow hawk. 46200.2 sparrow hawk,
 Crow. 01.7 farms are larger and better organized. 02.9 turkey
 vulture. 03.7 roven 05.0 turkey vulture. 05.2 2 crows
 3 roven. 16.3 ringtail, 2 roven. 18.7 sparrow hawk (2).
 19.9 shrike. now between 2 major reservoirs, no water birds.
 23.3 turkey vulture. Paripara? 46235.6. 11:45. 28.3 redtail.
 in area of highly metamorphic rocks with reds dominating.
 48.9 crow (2). 51.0 4 crows, first tractor in field, other
 cultivation by open. 53.5 5 roven, grackles associated
 will habitation. 62.4 turkey vulture. 75.1 Pacha 4 turkey
 vultures and 2 roven. At 82.2 on reservoir to right counted
 340 ruddy ducks, 60 pintails, 20 greater scaup, 10 redheads,
 1 small grebe with white line on sides, no gulls, 50 loat.
 Turkey vulture overhead. Several other large reservoirs beyond
 have some ducks on them. Inhabitants washing cloth along
 way. more deciduous trees on landscape. all reservoir
 murky. 99.2 mt tops covered with deciduous trees and surface
 of slopes with large rounded rocks. 46312.6 turkey vulture.
 13.3 2 turkey vultures. 14.0 turkey vulture (2). 15.3 turkey
 vulture. 17.8 deep cut road beds, 2 turkey vultures. 23.1
 good geological road cuts, mainly sedimentary layers of
 loosely consolidated material. 27.8 turkey vulture. 33.2
 Joybas, reservoir of about 1000 ducks. 46351. Lago de
 Guadalupe trailer camp. at camp noted a myrtlelike
 warbler, flock 38 Bohemian woodpeckers and a goldfinch?
 at 4:00 P.M. Spent evening in Mexico City. This city is so
 arranged that a stranger finds it almost impossible to get
 around, especially as landmarks are obscured at night. Unless
 one knows the town he is carried by the traffic with choice
 of direction. Some intersections have as many as 10 entrances,
 each one crowded to capacity with cars. To change lanes
 in these intersections requires knowledge, agility and courage.
 To make changes of lanes one must force himself into traffic
 with inches the car into traffic with waving hand. The traffic
 is simply insane and the drivers use the street as a traffic game

Lago de Guatalupe, Mexico

Jan 5, 1972

Spent the day in Mexico City, visiting the national museum of Archeology, the Natural History Museum and the entire length of the main street the Paseo de Reforma. Driving in the day is only slightly better than in the evening, but today the guiding landmarks were still obscured, this time by smog. The archeological museum is perhaps the best in the world, both in size, materials and arrangement. It shows how the combined strength of a nation can produce superior museums, in comparison to many local provincial ones. For this kind of material I believe the concentration of these treasures should be in one place. Photo 720105-1 is a boat made of wood and used by early inhabitants. ^{720105-1a cart in museum.} Photo 720105-2 is Annetto on open patio of museum with bamboo outline. Photo 720105-3 a Maya building with large trees in foreground. Photo 720105-4 a silhouette at night of a tree against a large globe of the world which houses continuous television. In the archeology museum two techniques are commonly used; one the suspension of panels by chains or cord from the ceiling and the other an inverted fish tanklike box of polished plate glass on stands for exhibits.

The activity in the city was much as any other modern city - varied and over-crowded. The traffic was fantastic - heavy, close & with total disregard for the rights of others! The drivers used their horns instead of their brakes to work thru traffic. Taxis were everywhere, of every vintage & the one thing in common was that they all were clean and shiny, no matter how old!

Lago de Guadalupe, NW Mexico City, Mexico

Jan 6, 1972.

Left this morning for east coast. ^{at mileage 46455, at 10:25 A.M.} Crossed Mexico City with trailer which for city part is not recommended. Continued N on highway leading to Pachuca. Considerable evidence of lake bottom physiography and in most recent form is without hesitation but a grassy plain. 12 turkey vultures between these ^{no farrago laws} two points. at 46544 at Sahaguen took photo 720106-1 of general topography of country. Area terraced and grown to agave cacti. 53.0 first large tree forests. 53.3 Asesto. 73.5 turn off to Honey. In this area is the best developed farming, and organization of the entire village complex. 75.6 La Presa on top of a divide. Pond on right but no water fowl. Continued on to a point where there is a large lake impounded by a long dam and surrounded by a pine forest. This is between Honey and entrance of highway 119 from Zacatlán. at 46584 mileage. Photo 720106-2 by two tree just outside of trailer near dam. The large forests are associated with fog and rain. The pines have leaves from 6-8 inches and leaves ^{occur in 3' $\frac{1}{2}$ and drop down.} No fish surfacing in lake but nets are in evidence. The ground is covered with greens & yellows of mosses. This area is not tropical.

Between Honey and Huauachinango, Mexico

Jan 7, 1972

Temp last night 48° F. fog and light rain throughout. This morning between 7 and 7:30 A.M. there were 15 buses past along road. One group of 4 natives (women without shoes) got off a bus and could not find all their luggage in compartment under bus so without checking further the bus driver pulled away and left the natives in confusion for 5 minutes after they bus had departed. Camp at approx 6800 ft elevation. Left at 9:00 A.M. Beyond state line noted that grass grew luxuriantly on steep banks of road but where grazing animals could not reach. Elsewhere the grass is eaten to the roots. 88.8 This area reminds one of the second growth of the NW United States. Huauachinango supports a syndicate of huts with a similar artistic arrangement of apples (green & red), oranges and bottled honey. 89.0 first broken-type ferns. Vegetation becomes even more like the N.W. with dense growth of plants & vines. 94. $\frac{1}{2}$ Huauachinango. 95.5 City park developed with tile on

walls, benches and the streets are clean of debris. 98.4 Rio de
 Tetacapa. 46600.2 at Nueva Necopa. Photo 720107-1 and
 720107-2 of this lake, Annette in foreground of latter. 720107.3^{and 720107-3a}
 lower down on lake. no water birds on lake but many
 fish jumping. Boat-tailed grackles in area as well as many
 other kinds of smaller ones. 03.1 photo 720107-4 and
 720107.5 of fog moving up canyon. 04.7 more and more
 tropical vegetation. all slopes in good green short grass where
 sidehills have been cleared. 07.1 at Xicotepac. 16.9
 good tropical forests with telephone line joined with spider webs.
 17.6 more banana trees at 2300 ft. 22.4 fog clouds rising
 or higher at 1300 ft. First black vulture. 23.2 15 black vultures
 feeding on animal at side of road. 23.5 at Camacho. 24.1
 at ^{edge of} river, approx ⁵⁰ black vultures at side of road. River like
 Kansas in late fall and clear with rounded boulders for
 channel. 33.0 Cazonas. Large trees indicate original condition
 of forests in this area. Arrived here at 12:00 A.M. 26.4
 fallowing along edge of river. 29.2 on flat part of valley
 surrounded by ~~the~~ mountains. Papaya groves and supporting
 large green fruits and egrets (snowy - black bill & yellow feet)
 make abrupt entrance into landscape. Boat-tailed grackles
 and swallows most common birds. also good banana groves.
 Hawk with shape of marsh hawk but hovers. 31.7 20 black
 vultures. 34.4 8 black vultures. 34.9 40 snowy egrets in
 compact group along side of pond. 35.6 still along river. Boat-
 tail grackles increasing in number. 38.1 San Diego. more
 Spanish moss. 39.8 20 snowy egrets. 42.5 14 egrets. 43.6 jacana
~~Chicana~~ on vegetation of pond. 44.3 20 egrets fallowing
 cattle. 45.8 green heron. 46.4 15 egrets. 47.9 first
 sparrow hawk since Mexico City. 65.0 back to river again.
 First bananas for sale and bought 10 for 1 pesos. 51.5 good
 banana stored as specialty. 52.4 along side of river. This
 river would make good concrete. 55.9 8 egrets, 2 of them
 on top of small tree. 56.8 Pasa Rica turnoff. 1:00 P.M.
 66.2 Nuevo Progreso. 65.8 30 egrets. 69.6 Tihuatlan.
 72.3 La Roma. 74.2 6 egrets. 75.3 60 egrets. 79.0 2
 Turkey vulture. 80.1 13 egrets. 84.6 20 black vulture on side of
 road. 88.4 black vulture. 89.9 Tupper bridge over bay.
 First gulls since Lawrence. 92.7 20 black vultures. Good
 groves of coconuts. at 93.9. Another marshlike hawklike bird
 that hovers in air. Arrive Playa at mileage ⁴⁶⁶97.0 at 3:00 P.M.

Slight rain practically all day. natives tell us that this is the ^{united} storm that is producing low temperatures and snows in the ^{states} to the north. The road we covered to date is magnificent for seeing ^{rough topography, interesting} people and tropical forests. It should be traversed as we did today from west to east. The road is windy ^{ing} but passible grades. Road rough thru villages. Photo 720107-6 and 720107-7 of fishermen setting gill nets.

Playa ^{east} south of Tuppan, Mexico

Jan 8, 1972

leuciscamp.

Birds in area are: black-billed plover, greater yellow legs, sandpiper, snowy plover, spotted sandpiper, willet, herring gull, smaller gull with banded tail in young, royal tern, ~~gull-billed tern~~ and another tern with ~~red~~ black bill and red legs and darker back = ^{roseate} tern. Porpoises, 12 feeding at mouth of bay. Temp last night. 62°F. Also sandwich tern, roseate tern, black vulture, snowy egret, boat-tailed grackle, killdeer. Temp at 1:30 78°F. At camp took the

following photographs:

- 720108-1 fishermen examining haul from ^{gill} fish nets left all night
- 720108-2 dogs at trailer
- 720108-3 surf with annette in foreground. She claims the water to be between 65 and 70 and near body temperature.
- 720108-4 ibid
- 720108-5 ibid
- 720108-6 ocean with foreground of ^{native hut (camp ship in background)} ~~pond~~, from previous high waves. Framed with pine
- 720108-7 general shot of ocean
- 720108-8 trail, car and our camp. This camp is ideal for easy access and, overlably and is or could be private.

Tuppan has the potential of developing into a very nice community. It is not commercialized or does it have excessive large industry. It is also near the rain forests of the mountains.

Left at 1:30 P.M. at 46704.0 mileage. The sky cleared this morning for first time in a week of cold cloudy weather. 719.2 photo no 720108-12 of antester road kill. 2 black vultures. The black vulture and turkey vulture are difficult to identify at an extreme distance but nearer the black can be differentiated by wing beat which is batlike, short tail and white spots in wings. They are more frequently found in groups while the turkey vulture is general seen as pairs. Black vulture will remain on side of road with cars passing at 10 feet.

Tempache at 22.7 26.0 Virginia opossum rd. kill.
 30.9 road divided. 35.3 black vulture. 37.1 4 black vultures.
 37.5 8 black vultures. Vultures are frequently associated with
 cities or habitation. 37.7 Cerro Azul. 41.4 turkey vulture.
 43.0 2 black vultures. 44.1 8 black vultures. 48.3
 gray hawk? (*Buteo nitidus*). 50.8 turkey vulture. These vulture
 are seen generally within 1/10 mi of road. I would predict the
 census would be immeasurable greater if the more distant
 area were included. Driving in Mexico does not permit leisure
 or casual observation. 52.6 photo 72010 8-13 of one of 2
 group of black vultures within city limits. The count from
 the photograph is _____ x equal number in second group is
 _____. 55.6 2 black vultures. 60.0 2 black vultures.
 Sparrow hawk and first one for long time. 73.8 32 black
 vultures in one group in air. 74.7 natural clear water
 pond with 2 teal (bluewing) and 2 jacanas. 76.2 boat-tailed
 grackles common in village and usually occurring as pairs.
 76.4 5 black vulture at side of road, one in road. 78.7 turkey
 vulture. 78.7 turkey vulture. Ozuilham at 79.1 81.1 first
 green growing corn. 8~~2~~¹⁹ 2 turkey vultures. 82.1 sparrow
 hawk. 86.2 2 turkey vultures. 89.0 country showing some
 signs of becoming slightly more arid. 92.2 gray hawk? .
 92.5 Caracara feeding on road kill. 92.6 8 black vultures.
 large inland bay to the east of us. 94.9 7 black vultures.
~~46~~ 803.0 2 turkey vultures. 10.0 2 flocks ^(approx 30 each) of blackbird
 size birds and first since Mexico City. 13.3 black vulture.
 15.7 hawk slightly larger than redwing and pure white belly.
⁴⁶⁸ 19.6 Tampico ferry (10 pecas). From Tampico to E to Mediero
 and to north Playa where we camped. Arrived at 6:00 P.M
 at mileage 46827. The road to here is not worth the
 the trip to the beach. Factory pollution, if wind were in a
 certain direction, would make the beach unbearable. Only birds
 on beach were 4 sandering.

Playa del Norte, Mediero, Mexico

Jan 9, 1972

Last night almost unbearable because of industrial pollution.
 min temp. 62°F. No birds on beach except gulls. On upper
 beach was one sparrow hawk and several boat-tailed grackles.
 Because of the pollution and concentration of people (although
 few here today) would not recommend for camping or bird

watching. Continued w thru Madiera and thence N. 44.0
 Actimepa, considerable marsh land. One turkey vulture. 47.8
 flock of blackbirds. Cattle egrets all thru the country so
 wherever favorable conditions exist. Egrets prior to these
 observations are probably cattle egrets. will not count these
 birds. 56.4 Miradores. 60.7 Country like Kansas.
 63.4 mainly agriculture and egret in groups of 10-200. First
 evidence of spraying field by plane. Turkey vulture. 65.1
 Trinidad. 66.2 4 vulture (turkey). 66.9 approx. 60 black
 vulture soaring. Another group of 3 nearby. 70.2 outlier
 mountain to right and should be investigated biologically.
 Hawk with white tail and dark wings. Turkey vulture.
 Country now flat and large tracts of land. 71.7 sparrow
 hawk. 72.8 La Gloria. 75.8 turkey vulture. 76.8 sparrow
 hawk, green corn. ~~77.5~~⁷⁸ 78.0 mannan. 78.0 manuel, 4
 black vultures. 78.5 redtail hawk, sparrow hawk. 82.5
 turkey vulture. 85.4 Gonzales. 85.7 Photo 720109-1 of
 volcanic stack and colored tree at a casa. 86.9 Arroyo del Cojo.
 water clear but greenish. 87.6 main city of Gonzales. 89.3
 sparrow hawk. 89.8 large turtle in middle of road. 93.7
 4 Caracaras in road. 94.2 3 Caracaras along side of road.
 96.0 30 black vultures circling above. 97.6 Turkey vulture.
 This part of road give best view of the Mexican Hat stack showing
 complete profile. 98.3 first tree type cactus. 98.9 turkey
 vulture. ^{46.9} 102.8 3 turkey vultures. 104.1 turkey vulture. 105.0
 30 vultures, 10 on consecutive fence posts. As one displaced its
 neighbor the displaced one displaces the next in order. Country
 becoming progressive drier and bushlike. ~~106.1~~^{106.1} Rio
 Guayalyalajo. At this bridge took
 4 photographs.

- 720109-2 The Mexican Hat up stream.
- 720109-3 up stream showing trees bordering river.
- 720109-4 down stream with Mex. Hat in background.
- 720109-5 " " " " " " " "

Trees on all sides full of bird songs. 2 turkey vultures in area.
 07.3 virginia opossum road kill. 46910.1 turkey vulture. Casas
 primitive using poles for walls, some with adobe. 15.4 first
 Kingfisher, sparrow hawk. 15.9 extensive fields of sugar (planted).
 cane. 92 20.5 Zapata area irrigated. now road bordered by pine
 24.7 Center of Montez at 12:15. Area with canals. 30.7
 more and more sugar cane. 31.5 El Limon at 12:25 Met

Mrs. Martinez who runs a chicken ranch & harvests cane sugar. Trailer court her backyard. Husband a partly Chinese. Some of her statements are:

Has two pet coati minde, one of which lives free in trees in yard and comes at command, another in cage that had been raised since a young one. Eats fruit and meat. Is confiding, shakes hand and nuzzles one's face.

Rabbit (domestic) eats meat and feeds with cats & coati.

Has 50 cats. They reach a composition of older animals and then the population decreases.

Chickens cannot stand too much disturbance and, characteristic of large groups which are confined.

Motmot in area for 3 years.

Papaya, mannos, Euphorbia, bananas, banyon, and other trees on her property.

At one time the area between here and Monterrey ~~was~~ was continuous with palm trees, now all removed for agriculture.

Friend in mountains to ^(Coahuila) W, has refuge in rain forest and charges \$25.00 per day for conducted tours.

Contraband is common practice.

Left and at Rio Frio at 34.4 41.6 have seen 3 kingfisher since first one observed. Area sugar low & lowals.
 48.0 Rio Sabinas, water clear but green mass. 52.2 large trees covering entire road. 53.2 photo 720109-6 of mountain thru a roadside tree. Listed as Cerro Alta. 54.0 turkey vulture
 55.5 35 black vulture. 57.9 Santa Fe. 62.0 turkey vulture.
 63.1 Felipe Angeles. 67.5 turkey vulture. 70.0 turkey vulture.
 70.2 6 turkey vultures. 71.7 Rio Guayalejo 72.3 4 black vultures. 74.3 turkey vulture. 74.9 5 turkey vultures. 76.1 near top of mesa and photo 720109-7 to SE showing volcanic stacks and low country. 76.4 Top of mesa, 3 crows. elev. 1950. 78.4 2 turkey vulture, 2 black vulture. 78.9 turkey vulture. 79.8 racoon road hill. 80.6 sparrow hawk. 82.4 turkey vulture. 82.8 sparrow hawk. 85.0 2 turkey vultures. group 20 vultures. 86.1 sparrow hawk. 86.7 turkey vulture. 88.0 sp. hawk. 91.0 roven. 95.0 roven, 20 small crows.
 96.2 Sisal. Extensive fields of Agave and lower leaves left as harvest. 98.2 sp. hawk. 98.7 sparrow hawk, 47004.7 Agave plants all along way to almost Victoria. Arrived Victoria and stayed at Panamorio Hotel just S of the large Church on top of hill. Photo 720109-8 of Victoria at night from the motel.

Victoria, Mexico

Jun 10, 1972

Left. 9:10 47009.3. Photo 7201¹⁰ -1 of Church, hut and Hotel. 720110-2 of Annette and City in distance. Continued N towards Matamoros. At outskirts of City were 20 roven and 40 crow. 10.7 sparrow hawk. 11.1 sparrow hawk. many agave plantations outside of city. 11.2 mockingbird and mourning-dove, 4 roven. 12.8 sparrow hawk. Visibility 1/10 mi. and as result of abrupt bank of fog clouds. 14.4 sparrow hawk. 18.2 roven. 20.4 100 small crows. 21.0 crow. Tenater 3 crows. 21.2 crow. 21.5 approx 100 small crows. They have a different softer call than regular crow. 22.3 fog lifting but only temporarily. 22.7 2 sparrow hawks, few boat-tailed grackles in area. Small crow principal bird. 26.3 sparrow hawk. There are fewer people here than to S. area dry. 29.4 sparrow hawk. and river with tree from bank to bank overhead. Beyond river community is lower brush. 30.6 dark colored hawk a maybe dark redtail. 31.4 sparrow hawk. 34.1 small crow. 36.1 approx 120 cattle egret in field with cattle, surrounding area dry. 36.2 sparrow hawk & approx 30 crows. 36.3 Rio Purificacion. 37.0 black vulture. Extensive cleared area and extensive cultivation. 36.2 sparrow hawk. 38.5 sparrow hawk. 39.1 sparrow hawk. 39.5 sparrow hawk. 39.9 sparrow hawk. 48.0 Tuente deficiente. road construction allows for extensive flood. 41.1 Rio Pilon. sparrow hawk. 43.7 beginning of cactus palm. 46.3 sparrow hawk. Fog bank still present. 46.2 San Carlos turnoff, approx. 100 crows. 48.8 sparrow hawk. Rio Abajos. 49.6 turkey vulture. 50.1 approx. 40 black vulture 50.2 turkey vulture. 50.8 sparrow hawk. 61.2 sparrow hawk. 52.0 10 roven. 52.6 4 roven, sparrow hawk. 52.8 roven. 53.4 sparrow hawk. 54.8 top of ridge looking over low country to N, 2 roven. 55.1 sparrow hawk, 2 roven, 55.4 sparrow hawk. 55.6 sparrow hawk. 55.7 sparrow hawk. 56.5 now on low plains. 56.7 sparrow hawk. 57.3 sparrow hawk. 57.4 sparrow hawk. 58.2 8 turkey vultures, sparrow hawk. 58.5 Harris hawk. 58.7 sparrow hawk. 58.9 2 Harris hawks, sparrow hawk. 59.1 sparrow hawk. 59.3 sp. hawk. 59.6 sp. hawk. 60.5 sp. hawk. 60.8 Harris hawk. 61.7 sparrow hawk. 62.4 sparrow hawk. 62.6 sp hawk. 62.8 sp. hawk. 63.2 sp. hawk. 63.6 sp. hawk. 63.8 sp. hawk. 64.1 2 Harris hawks. 64.7 sp. hawk. 65.4 sp. hawk. 65.7 turkey vulture. There is a small greenish flycatcher with white breast at about 1 per mile. 67.0 approx 60 black vultures

circling above and 23 in another group 1/10 mile beyond circling -
 The city is Jimenez at 67.3. 8 black vultures in middle of
 town. 68.6 turkey vulture, sp. hawk, sp. hawk, Harris hawk.
 69.4 4 Harris hawks. 69.7 2 small crows, turkey vulture.
 70.5 sp hawk. 71.2 Harris hawk. 71.7 sp. hawk. 73.2 sp hawk.
 73.4 sp hawk. 74.1 sp. hawk. 74.3 sp. hawk. 75.5 3 roven.
 77.0 25 crows. 77.5 a whitish sagebrush shrub becoming
 more & more common, turkey vulture. 77.8 roven. 78.0 sp. hawk.
 78.8 sp. hawk. 80.3 sp. hawk. 80.8 5 roven. 81.2 Encinal
 village, turkey vult., 81.8 3 Audubon caracara in road at bend.
 83.2 sparrow hawk (2), 83.5 turkey vulture. 84.1 sp. hawk,
 turkey vulture. 85.4 turkey vulture. 85.7 sp. hawk. 86.0 sp hawk.
 86.2 La Coma 87.0 2 black vultures (3) 88.4 sp. hawk. 92.1
 turkey vulture. 92.8 black vulture. 94.6 La Union. 96.5
 3 turkey vultures. 97.2 4 black vultures. 97.5 Las Norias.
 98.7 2 sp. hawks one pale apart. 09.8 sp. hawk. 09.9 turkey
 vulture. 47101.3 sp hawk and gray hawk?. 93.6 kite.
 06.0 turkey vulture and gray hawk?. 07.4 sp. hawk. 08.8
 La Mayo. 09.5 sp. hawk. 09.7 Caracara. 11.1 Harris hawk,
 turkey vulture. 11.4 8 black vultures. 12.1 sp. hawk. 13.8
 sp. hawk. 13.9 black vulture.
 17.4 sp. hawk. 17.9 sp. hawk. 18.9 Photo 720110-3 and 720110-4
 of Caecos just outside of town. Seconds later the area become
 alive with children. 19.3 sp. hawk, 24 crows. 20.1 sp. hawk,
 3 black vultures. 21.3 sp. hawk. 22.0 sp. hawk. 22.7 sp. hawk.
 5 black vultures. 22.9 3 turkey vultures, sp. hawk. 23.8
 8 black vulture, 2 sp. hawks. 25.4 field of Brahma cattle.
 These animals seem to space themselves generally throughout
 the area. Photo 720110-5 shows this condition. This area
 is at San Antonio. Sparrow hawk. 27.4 Virginia opossum road
 kill, sp. hawk. 29.7 turkey vulture. 31.2 sparrow hawk, 33.3
 sp. hawk. Shrike is generally distributed throughout trip and
 is as ^{more} common here as elsewhere. 34.0 sp. hawk, marsh hawk.
 35.9 2 sp. hawk. 36.2 sp. hawk. 36.8 first meadowlark. 37.0
 second meadowlark. 38.7 3 more meadowhawk, 39.2 2 Turkey
 vultures. 39.3 redtail. 39.5 Harris hawk 42.4 Kingfisher.
 43.1 2 black vultures, striped skunk road kill, second Kingfisher.
 43.7 sp. hawk. 44.1 Los Lagos, sp. hawks, 30.0 egrets to west.
 sp. hawk. The egrets are just beginning to occur. 46.0 sp. hawk.
 46.7 ^{ground} rock dove. 47.3 redtail. 49.6 coyote road kill, sp. hawk
 50.7 sp. hawk. 51.8 sp. hawk. 52.2 sp. hawk. 52.9 Harris hawk

First large flock of blackbirds or grackles (2-3000). The grackles seem to be the common grackles. 53.7 sp. hawk. at Los Angeles. Just moving across field. sp. hawk. 59.4 80 egrets on shoulder of road 20 feet away. 61.5 sp. hawk. 61.9 sp. hawk. ~~63.0~~ sp. hawk. 63.8 Harris hawk. 65.0 sp. hawk, opossum rd. kill. 65.3 sp. hawk, Harris hawk. 66.4 first Coot. 66.6 large lake to left. 79.0 sp. hawk. 73.5 sp. hawk. 76.2 snow geese? flying E. 77.2 Harris hawk. 78.9 Harris hawk. Many snowy and cattle egrets in fields. 79.4 6th striped skunk road kill since first one observed earlier, sp. hawk 80.7 sp. hawk. 84.6 2000 crows and largest seen on trip, 47200.0 at Matamoros at 2:30 P.M. Shopped in market and left at 6:30 P.M. There are at least 150 market type stores in a restricted area that sell Mexican articles of all descriptions from all States of Mexico. There is considerable repetition of material. Prices are approx 40% higher than actual final bargaining price. This is one of the best ways to see the items sold in Mexico although they say that some articles from Japan are sold here. Left at 6:30 P.M. at 47201 and crossed into the U.S. No problem with U.S. Customs and 50¢ Texas tax on qt of Tequila. Camp in Brownsville in Chamber of Commerce parking lot. Many cars stopped here to adjust purchases made in Matamoros. Would recommend a special trip to Brownsville to shop in Matamoros, Mexico. No problems with customs. Day visit requires no pass.

Brownsville, Texas

Jan 11, 1972

Left 47203 at 8:00 A.M. 222.1 2 long-billed curlew on way to Boca Chica near mouth of Rio Grande. They inhabit short grasses bordering marsh areas. They called twice. A local informant said these birds raise young in the area but I believe they nest much further to the N. The dominant bird is meadowlark of 2 species (by call) and since Brownsville have observed approx. 30. 262 at end of road and now on beach. Extent for 3 cars (fishermen) the beach is untouched or inhabited and to this extent is a good place to camp. The surrounding land is low and would be hazardous in case of storms. Bird life may be better represented to S toward river but in any case the area is limited in extent and variation of habitat. It is surprising that Boca Chica is not used by inhabitants of Brownsville. Had breakfast here and returned to Brownsville and thence to Port Isabel. At 3:28.2 observed 3 long-billed Curlew along side of road.

Shorebirds along road are willet, laughing gull, Herring gull, dowitcher and some boat-tailed grackles. At 43.0 sparrow hawk. 47.267.9 Port Isabel. Willets (6) and laughing gulls and ring-bills on beach. 78.0 end of present road to north. One can go farther on beach. This entire offshore bar is developed with private homes and accommodation. The trailer park at W end is attractive and a good base for ~~operation~~ operation. Chances for camping on beach are out except to far N. The variation of ocean, inland lakes and marsh area make the area attractive (average value). Great Blue heron, laughing gulls, pintail ducks and Caspian tern are dominant birds. Left area and turned off highway 510 at Laguna Vista to N. will work way up to Laguna Atascosa, thence W & N to highway 77. 95.4 turkey vulture. 47.302.1 sparrow hawk and turn off to Headquarters of reservation. Laguna Atascosa. Bird life thru reservation extremely rare. Self conducted car routes are not recommended as a refuge policy. 47.303.3 shrike. 2 marsh hawks. 04.4 so far have seen 3 shrikes and 1 mockingbird. 05.3 Harris hawk. Lesser scaup & coot in one bay. 100 snow geese in cultivated field and 10 blue and 15 Canadian geese. 5 Canvas backs, 5 turkey vultures, red-tail, marsh hawk 12.4 sparrow hawk. 16.5 W side of reservation. Have give kinds of birds only of inhabitants of refuge which is not too impressive for an area of land set aside for winter migrants. Areas in 5 Louisiana support ^{many} hundred times more wildlife than Atascosa. I believe there is too much management of this refuge. 27.0 Rio Hondo. 40.4 in this cultivated area the hawks and especially the vultures are absent. 41.4 sparrow hawk. 44.8 2 marsh hawks. 50.0 main highway (77), at 3:00 P.M. 62.1 sparrow hawk. 62.3 sparrow hawk, 2 turkey vultures. redtail. Pond to left 2 redtails and 1000 egrets, striped skunk road kill. 64.0 Harris hawk. There is a decided increase in numbers of birds including mourning doves, egrets, boat-tail grackles and blackbirds. 64.4 4 turkey vultures. Harris hawk. There has been a change from extensive cultivated lands to second growth grazing lands and an associated increase in birds. 65.3 Harris hawk. 66.4 2 turkey vultures, ponds with 20-200 ducks and shorebirds. Hairy woodpecker, Harris hawk. 66.9 Harris hawk, 67.9 Harris hawks (2), road kill turkey vulture, one live vulture

overhead. 68.4 sparrow hawk, grackles (2 species) very common
 thru here. 68.9 Harris hawk, 69.8 sparrow hawk. 70.9
 Harris hawk. 71.9 2 Harris hawks, 72.2 Harris hawk.
 72.4 Harris hawk, turkey vulture 72.8 redtail, Harris hawk.
 73.6 Harris hawk, 74.3 Harris hawk. 74.6 Harris hawk and
 turkey vulture. 75.8 sparrow hawk, Harris hawk. 76.3
 turkey vulture. 76.5 Harris hawk. 76.8 Harris hawk. 77.2
 redtail and 2 Harris hawks, turkey vulture. 77.5 Harris hawk.
 78.3 redtail. 78.4 Harris hawk. 78.5 Harris hawk. 78.7 red-
 tail hawk. 79.0 sparrow hawk, Harris hawk. 79.7 redtail.
 80.1 3 turkey vultures, Harris hawk. 81.0 It is curious that
 there are not more herons in this area as there are many
 ponds which have good populations of ducks and shorebirds.
 82.4 Harris hawk, turkey vulture, redtail, some red-wing blackbirds.
 83.1 Harris hawk. Only use of area is grazing. Large
 flocks of blackbirds in area. 84.4 redtail, 84.6 redtail.
 85.0 Armstrong. Large flocks of blackbirds. 85.5 Harris hawk.
 turkey vulture. 85.8 Harris hawk. 86.0 redtail. 86.4 redtail.
 86.6 Harris hawk. 87.3 marsh hawk. 88.6 redtail (some of
 these are tending towards dark phase). 89.3 redtail (with
 roughleg characteristics). 89.8 Harris hawk. 91.3 larger trees
 but may be local at least patches of larger tree increasing.
 gophers common and increasing in number. The trees
 and gophers are correlated with irregular soils, ^{of sandy type} ~~sandy~~
 terrain. 93.8 redtail like roughleg. 94.3 redtail. 99.8
 redtail. The increase of irregular terrain & trees is associated
 with decrease in hawks. 47 ~~40~~ 2.8 sparrow hawk.
 02.8 sparrow hawk. 03.0 redtail. 04.0 Harris hawk.
 04.9 snowy & cattle egrets, Harris hawk. 05.1 Savita 4:30
 number of ducks high all along route. Now to N the land
 is flat and the irregular terrain & trees are absent. 07.1
 Harris hawk. 08.9 sparrow hawk. 09.1 Harris hawk. 10.4
 Riviera. 13.0 sparrow hawk. 13.2 Harris hawk. 15.3 Harris
 hawk. 15.5 redtail. 16.1 sparrow hawk. 16.8 Harris hawk.
 17.3 Harris hawk. 17.4 sparrow hawk. 18.5 sparrow hawk.
 19.0 Ricardo. 20.3 redtail. 20.7 now on 4 lane highway.
 20.9 Business turnoff to Kingsville to left. Continued ~~to~~ along
 main highway and did not go to Kingsville. 25.4 sparrow
 hawk. ~~at outskirts of Kingsville~~. 27.9 marsh hawk. 28.3 marsh
 hawk. 28.6 redtail. 29.0 redtail. No much human habitation
 thru this area but completely cultivated. 29.5 Harris hawk

29.6 redtail, Coyote road Kill. 31.4 Bishop. at 5:10 P.M.
 32.5 turning E on highway 70. 39.8 entire area from Bishop
 on is completely cultivated ^(plowed now) and flat as a table. 40.1 sparrow
 hawk. 50.8 still passing thru plowed and harrowed lands.
 Birds rare. 51.5 sparrow hawk. 52.4 Chapmans Ranch.
 turned to 286 highway. 56.1 second large swarm of black-
 birds moving to S. 58.2 4 large Cranelike birds, sparrow
 hawk. 58.7 more houses along side of road but land still
 completely cultivated. 47460.3 sundown 5:55 P.M and
 end of census. 47.6 City limits of Corpus Christi and now
 on highway 357. at 6:00 P.M 68.8 junction of 368.
 76.2 Intercoastal Canal overpass. 80.5 on beach at 6:30
 P.M (Padre Island Corp just east of the State Park (Nueces State
 Park). Trailer about 70' from ocean. By light on beach
 noted the great blue heron, and black skimmers to feed all
 night. Sanderling active ^{at least for an hour} after dark.

Padre Island, S Corpus Christi, Nueces Co., Texas

Jan 12 1972

Birds along beach were great blue heron, sanderling, Herring
 gull, laughing gull, ring-billed gull, Royal and Caspian tern
 (mainly Caspian), Common tern, willet, eared grebe among
 breakers, horned lark on beach. Left 47480 mileage at
 10:30 A.M. Followed paved road to Aransas Port although
 one could follow beach if so desired. (Salt too damaging for
 car & trailer). The road passes very near beach and one can
 see beach at many points. Some marshland to N but
 looks barren & dry. 865 marsh hawk
 gophers completely inhabiting sand dunes all along route.
 87.4 marsh hawk 90.1 redtail. vegetation mainly a
 short form and brown in color, green in wet places. Few
 meadowlarks. Pond with or without ducks. Temp. 64°F.
 Some ponds with rushes but not many. Some dunes active and
 colorful. 47502 at ferry at Port Aransas. 60 double-crested
 cormorants flew down bay. 07.9 Aransas Pass. Long-billed
 Curlew. ^{not impressed with this area (Aransas Pass)} 20.9 2 sparrow hawks. 23.4 Lockport. In this area
 are oaks with large trunks and ^{extensive brown} overhead protection. 31.9 east of
 viaduct. 3 turkey vultures. Here at Sea Gun Sports Inn arranged
 for boat trip to see whooping cranes in Aransas Wildlife Refuge.
 Left 1:30 P.M on a 65 foot boat the "whooping Crane". Navigated
 out intercoastal passage and thence E along waterway and tidal
 flats along S side of refuge. Observed the following birds:

Laughing gull: the gull that followed the boat. It is possible to get these gulls to within 3 feet or less of camera in stabilized flight. Mainly adults.

Herring gull. 2 or 3 following boat.

Ring-billed gull. mainly on beaches and resting on islands

Double Crested Cormorant In flight and resting off on sand bars and small islands. approx. 300 total. Frequently with white pelicans.

Great blue heron. Common on tidal flats and around ponds and a crude estimate would be 50.

Golden-eye duck In deeper parts of bay and in unexpected numbers. Approx 70 all told.

Eared grebe. Approx 20 and singles or small groups.

White pelican. 120 in several groups mainly resting.

Oyster catcher. 2 pairs

black skimmer. group 8 and 2 pairs

Royal tern 2

Caspian tern 18

Foster tern 12

Gadwall duck 8

Shoveller 4

Ringtail 40

Lesser yellowlegs 2

greater yellowlegs 1

American Egret 30

Snowy Egret 45

Redtail 1

Turkey vultures 42 in field at one time over refuge. mainly singles or small groups. Some could be black vultures or Caracaras.

reddish egret 3

ovacet 120 one flock

Caracara 4

Coot 18

Curlew 2

Willet 6

red-backed sandpiper 12

marsh hawk 6

sanderling 30

yellow crowned night heron 2

Little blue heron 1

Total numbers are not reliable, especially with ducks and other kinds of birds and are to be used as coarse approximations.

killdeer 2

red merganser 6

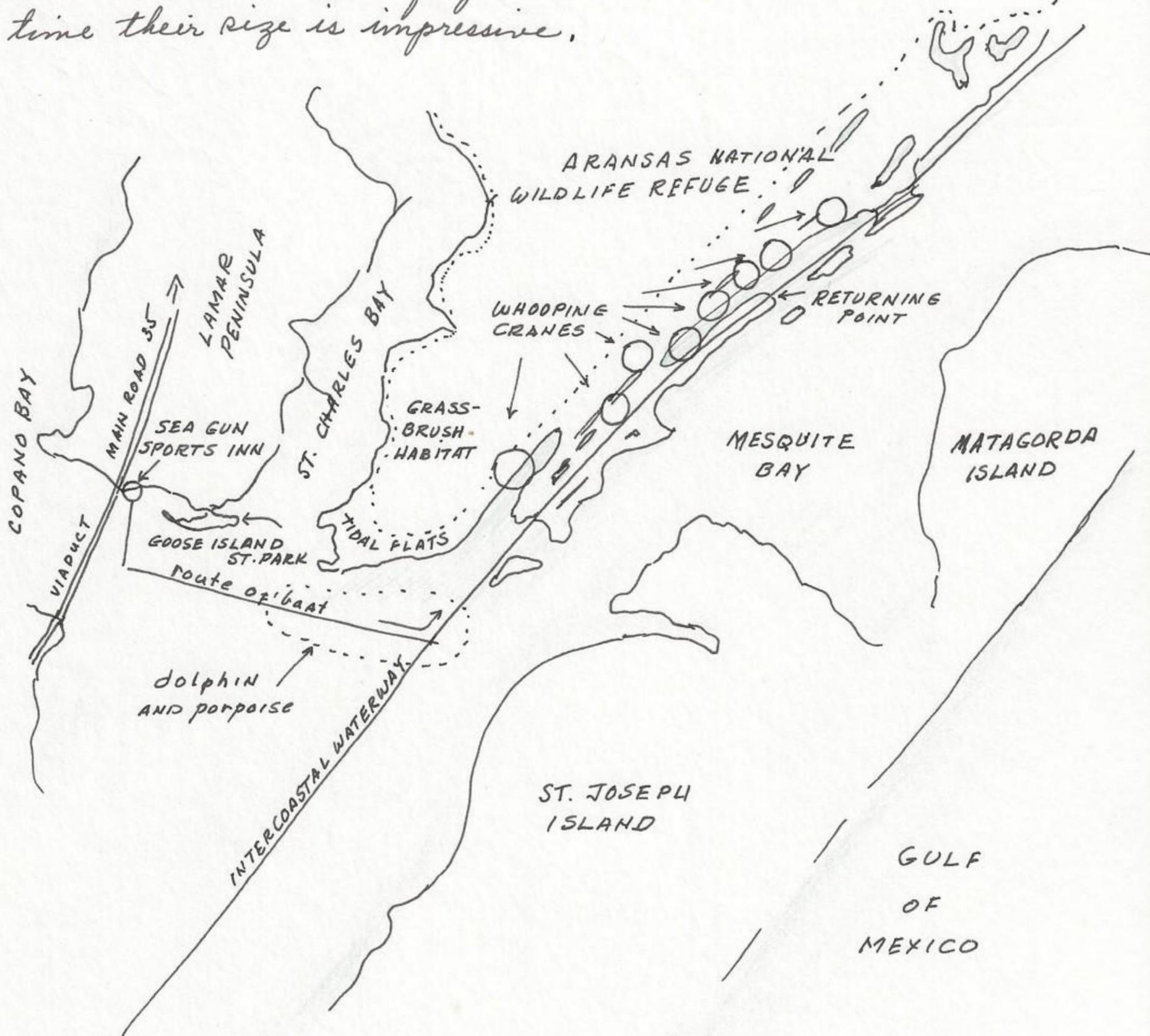
porpoise 4

dolphin 5

The whooping cranes are territorial and in grass field bordering the tidal flats occurred in the following groups and sequence:

2-3 (2 adults and 1 immature) - 3-2-2-2-2-3 = 19 birds.

This number is 19 of 59 ~~existing~~ existing birds. 23 other whooping cranes are in captivity from birds raised from eggs. The second group of 3 flew approx 2/10 miles; others fed and waded about on their feeding grounds. They have a different stance than the am. egret and appear more hunched back. Their flight is unmistakable and at that time their size is impressive.



ROUTE OF BOAT AND TERRITORIES OF WHOOPING CRANES, ARANSAS NATIONAL WILDLIFE REFUGE.

Left Sea Gun Inn at 5:30 P.M. and continued E. at
 mileage 47536.6 36.8 sparrow hawk. 39.9 sparrow hawk.
 42.6 marsh hawk. 44.4 sundown and lights fading.
~~End of census~~ 46.4 redtail hawk. end of census.
 Point Comfort 47577. at LaVaca

Point LaVaca Camp, Texas

Jan 13, 1972

Left at mileage 47577. at this camp, ^{LaVaca Bay,} at side of
 water observed. 6 long-billed curlew, pipit, double
 crested cormorant, ring-billed gull, Herring gull, laughing
 gull, Louisiana Heron, boat-tailed grackle, black-bellied
 plover, snowy egret, Caspian tern, common egret, Forster
 tern, sandpiper, gadwall, pintail, snow geese (175).
 Left at 7:30. 82.8 sparrow hawk. 84.9 coyote road
 kill. 85.8 2 snow geese, large flocks of cowbirds. 88.3
 heavy congregation of cowbirds along road. 89.0 marsh
 hawk. 89.8 sparrow hawk. 90.0 Carancahua Bay,
 95.3 sparrow hawk, 2 snow geese, killdeer. 97.5 redtail.
 98.7 sparrow hawk. 102.6 sparrow hawk. 103.5 striped
 skunk road kill. 108.4 sparrow hawk. 47608. 10.5
 2 striped skunk road kills. Have not recorded all
 road kills. ~~but~~ Road kills are, however, uncommon. 16.8
 2 turkey vulture road kills near an opossum road kill.
 19.8 80 snow geese. 21.6 marsh hawk. 22.3 more
 cottontail road kills than I have observed on entire trip.
 The increase of Virginia opossum and striped ^{skunk} road kills
 as associated with the rabbits. 23.2 marsh hawk and
 turkey vulture. 24.1 marsh hawk. 25.1 250 snow and
 blue geese. 26.8 marsh hawk, killdeer frequently at side
 of road. 27.8 beginning of oaks. 30.4 Colorado River.
 32.6 Bay City. 36.4 marsh hawk, sparrow hawk. 41.1
 sparrow hawk. Oaks increasing and more savannas.
 Few crows but not many. 43.3 2 turkey vultures.
 44.2 turkey vulture, few snowy egrets. Large trees and
 water lilies similar to Louisiana. 48.8 2 turkey vultures.
 51.2 country still flat but large ^{solid, tall} forests. 52.2 Saw
 Bernard River. 53.9 sparrow hawk. 57.9 3 turkey vultures.
 59.3 raccoon road kill. There are many more road
 kills in this area than in Mexico. Duffer mounds are
 conical. 64.9 Brazos River. 67.0 increase of Spanish moss.

nuthatch, white crowned sparrow, flicker, pine warbler
deer tracks, some not over an inch and a half.

Left at 47854.0 at 9:45 A.M. Raven and crow
along main highway but not in winter population numbers.
66.9 2 turkey vultures. 68.4 4 turkey vultures. 71.5 black
vulture. 72.0 turkey vulture, black vulture. 72.9
black vulture. Crows average 4 per mile thru forested area.
in area of 77.8. 80.3 Madison County, 2 turkey
vultures. 82.1 turkey vulture. 83.9 turkey vulture.
88.5 2 turkey vultures. 89.0 2 turkey vultures. 91.2
sparrow hawk. 92.0 turkey vulture. 92.9 2 turkey
vultures. 98.8 marsh hawk. 47901.1 Leona city
limits and turkey vulture. 02.9 2 turkey vultures,
03.5 turkey vulture. 10.8 redtail and 7 turkey
vultures. 11.5 misceltes making its appearance on trees.
Trees mainly deciduous leaving left pines behind. Oaks
dominant. Crows 1 or 2 per mile. Pine occasionally
but mainly leafless deciduous trees. 17.7 redtail,
25.6 2 turkey vultures. Beginning of red soils. 26.3
Freestone Co. line, 29.8 2 turkey vultures. 30.4 turkey
vulture. 31.6 turkey vulture. 35.8 turkey vulture. 36.7
turkey vulture. 38.6 2 turkey vultures. 39.9 2 turkey vultures.
Tree more oak than other kinds. 41.5 turkey vulture. 44.9
redtail and turkey vulture. 46.1 2 red-tails. Misceltes localized.
47.4 turkey vulture. 47.9 turkey vulture. 52.6 turkey
vulture. 57.5 turkey vulture. 57.8 Navarro Co. line.
marsh hawk. Now open brush. 60.9 turkey vulture.
63.2 redtail. 64.6 turkey vulture. 65.3 2 turkey
vultures. 69.4 Angus 71.4 sparrow hawk and 2 turkey
vultures. 73.7 redtail, 2 turkey vultures. 74.1 redtail.
74.7 redtail. 76.0 Coreacana directly west, Roadside 233
mileage = 77.4 on par 80.5 Chambers Creek. 81.3 first
Cottonfields. 82.1 5 turkey vultures. 87.2 Rice.
87.9 Ellis Co. line. getting into open country, marsh hawk.
88.4 marsh hawk. 91.8 sparrow hawk. 95.6 redtail.
98.1 turkey vulture. 48,000.0 redtail redtail, 01.7
turnoff to Palmer. Since morning there has been several
meadowlarks but not in winter populations. 10.7 Dallas
Co. line. sparrow hawk. 34.4 Center of Dallas. 51.7
Denton Co. line, redtail within city limits of Dallas. West limits
of Denton City at 74.8 at 3:20 P.M. Continued 55.4 first redtail records.
Norman, Oklahoma
Jan 15, 1972
Left Norman at near 0° F. First redtail at 48255.4.

at Waterloo road exit. 48255.9 Logan Co.. few crow in area. most
 rivers frozen. Temp. this A.M. 6°F 68.1 2 redtails 69.8
 first sign of snow along road and then only traces. Crows
 12 per mile. 71.1 redtail. 74.2 Cimmaron River, 60%
 frozen with main channel open. 85.1 sparrow hawk. 86.1
 Noble Co. 88.4 slight increase in snow along side of road.
 89.9 redtail. 96.6 sparrow hawk. 99.3 marsh hawk.
 99.6 Black Bear Creek. 48301.4 snow beyond drifts onto
 fields. 05.8 redtail. 16.3 Kay Co. 18.3 redtail,
 18.9 marsh hawk. Snow cover increasing slightly to N,
 but still scanty. 28.4 redtail. 38.4 2 redtails. 39.0 redtail.
 43.6 Kansas border. 48.6 2 redtails. 49.4 redtail.
 53.8 redtail, meadowlarks uncommon. 55.2 redtail.
 56.9 redtail. 60.4 redtail. 63.7 redtail. 65.9 redtail.
 67.8 redtail. 69.8 redtail. Ninescaw 70.9 redtail
 79.5 marsh hawk. 86.8 Arkansas River 60% open. On
 crease in snow. 48404.4 redtail. 4:25 05.4
 whitewater river 13.0 redtail. 20.3 marsh hawk
 23.0 last 20 miles with large flocks of starling which is new
 to the census. Temp 5°F 35.2 marsh hawk. 38.0 Mat-
 field Service Area on turnpike, 43.0 great horned owl
 flew across road. 43.3 Shaw Creek Road Bridge 5:30
 at sundown and end of census. 51.6 Cattle Kers. 65.2
 Cottonwood River. 69.6 Neasbaev River. 48541 Arrived
 Lawrence at 7:30 P.M. Snow here about 1 inch.

Blue mound, SE Lawrence, Douglas Co., Kansas

Jan 16, 1972

Took several photos of Annette C at the skiing slopes on Blue mound. These slopes are augmented with artificial snow and are popular for the Lawrence community. Chris had been skiing in Utah at Snowbird and was able to handle these slopes without difficulty.

- 720116-1 Annette on slopes
- 720116-2 skiers on tow
- 720116-3 Annette on slope
- 720116-4 " " "
- 720116-5 skiers
- 720116-6 Annette on slope
- 720116-7 Annette at base of tow
- 720116-8 " " " "
- 720116-9 Top of chair lift
- 720116-10 Annette on slope
- 720116-11 Annette down
- 720116-12 Annette on fall

720116-13 Annette
720116-14 General view of slope.

Museum Natural History, University of Kansas, Lawrence, Kansas

Jan 17, 1972

Photographed a fossil gopher, Pleurolicus (n. sp.), complete articulated pre-Pleistocene gopher

It was collected by Mr. Donald L. Rasmussen and prepared by Orville Bonner of the museum staff. Photographs are:

- 720117-1 General view of entire fossil and rock
- 720117-2 Closer than above. Left side of film with shadow
- 720117-3 ibid but lighting good. (best for reproduction)
- 720117-4 skull at close-up.
- 720117-5 skull and rib cage
- 720117-6 posterior part of mammal
- 720117-7 entire mammal
- 720117-8 baculum
- 720117-9 Close-up of skull.

From a tuffaceous mudstone in the Cabbage Patch Beds near Drummond (Granite Co.) Montana - early Miocene. 20 million years old. See *Nature*, U 17, no 8, Aug 1972.

Perry Lake, Old Ozarkie, Jefferson Co., Kansas

Feb. 20, 1972

Photographed effects of ice sheet on road at S side Old Ozarkie. The direction was from SW.

- 720220-1 buckled acidized road at edge of lake
- 720220-2 buckling of ^{soils} road bed at edge of lake
- 720220-3 general view of effect of lateral ice heave of winter ice ponds sealed in ice

no ducks in area. Kaw open Perry Lake in ice and closed. Ponds sealed in ice

Slough Creek, Perry Lake, Jefferson Co., Kansas.
 March 13, 1972

Census of mammals and birds on west side of Slough Creek from Ferguson bridge to bridge 902 SE of Bay Scout Camp. Left Lawrence at 11:30 A.M. at mileage 92.9 (Pepee Junction). Temp 48°, sky 1/10 in high clouds, windy. Will keep track of kinds of birds between Lawrence and Perry. Sparrow hawk, rough-leg hawk, Eng sparrow, 02.9 Perry Junction. The 3 birds previously recorded were, in fact, the only ^{individual} birds observed from Lawrence to Perry. From Perry Junction to SE corner of Perry Lake area recorded: redtail, Eng sparrow, 7 tree sparrows, 4 juncos, meadowlark, marsh hawk, 05.4 SE corner at 11:50. Will keep complete list of numbers of birds from here on. 05.6 redtail, 05.7 redtail, Rough Creek at 07.7 N end bridge, at 11:55. and beginning of walking census along west edge of Slough Creek arm of lake. Wind from W and strong enough to make good white caps on lake. Now following along outcrop of rocks among deciduous forest. The rocks are rounded on edges as they are being eroded. 12:02 fence line, 2 blue jays. 12:05 from point watch bald eagle (adult) hunting over bay to E (200' above water) It dropped down twice to water for fish. On the third trial it captured a small fish and then flew E across bay to alight in top of dead tree to consume the fish. 4 goldeneyes in same area as used by eagle. They left on my approach. Can see 5 other ducks (sp?) and 1 herring gull in middle of bay to S. 18 mallards left area in groups of 5-3-4-2-3-1. Another herring gull. Approx 300-400 starling concerned with eagle. 12:15 kingfisher flew down along shoreline and then left water to fly over trees as shortcut to lake to W. Lee side of ridge comfortable but high way in bay. Noted that styrofoam cups + ice chests are the greatest offenders of pollution along shoreline (5 articles in 100 feet). Plastic second in degree of pollution. Fisherman's lures and bobbers approx 1 per 50'. Plastic tops (set of 6) for soft drinks common. 12:25 head of first small bay. Microtine runways common. 12:30 beginning of inundated trees. Great blue heron nests still in area. ^{beyond.} 2 Hooded mergansers left area of inundated trees. Redheaded woodpecker, 2 black-capped chickadees at fence line. 12:35 great blue heron nest, cardinal, 2 chickadees. 14 nests in main tree making a total of 15 nests. All trees in area levelled except some oaks leaves of previous year or tree downed last year. 12:38 entrance second major bay. Ice slush masses about 20 per cent. 12:39 fence line half way up bay. Five masses of green vegetation on east side of bay. Good microtine runways just before end of upper part of bay.

12:42 head of bay. fox sparrow, 4 black-capped chickadees, no raccoon tracks in sands of drainage. main stream into bay approx. 1 quart per six seconds. Good jumpers on bench to east. Green vegetation associated with abandoned hornesites and are crop associated plants. Racks of ridge rounded. Fishermen have used this area and have left debris. Red-headed woodpecker, 2 tree sparrows, 12:45 E. entrance of bay. juncos 12 (S. color), 12:48 fence line near end of trees, bald eagle soaring to east. water clear & blue, no white caps because of protection here. 150 beyond is a rock fence that comes down to the lake. The trees that extend into lake are an extension of this fence line. 3 black-capped chickadees, downy woodpecker, song sparrow, 2 cardinals, 12:56 west gate of ^{secondary} bay with solid rocks at head. Slush 80% in this side bay. 12:58 head of this bay to W. The solid rocks turn out to be a bridge. Downy, redhead woodpecker. This road is the old road that crossed the valley to the E. Large deer track 73 mm crossing bridge. The road 100' beyond bridge to E turns to N. Kingfisher. 1:00 east part of bay, yellow-shafted flicker, red-bellied woodpecker. 1:05 ^{old} county road crossing, cardinal, 5 slate-colored juncos, 14 tree sparrows, 1 field sparrow. now following along level road at edge of bay. no coyote tracks. 1:13 leaving road and following along edge of bay. 1:16 tree line going across bay and is former road. 2 tree sparrows, 15 sculp flying out of bay to S, beaver cuttings. 1:18 old road bed into bay. many microtine runways on road bed and in ungrazed field to N. 1:20 2 green-winged teal (♂♀) in protected edge of bay. Field sparrow. 3 mallards. 2 green-wing teal. 2 male green-wing teal. 1:25 gate or construction of bay. tree sparrow. 1:29 head of bay. This arm has pond at head. Red-headed woodpecker, 2 tree sparrows. This area has unique character of trees and topography. water clear, red-bellied, 1:32 north gate good microtine area, many small openings in matted grasses for microtine sun bathing. muskrat entrance. Ice leave action along side of lake. Tree sparrow, 1:38 convergence large bay to narrows of river channel. now directly east of red house on hill to west. 1:40 crow, field cleared for horse racing course. cardinal, coyote (live), 5 cardinals, 12 tree sparrows, 2 black-capped chickadees. 7 tree sparrows. 5 cardinals, 1:47 5 tree sparrows, song sparrow, 13 tree sparrows, 20 tree sparrows. 1:50 fence line just beyond inlet bay. 1:53 end of continuous field and bay extending into field slopes from W drainage. redtail. The drainage near the heels to W is 10 feet deep. It is necessary to cross this drainage at point where it leaves slope of hills. The farther away from inlet the deeper the entrenched drainage. 2 redbellied woodpeckers. At crossover noted a white breasted nuthatch, 4 black-capped chickadees. Raccoon tracks in

mud at bottom of drainage. This would be a good area to check stratigraphic profile of valley, 4 tree sparrows, 7 bobwhites, 2:00 north end of gate of bay (a gate is the construction of a larger body of water to a smaller or inlet). From this location can see directly west a ^{background} flat ridge that connects two prominent ridges or terminal knolls. 8 tree sparrow. ~~4~~ From this point on there was a malfunction of the recorder and no information was recorded beyond this point. The route continued along drainage however, to bridge 920 and thence return by county road to Ferguson road thence back to car at Slough Creek bridge. Walked entire way. One return at white pines on Ferguson Road while looking up to see if mature cones were present, experienced an abrupt nausea and dizziness that continued for some time. Mileage from Slough Creek bridge to end of census 4.1 miles. From end of census to bridge 920 1.7 miles. From bridge 920 to Slough Creek bridge 5.2 miles or a total of 11.0 miles.

Summary of birds.

blue jays 2-

bald eagle 1-1 (the second one probably same as first one observed as both were adults.

goldeneye duck 4

ducks sp? 5

herring gull 1-1

mallards 18-3-

starling 300 to 400

kingfisher 1-1

hooded merganser 2-

redheaded woodpecker 1-1-1-1

black-capped chickadee 2-2-1-4-3-2-~~4~~-4

cardinal ~~4~~ 1-2-1-1-5-¹⁰5-1-

fox sparrow 1

tree sparrow 2-14-2-1-2-1-12-7-12-5-20-4-8-

slate-colored junco 12-5-

downy 1-1

song sparrow 1-1

yellow-shafted flicker 1

red-bellied woodpecker 1-1-2-

field sparrow 1-1-

scaup 15

green-winged teal 2-2-2-

crow 1-

Coyote 1-

redtail 1-

white-breasted nuthatch 1

bobwhite 7-

27 species

4.1 miles census route

2 hrs 5 min in field.

Niangua River, Missouri.

March 19, 1972

Annette P and I made canoe trip on Niangua River, leaving Lawrence at 1:30 P.M. with car and trailer and canoe at mileage 49716. Day clear and temp 70°F, wind approx 25 miles per hour. Route Olathe, Warsaw, Louisville, arriving at Bennett State Park at 6:00 P.M. at mileage 49917. Enroute 15 striped skunk road kills and generally distributed, Approx 30 opossum road kills. Birds rare because of wind. Only 5 redtails and 3 sparrow hawks. The first turkey vultures (2) were at Bennett Springs on the Niangua. Camped in Bennett Springs State Park. Frogs calling in evening like a bird chirping. There were very few people in the area and this pre-season time is preferred over the summer crowds.

March 20, 1972

Birds in Park include: common grackle, robin, Eng sparrow, mourning dove, red-bellied woodpecker, bluebird, bluejay, starling, meadowlark, Chipping sparrow and a mammal the grey squirrel.

Put canoe in river, ^{10:30 A.M.} at first ford above Bennett Springs some 7-8 miles up river. Some observation on river for first part of river are: Titmouse, 3 vultures, pileated woodpecker, A pileated woodpecker nested in the S side of a sycamore tree 25' high (the nest). It left the nest & flew N across the river. Three crows, 3 large turtles, 1 small turtle, cardinal, great blue heron, 3 large and 3 small turtles, one a soft shell. 10:40 Carolina wren calling, 32 turtles in 1/10 mi 10:45 pileated & red bellied woodpeckers, blue jay. 10:50 Kingfisher. 10:56 bend and rapids. 10:58 10 turkey vultures in one group circling above high cliffs of river (to right), mourning dove. 11:15 2 woodducks, red-bellied woodpecker, slate colored juncos. 11:25 bend to W. 19 woodducks, brown creeper, black-capped chickadee. 12:00 east curve and fast water all along, robin. Lunch at 12:30 P.M. to 1:00 P.M. 1:05 3 ♂ & 1 ♀ greenwing teal, brood winged hawk, 1:20 crow chasing a grey squirrel at the crows nest. 1:40 bend, now to SE. 1:45 2 woodducks, large natrix. 2:25 rock in river, 2 ducks. Arrived ^{Bennett Springs} 2:45 P.M. or 4 hours & 15 min trip. The notes above, especially the latter part of trip are not complete. There is no difficulty on river except last part of river where as many as 3 channels diverge from main river. These are ^{partly} choked with small shrubs & trees. Water clear and cold. This is the best water level to travel of any season.

Left Bennett Spring at 3:20 P.M. and walked back to car where we left at 10:30 A.M. via main county road. ^{Kinds of} Birds observed are: red-headed woodpecker, red bellied woodpecker, robin, grackle, Eng. sparrow, starling; marmot + mole mammals, meadowlark, bluejay, grey squirrel, yellow shafted flicker, Carolina wren, ^{alone} 2 pileated woodpeckers, yellow-shafted flicker, 9 redheads, These birds observed on grade thru forest up to top of ridge. Beyond were bluebird, crow, titmouse, Killdeer, Wilson snipe. 4:22 Poverty Ridge Store or dance hall. Beyond to river were redwings, grackles, downy woodpecker, cardinal, mockingbird. Arrived car 5:00 P.M. Mileage by car on return is 0 mileage at river, 1.3 at Poverty Ridge, 3.2 miles to base of hill at Bennett Springs.

This evening talked to Mr. Strickland of the Fisheries section of the Park. He says that big mouth bass are in Neangua River but not at Bennett Springs area. There are no bear or mt lion but bobcats and coyotes. Best time to float Neangua is first week in October. In July, August + September water is too low and weather is hot. Best time in spring is first week in May. Current River is larger and faster and there are many covesizes, Big Piney like current. From Buffalo City to Bennett Springs the usual float time is 3 days - from Bennett Sp to Neangua Lake the time is 3 days. My estimation is 10 days.
March 21

Checked several points along the Neangua today. There is no camping at put-in N of Bennett Springs on other side of bridge. Informant at Buffalo said the Neangua ^{trip} takes 6 days to lake. June is month of high water. In winter the water freezes but river can be floated any time of the year. There is no camp site at Buffalo crossing. at junction S and E noted a fox + marmot. Continued on to N and to road S of the Lake of the Ozarks, thence same route back to Lawrence. Total mileage 526 miles

Lakeview, Douglas Co., Kansas

March 25, 1972

Collected several examples⁴² of Leptodea laevissima from east side of the NW end of the oblong lake. They were all on sandy shore and left as water receded. Some of the largest and most brilliant were near the base of the bank. These were placed at random except a few localized aggregates collected by raccoons. There was only one other species and the shore and this species represented by two shells only. The largest measured 162 x 108 mm.

Lawrence, Douglas Co., Kansas

March 28, 1972

Selected piano compositions recorded this date.

- 720328-1 Scarlatti: Sonata in E major, (Longo 430)
 720328-2 Scarlatti: Sonata in A major, (Longo 483)
 720328-3 Scarlatti: Sonata in G major, (Longo 209)
 720328-4 Schubert: Impromptu in G Flat Major, Op 90, no. 3.
 720328-5 Scriabin: Poem F sharp major, Op 32, no. 1
 720328-6 Scriabin: Etude in C-Sharp minor, Op 2, no. 1
 720328-7 Scriabin: Etude in D-Sharp minor, Op. 8, no. 12
 720328-8 Scarlatti: Sonata in E major (Longo 23).
 720328-9 Scarlatti: Sonata in G major (Longo 335).
 720328-10 Debussy: Clair de Lune (moonlight)
 720328-11 Clementi: Minferrina no. 2
 720328-12 Clementi: Minferrina no. 6
 720328-13 Handel: Largo
 720328-14 Beethoven: Adagio "moonlight" Sonata.
 720328-15 Chopin: Prelude
 720328-16 Sinding: Rustle of Spring.

Lawrence, Douglas Co., Kansas

April 11, 1972

House wren arrived at 402 Yorkshire this date and established territory at nest box.

Wren above

April 13, 1972

Offered first song and continued on a regular basis

April 19, 1972

Female house wren arrived this date and joined ♂ at nesting box.

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

April 27, 1972

Noted a marmot at intersection (4 way stop) just E of Dr. James Campbell's residence. It chose to run from one car to the other as the cars stopped at intersection. It finally ran to residential area to the NW of intersection. Also observed a rose-breasted grosbeak here. The species is observed in the same area each year. On April 29, a marmot, could be same individual, observed at the field N of Hillcrest School some 1/2 mile from where the one was observed above on April 27.

402 Yorkshire, Lawrence, Kansas

May 13, 1972

Starling systematically robbing nest + Ena Sp + martin prob. + successful nesting on mart. house of the sparrows or martin

Perry Reservoir, Jefferson Co., Kansas

May 5, 1972

Museum Techniques Course to Paradise Point. Materials needed cones, paddles, life preservers, sponge, food, milk, butter, boots, raincoat, shoes, jacket, bird book, skin kit, cotton, traps, tow, thread, clay, oat meal, corn meal, ice box, binoculars, watch, journal, pen, skin pans, black glass pins, maps.

Robert Waltner & Stephen Peckham & I drove to Paradise Point at 1:00 P.M. and established Camp at NW corner Point of the peninsula. At 3:30 P.M. set 100 trap in field of switch grass with general weed debris at base. This field is SE of the circular turn around just S of entrance to the park. All traps in runways or feeding corridors. Complete overhead protection. Take approx 100' beyond. One small mammal observed. Considerable cut grasses and some green feces. Completed line at 4:30 P.M. High wind, high cirrus overcast and temp approx 75° F. Wind approx 25 M.P.H. Birds in area are bluewing teal, loon, cormorant, Forster tern, ring-billed gull, dickcissel, cowbirds, meadowlark, red-wing blackbird. In forested area: bluejay, redhead, Baltimore oriole, chickadee, starling, grackle, Turkey vulture, mourning doves. Other birds are: Franklin gull, barn swallow, bobwhite, cardinal, blue bird, titmouse

red-bellied woodpecker, orchard oriole, shrike, redstart, robin, downy.

From trapline caught the following (8:00 P.M. to 8:30 P.M.)

- 1 *Synaptomys*
- 2 *Synaptomys* *seymourensis*
- 17 *Microtus ochrogaster*

May 6, 1972

Other birds. Goldfinch, Crested flycatcher, Cottontail. Brown thrasher, eastern kingbird. Inspected trap line set last night. This field is being allowed to return to native plants and grasses and as yet has not been cut which is routine for other areas of Paradise

Point. There did not seem to be a preference for small mammal use of field, however, edge effect had some control in increased numbers. Low cut grasses associated with this area did not support mammals. If these areas could be maintained in this condition of succession, not too low or high, the small mammals could build up a tremendous population for predatory species such as weasels, marsh hawks etc. Cutting grass in such a way as to leave adequate protection or islands of vegetation may have some effect as ^{edge} grazing animal in keeping the condition prairie.

mammals captured from traps (100) set last night. Interval space 20' and linear. (Includes those caught 4 hrs after traps were set) Locality is: 800' W, 1900' S of NE corner sec. 19, T9S, R18E, Paradise Point, Jefferson Co., Kansas.

	720506-1	<i>Synaptomys</i>	138-21-18-11-54	gms ♂	testis 6 mm.
SKU	720506-2	"	147-20-19-12-61	gms ♂	Testis 7 mm
	720506-3	<i>Microtus ochrogaster</i>	156-33-21-11-54	gms ♂	testis 15 mm
	720506-4	"	145-34-20-12-43	gms ♂	testis 13 mm
	720506-5	"	155-35-18.5-12-57	gms ♀	3x0 emb 14 mm
	720506-6	"	158-32-20-12-54	gms ♀	2x0 emb 15 mm
	720506-7	"	159-36-19-12-52	gms ♂	testis 15 mm
	720506-8	"	140-32-18-11-37	gms ♂	testis 11 mm
	720506-9	"	136-31-19-11-33	gms ♂	testis 9 mm
	720506-10	"	168-40-21-12-55	gms ♀	4x1 emb 8 mm
	720506-11	"	159-40-19-12-53	gms ♀	4x2 plac. scars
	720506-12	"	163-41-20-13-49	gms ♂	testis 14 mm
	720506-13	"	162-38-20-12-52	gms ♀	ut normal.
	720506-14	"	156-35-19-12-54	gms ♀	2x3 emb 15 mm
	720506-15	"	139-34-20-11-29	gms ♀	ut normal.
	720506-16	"	130-29-19-11-28	gms ♀	ut. normal
	720506-17	"	128-32-20-11-28	gms ♂	testis 8 mm
	720506-18	"	94-23-17-9-10	gms ♀	ut normal
	720506-19	"	103-23-18-9-13	gms ♂	testis 4 mm
	720506-20	"	136-31-19-11-32	gms ♂	testis 9 mm
	720506-21	<i>Sigmodon hispidus</i>	208-83-38-15-60	gms ♂	testis 12 mm
	720506-22	"	180-70-26-14-39	gms ♀	ut normal
	720506-23	<i>Microtus ochrogaster</i>	162-35-19-12-55	gms ♀	2x2 emb 5 mm
	720506-24	"	155-37-18-10-50	gms ♀	3x1 emb 14 mm
	720506-25	"	165-40-20-12-56	gms ♂	testis 15 mm
	720506-26	"	158-37-20-12-53	gms ♂	testis 15 mm
	720506-27	"	151-30-19-12-46	gms ♀	post. parturition
	720506-28	"	155-36-20-11-44	gms ♀	2x2 plac. scars.
	720506-29	"	170-37-21-12-60	gms ♂	testis 15 mm
	720506-30	"	164-36-21-12-55	gms ♂	testis 16 mm
	720506-31	"	161-36-20-11-49	gms ♀	ut. normal
	720506-32	"	152-35-20-12-50	gms ♀	1x3 emb 12 mm
	720506-33	"	152-33-19-12-50	gms ♀	4x1 emb 6 mm
	720506-34	"	160-35-19-12-49	gms ♀	1x4 emb 7 mm
	720506-35	"	151-36-20-12-44	gms ♂	testis 15 mm
	720506-36	"	158-38-19-12-49	gms ♂	testis 13 mm
	720506-37	"	160-34-19-12-45	gms ♀	1x1 emb 6 mm
	720506-38	"	150-37-19-11-46	gms ♀	2x0 emb 15 mm

720506-39	<i>Microtus ochrogaster</i>	147-33-19-12-42 gms ♀ ut normal
720506-40	" "	140-32-19-11-32 gms ♀ 2x0 emb 7mm
720506-41	" "	123-29-19-11-26 gms ♀ ut normal
720506-42	" "	138-30-20-11-30 gms ♂ testis 8mm
720506-43	" "	128-28-19-12-25 gms ♂ testis 8mm
720506-44	" "	158-31-20-12-48 gms ♀ 3x2 plac. scars.
<u>720506-45</u>	" "	170-42-20-12-52 gms ♂ testis 16mm
720506-46	" "	158-40-20-11-49 gms ♀ 3x3 emb 4mm
720506-47	" "	145-32-18-11-41 gms ♀ 0x1 emb 17mm
720506-48	" "	157-34-20-12-56 gms ♂ testis 13mm
720506-49	" "	150-30-19-11-48 gms ♀ 1x2 emb 3mm
720506-50	" "	158-36-21-12-48 gms ♂ testis 15mm
SKU 720506-51	" "	162-36-21-12-50 gms ♂ testis 14mm
720506-52	" "	156-34-20-12-46 gms ♀ 4x 2 emb 9mm
720506-53	" "	148-35-19-11-39 gms ♀ 2x1 emb 9mm
720506-54	" "	152-33-19-12-44 gms ♂ testis 14mm
720506-55	" "	140-30-18-11-43 gms ♀ 2x2 emb 8mm
720506-56	" "	136-32-20-11-36 gms ♂ testis 9mm
720506-57	" "	140-32-20-11-32 gms ♂ testis 8mm
720506-58	" "	130-30-19-11-29 gms ♀ ut. normal
720506-59	" "	129-30-19-11-28 gms ♂ testis 9mm
720506-60	" "	115-30-18.5-10-19 gms ♂ testis 6mm
720506-61	" "	108-24-17.5-10-17 gms ♂ testis 5mm
720506-62	" "	117-25-18-11-20 gms ♀ ut. normal
720506-63	" "	123-31-19-11-22 gms ♂ testis 8mm
720506-64	" "	106-24-18-11-17 gms ♀ ut. normal
720506-65	" "	157-34-20-12-56 gms ♂ testis 13mm
720506-66	" "	149-31-19-11-47 gms ♀ 1x2 emb 4mm
720506-67	" "	147-32-19-12-43 gms ♀ ut normal.
720506-68	" "	158-32-20-12-54 gms ♀ 2x1 emb 15mm
720506-69	" "	155-38-19-10-51 gms ♀ 3x1 emb 14mm
720506-70	" "	160-35-19-12-46 gms ♀ 2x1 emb 6mm
720506-71	" "	151-36-20-12-50 gms ♀ 1x3 emb 11mm
720506-72	" "	127-31-20-11-29 gms ♂ testis 9mm
720506-73	" "	161-36-19-12-56 gms ♀ 2x1 emb 6mm
720506-74	<i>Sigmodon hispidus</i>	156-56-24-13-28 gms ♂ testis 7mm
720506-75	" "	188-78-26-14-40 gms ♀ ut normal
720506-76	<i>Peromyscus leucopus</i>	173-73-23-15-20 gms ♀ 1x2 plac scars.
720506-77	" "	171-71-22-15-24 gms ♂ testis 9mm
720506-78	<i>Reithrodontomys megalotis</i>	142-63-17-12-14 gms ♀ ut normal
720506-79	" "	151-66-16-12-13 gms ♀ ut normal
720506-80	" "	145-68-17-12-11 gms ♀ ut normal

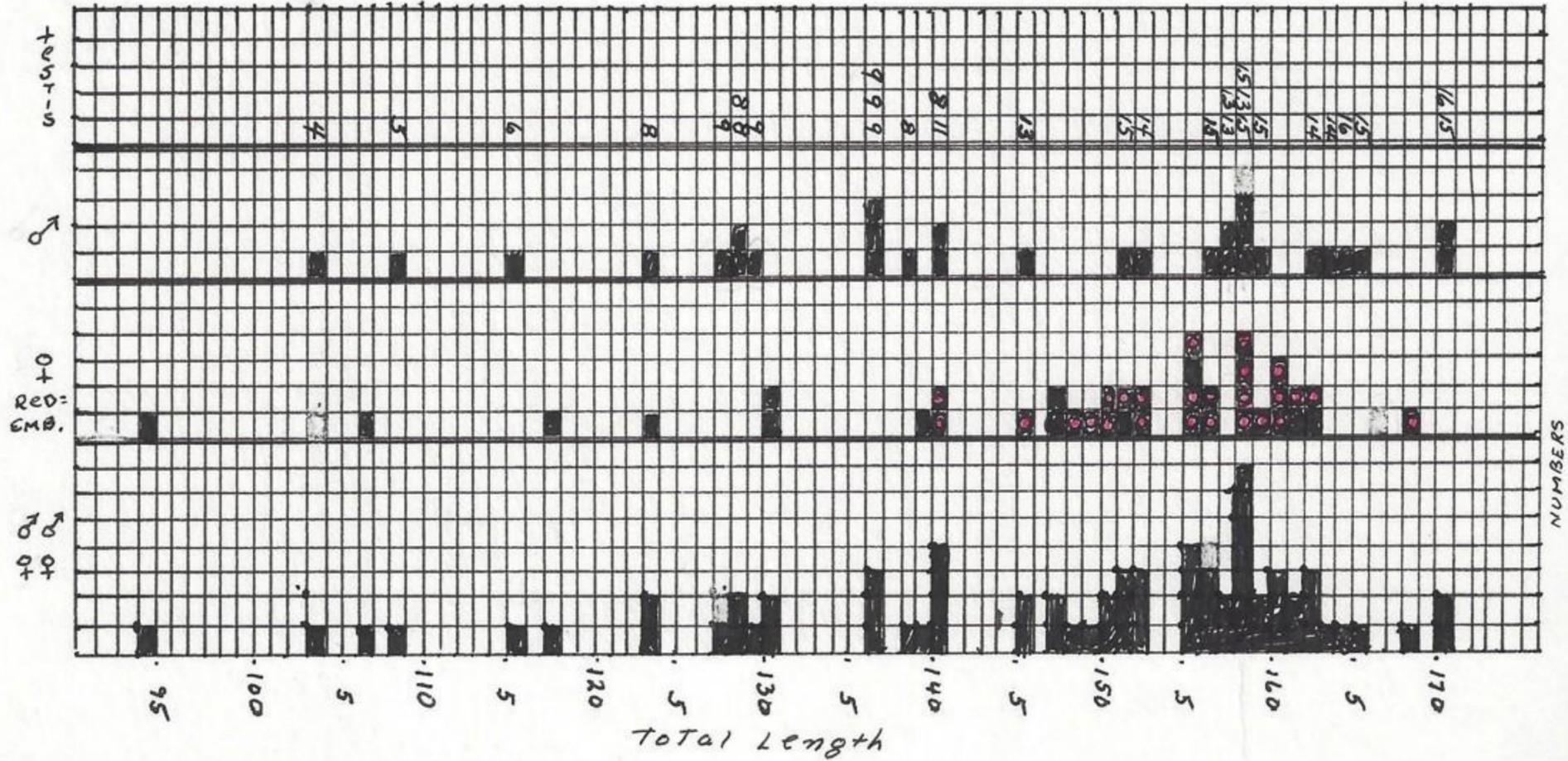
720506 - 8¹/₂ *Reithrodontomys megalotis*

141-62-17-12-15 gms ♀ ut normal

Summary:

		♂	♀
<i>Synaptomys</i>	2	2	0
<i>micratus ochrogaster</i>	69	30	39
<i>Reithrodontomys megalotis</i>	4	0	4
<i>Peromyscus leucopus</i>	2	1	1
<i>Signadon hispidus</i>	4	2	2
TOTAL	81		

MICROTUS OCHROGASTER



Species diversity is:

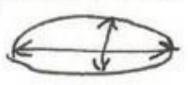
Redmond Reservoir, Kansas

May 19, 1972

Annette C Bee reported approx. 45 pelicans on reservoir

Highway 59 and Wakarusa River, Douglas Co., Kansas

May 20, 1972

Collected a *Proptera purpurata* 720520-1 from river below bridge. It measured 122 x 900 . Height included keel.Lakeview, Douglas Co., KansasMay 28, 1972 ^{road}Measured Natrix (40 inches long) on ^{road} dike across Lakeview Lake. It has been run over by car.End Tennessee St to end Iowa St via Santa Fe tracks, Lawrence, Douglas Co., Kansas.

June 9, 1972

Tracks at n end Tennessee St. 9:15 A.M. Day windy, temp 60°. Yesterday temp 98°F.

grackle 11-2-1, Baltimore Oriole 1, starling 1-1, house wren 1, mourning dove, cardinal 1.

9:23 first small creek - catbird 2, B. Oriole 1, ^{nose} red breasted grosbeak 1, house wren 1, mourning dove 1-1-1, starling 1-1, red-bellied woodpecker 1, robin 1-1-1-1-1-2-1-1-2-1, yellow shafted flicker 1, grackle 1-2-1-2-6-2-2-1-4, Bell's vireo 1-1-1, titmouse 2, mourning doves 2, starling 12 (young), 6-2-6-4, red-headed woodpecker 1, cowbird 2, black-capped chickadee 2, Baltimore Oriole 1.

9:45 water plant crossover. Cowbird 1-2, Eng. sparrow 2, crested flycatcher 2, grackle 1-1-1-2-3-6-2-4, 18, house wren 1, indigo bunting 1-1, Baltimore Oriole 1-1-1-1, starling 2-2-34-2 (4 were light brown colored), robin 1-1, brown thrasher 1, black-capped chickadee 1-1-1-1, titmouse 2, yellow billed cuckoo 1, crested flycatcher 1, blue jay 1, downy woodpecker 1, warbling vireo 1, cardinal 1, mourning dove 1, black billed cuckoo,

10:15 railroad bridge at n end of cottonwood grove, open field beyond - barn swallow 1-1-1-1-1-1-1, green heron 1, indigo bunting 1-1, grackle 1, starling 4, mourning dove 1-1-1-1, dickcissel 1-1-1, meadowlark 1-1, redwing blackbird 1, cowbird 1.

10:40 under Turnpike - mockingbird, dickcissel 1, starling 2.

10:45 private road crossing tracks - robin 1-1, dickcissel 1-1-1-1, bobwhite 1, grackle 1-2, redwing 1-1-1, barn swallow 1-1-1-1, cowbird 2, Approx 1/10 mi S of R.R switch are 3 good fossil rocks.

11:00 R.R. switch to W. - yellowthroat 1, dickcissel 1-1-1, starling 1-2-2, redwing 3-1-1, Baltimore oriole 1, grackle 2-3-1, meadowlark 1-1, bobwhite 1, robin 1, mourning dove 3, cowbird 1,

11:20 bend in tracks beyond Calgary Chemical switch - Cowbird, dickcissel 1-1-1-1, Baltimore oriole 1, downy woodpecker 1, robin 1-1, y.b. Cuckoo 1, Chimney swift 1, meadowlark 1, eastern phoebe 1, mourning dove 1, killdeer 1, Arrived road (N end of Iowa) at 11:40 A.M. Continued across graded field at Commercial Complex and picked up a fat scrapper no 720609-1

Summary.

grackle 1-1-1-2-1-1-2-1-2-6-2-2-1-4-1-1-1-2-3-6-2-4-18-1-1-2-2-3-1 = (75)

Baltimore oriole 1-1-1-1-1-1-1-1 = (9)

starling 1-1-1-1-12-6-2-6-4-2-2-34-2-6-2-1-2-2 = (87)

house wren 1-1-1-1 = (4)

mourning dove 1-1-1-2-1-1-1-1-1-3-1 = (14)

cardinal 1-1 = (2)

catbird 2 = (2)

~~rose~~ breasted grosbeak 1 = (1)

red-headed woodpecker 1-1 = (2)

robin 1-1-1-1-1-2-1-1-2-1-1-1-1-1-1-1 = (19)

yellow-shafted flicker 1 = (1)

Bells vireo 1-1-1 = (3)

titmouse 1-1-2 = (4)

black capped chickadee 2-1-1-1-1 = (5)

cowbird 1-2-2-1-2-1-1 = (10)

Eng sparrow 2 = (2)

great crested flycatcher 2-1 = (3)

indigo bunting 1-1-1-1 = (4)

brown thrasher 1 = (1)

yellow billed cuckoo 1-1 = (2)

blue jay 1 = (1)

downy woodpecker 1-1 = (2)

warbling vireo 1 = (1)

black billed cuckoo 1 = (1)

barn swallow 1-1-1-1-1-1-1-1-1-1 = (11)

green heron 1 = (1)

dickcissel 1-1-1-1-1-1-1-1-1-1-1-1-1 = (15)

meadowlark 1-1-1-1-1 = (5)

redwing blackbird 1-1-1-1-3-1-1 = (9)

mockingbird 1 = (1)

bobwhite 1-1 = (2)

yellowthroat 1 = (1)

chimney swift 1 = (1)

eastern phoebe 1 = (1)

killdeer 1 = (1)

35 species

303 individuals

Peterson or
Hallmark Pond, N Peterson Rd, Douglas Co., Kansas

June 9, 1972

at sundown (10 minutes before) a woodcock arrived from E and alighted on pond. It left at 10 minutes after sundown and flew east. Caught 12 Lepomis macrochirus (bluegill sunfish) 2 Lepomis cyaneellus and 2 Lepomis

Lawrence, Douglas Co., Kansas

June 9, 1972

Information from Dr Frank W. Wilson of Geology Dept that might be useful for Prairie National Park:

Chase Co could be recommended for mapping (U.S. GS Topo) if National Park so requests. It takes approx. 4 years to get final map. Walter Kollmorgen (434 Lindley, KU) is interested in the Flint Hills and may have maps of the area being considered by National Parks.

U.S. G.S. topo maps of 1889 of some of the Flint Hills still stand as maps for the area but they are not accurate.

Lawrence, Kansas Power & Light Co to Callery via Santa Fe tracks,
Douglas Co. Kansas.

June 11, 1972

Start at Lakeview but recorder failure to first drainage east of Power Plant. Birds in area of drainage are: yellow-billed Cuckoo, black-billed cuckoo, 20 starling, yellow warbler, great crested flycatcher, robin, bobwhite, mourning dove, red-headed woodpecker. Birds prior to this drainage are in recollection are: dickcissel, redwing, m. dove, starling, black-billed cuckoo, yellow-billed cuckoo, Baltimore Oriole, chickadee, red-headed woodpecker, sparrow hawk, meadowlark, Eng sparrow, chimney swift, flicker (y.s), bobwhite, Indigo bunting, cardinal

From this drainage will keep complete record to Gallery switch off. cardinal, yellow-billed cuckoo, bobwhite, great crested flycatcher, redhead woodpecker, Baltimore Oriole, bobwhite, blue jay, chickadee, Bell's vireo, bluebird, 2 Baltimore Orioles, Catbird, robin, fox squirrel, mourning dove, robin, Indigo bunting, cardinal, bluejay, redwing, 2 Baltimore Orioles, 2 cardinals, cowbird, 11:36 crossing road that leads to field across tracks, 3 Eng sparrow, 2 redwings, starling 2 redwings, B. Oriole, B. Oriole, 2 redwings, 2 dickcissels, dickcissel, redwing, dickcissel, redwing, 2 redwings, robin, dickcissel, 8 starling, 2 redwings, meadowlark, 4 starling, dickcissel, mourning dove, starling, dickcissel, redwing, 13 starling

11:50 Callery switch, now side branch, redwing, 5 redwings.
 dickcissel, bobwhite, redwing, grackle, shrike, grackle,
 12:00 switch to Callery Plant (now abandoned) but continuing
 main sidebranch, B. oriole, 8 starling, cardinal, 5 starling,
 mockingbird (white in tail does not show until at alights, the
 white of wing is pure white, mourning dove, grackle, bobwhite,
 brown thrasher, 4 grackles. 12:04 beginning of wooded area
 to left. 2 mourning doves, yellow-billed cuckoo, robin, 2
 chickadees, robin, cardinal, dickcissel, robin, B. oriole,
 meadowlark, dickcissel 12:15 end of census at main road (N end
 of Iowa).

Lawrence, Douglas Co., Kansas

June 15, 1972

Made census of ^{birds} birds from Museum of Natural History at K.U. to
 402 Yorkshire Dr via walking (approx 3 1/2 miles).

Chimney swift, bluejay, Eng sparrow, nighthawk, cardinal,
 yellow-shafted flicker, starling, goldfinch, robin, B. oriole,
 titmouse, grackle, mourning dove, house wren, Bell's vireo,
 redheaded woodpecker, meadowlark. Practically all the different
 kinds were on campus at K.U. City area did not contribute beyond
 initial census. It would be interesting to make census across
 the city in several directions and correlate birds with principal
 highways, residential areas, business areas, peripheral versus
 central area. Noticed for that traffic noises drowned out the
 calls of birds.

Lawrence, Railroad tracks (Santa Fe) from ^N end, Tennessee St to
 end Iowa via Callery turnoff, Douglas Co., Kansas

June 18, 1972

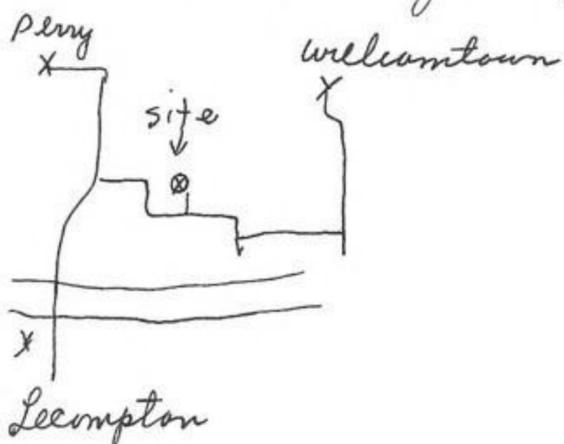
Made complete census of birds and mammals ~~from~~ from tracks, morning
 7:15 A.M. 2 black chickadees, 4 grackles, 2 grackles, 15 grackles,
 B. oriole, 8 grackles, yellowthroat, catbird, cardinal, catbird,
 house wren, brown thrasher, cardinal, brown thrasher, 7:20 first
 drainage ditch just beyond curve, B. oriole, house wren, cardinal, red-
 eyed vireo, marmot ^{train} ~~road~~ kill, yellow-billed cuckoo, 4 starling, m. dove,
 B. oriole, yellow-shafted flicker, 2 grackles, m. dove, 2 robins, robin,
 brown thrasher, robin, robin, catbird, 4 robins, 3 grackles, bluejay,
 2 cardinals, house wren, 2 titmice, 4 robins, Bell's vireo, redheaded
 woodpecker, cardinal, 4 Eng sparrows, robin, catbird. 7:30
 waterwades crossover. Sky 90% clear. No wind among trees

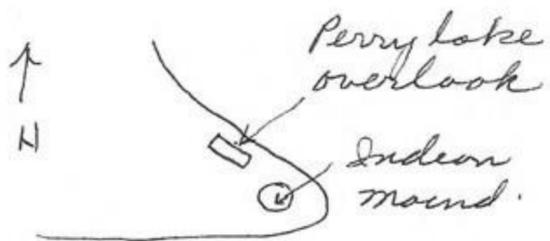
but some in open fields. redheaded woodpecker, B. oriole, m. dove, house wren, robin, 6 robins, red-bellied woodpecker, 2 mockingbirds, 7 grackles, yellowthroat, chickadee (2), 8 grackles, B. oriole, bluejay, B. oriole, robin, Indigo bunting, chickadee, robin, B. oriole (3), cardinal, 2 robins, redhead, B. oriole, robin, chickadee, bluejay, B. orioles (2), m. dove, yellow-billed cuckoo, 7:47 bridge at end of forested area. red-bellied woodpecker, phoebe, Left this bridge at 8:05, 1 grasshopper sparrow?, yellowthroat, redwing, bobwhite, chickadee, m. dove, barn swallow, 2 grackles, Starling not as numerous as previous trip, mourning dove, yellowthroat, barn swallow, downy woodpecker feeding on mulberries, barn swallow, 4 grackles 8:25 turnpike, redwing, robin, grackle, m. lark, redhead, m. dove, dickcissel, m. dove. 8:30 private roadway across tracks. dickcissel, Indigo bunting, meadowlark, dickcissel, redheaded woodpecker, dickcissel, dickcissel, B. oriole, robin, 2 dickcissels, redwing, yellowthroat, 4 redwings, 8:41 railroad switch from main line, now toward Kollery. 2 dickcissels, robin, 2 bobwhites, B. oriole, 2 redwings, robin, redwing, bobwhite, 3 meadowlarks, green heron, dickcissel, grackle, grackle, 19: grackle, mockingbird, meadowlark, 2 starling, meadowlark, redwing, bobwhite, meadowlark (2), 9:00 middle of bend & beginning of deciduous trees on left, redheaded woodpecker, robin, 2 robins, cardinal, carolina wren, robin, 2 grackles, indigo bunting, robin, B. oriole, mourning dove, cardinal, eastern phoebe, meadowlark, robin, 9:10 end of Iowa street and end of complete census. Across flats of commercial plant area observed 3 killdeer which were the only ~~ones~~ birds observed. Home at 11:00 P.M.

Perry Lake, Jefferson Co., Kansas

June 25, 1972

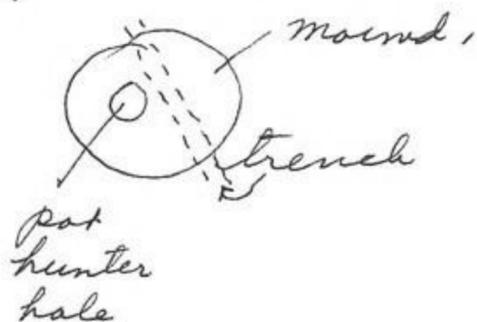
Enroute to Perry Lake, checked Hopewellian Indian site NW of abandoned home and barn. This area is now in corn and impractical to visit. In fall after plowing will check the area. Delbert said he picked up potsherds 6" in diameter. Continued to Perry Lake and at the Look over station on top of hill beyond the west end of the dam visited an old Indian site.





This mound is just beyond Overlook and to the SE some 40'. It overlooks Delaware valley & Kaw Valley at a most advantageous position.

a trench has been dug across the mound and a pot hunters hole near center. At approx 1/10 mi W of this site at edge of forest, ^{2:00 P.M.} on S slope flushed a chuck-wills-widow and



1 of her two young. The first bird that left the ground was the adult that flew 20' and alighted 20' away. It rolled and demonstrated injured behaviour on the ground and then flew into tree some 100' beyond. This adult bird remained in area the entire time and came as close as 25' and as far as 70', chucking at all times. At the roll of the young which I held in my hand the adult would come nearest and usually present injured behaviour. When standing upright the wings would point slightly forward and the tail appeared unusually long. ^{one of} The young flew 25' at the time the adult left, and alighted on ground. It flew 3 times for this length of flight (25' each time) but remained still on the fourth approach. It opened wide its mouth when touched. The second young remained crouched at all times until picked up. It could fly but not as good as the other young. The young when pursued hop rhythmically with a ~~rhythm~~ ~~rhythm~~ rhythm regardless of obstacles or barriers. The wide mouth is used as a defensive behaviour. The young measured (total length) 147 mm



In lake along dam caught approx 50 fish with fly and they included bass, bluegill, green sunfish (all small).

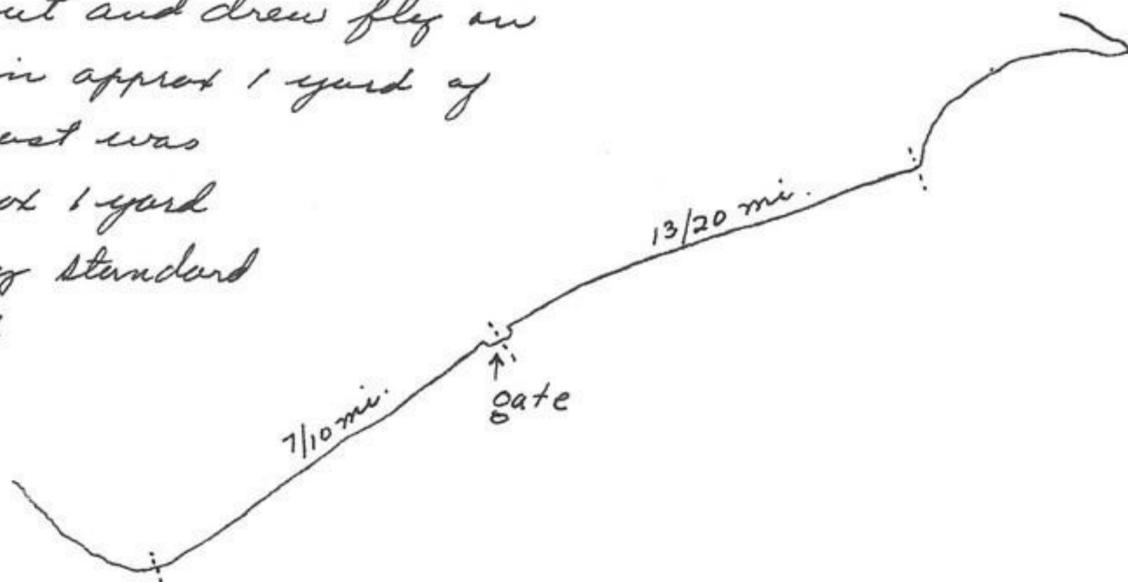
Perry Reservoir, Jefferson Co., Kansas

June 29, 1972

Fished curve of W end of dam from 200' beyond curved (east) to point where shore contacts north hillside, starting at 5:30 P.M. at hillside shore. Fish record consecutively and by length. greenfish 130, greenfish 85, bluegill 115. 6:15 P.M. loop at bend. bluegill 120, 6:45 P.M. bluegill 108, bluegill 112, end of line at 7:00 P.M. Breeze audible, waves slight, sky clear, sun at 7:00 1 hr from ridge.

Perry Reservoir, Jefferson Co., Kansas
 July 1, 1972

Fished dam from outlet gate to curve at
 W end. This distance is $7/10$ mi. Cast
 approx 30 feet out and drew fly on
 14 hook to within approx 1 yard of
 rocks. Each cast was
 separated by approx 1 yard
 will list fish by standard
~~less~~ length and
 consecutively as
 caught.



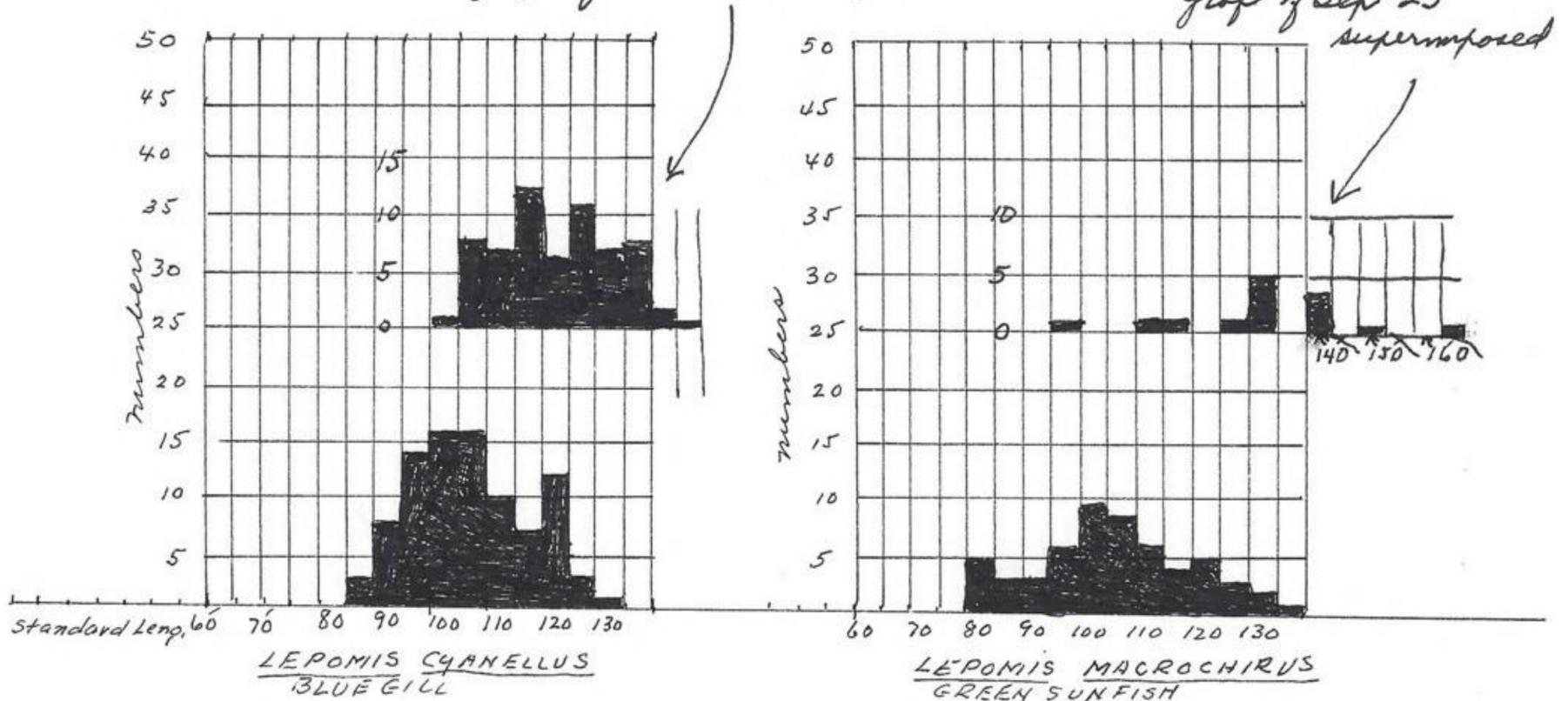
Started at gate 8:27 with water at 991 1/2 feet.

B = blue gill
 G = green sunfish

G. 90	B 109	B 93	G 87	B 127
B. 120	B 103	B 123	B 92	B 105
B. 128	B 113	B 99	B 96	B 95
B 98	B 101	B 98	B 132	B 112
B 108	(10:15)	B 104	B 103	B 110
B 120	B 85	B 86	(raft 1:00)	B 105
B 110	G 124	B 106	B 124	B 118
B 108	B 118	B 107	B 109	B 108
B 102	G 121	B 92	B 88	B 107
(first gravel) 9:15	B 103	B 84	B 112	B 82
B 102	G 103	B 98	B 95	B 102
B 123	B 124	B 107	B 103	B 92
B 99	G 111	B 112	B 120	B 96
B 86	(double black + yellow peres) 11:00	B 93	B 127	B 118
G 102		B 105	B 125	B 83
B 96	B 113	B 108	B 124	B 100
B 118	B 109	B 108	B 110	B 106
B 100	G 96	B 101	B 97	B 98
B 112	B 116	B 138	B 101	B 103
B 102	B 124	B 115	B 103	B 91
B 109	B 98	B 105	B 120	B 106
B 96	G 120	B 101	B 93	B 99
B 113	B 99	B 105	B 103	B 112
B 92	B 98	B 132	B 106	B 110
B 93	B 102	B 118	B 82	B 123

B 120	B 109	B 100	B 101	B 100
B 118	B 110	B 107	B 99	B 108
B 111	B 89	B 115	B 108	B 82
B 110	B 102	B 93	B 103	B 123
(2:30) first block + yellow pipe	B 105	B 121	B 97	end of census
	B 125	B 131	B 120	89 bluegill 57 green sunfish

day overcast and weather variable with winds in late morning to gusts. Later winds subside but always ripples. Wind from NE. Grackles along dam and only bird. They leave in middle of day
graft of Sept. 23 superimposed



In comparison of this date and the census of June 29 in part of this area would say that there is a decided difference in feeding behavior. In the late afternoon of June 29 the day was hot and clear and the fish were not feeding whereas today the sky was clouded and cool with winds to create a water surface agitation that is protective for fish exposure.

Enroute to Perry Lake this morning recorded the kinds of bird: (left 7:30, via road just N of turnpike, thence to LeCompton, Perry etc). Meadowlark, Eng sparrow, starling, barn swallow, dickcissel, grackle, killdeer, redwing, mourning dove, cowbird, cardinal, bluejay, bobwhite, (Kansas River), indigo bunting, 780 mm Kingsnake. (Perry), mockingbird, (SE Perry Lake area) From here to E end dam - barn swallow, mourning dove, meadowlark, bobwhite, robin. In walking on top of dam from west end to gate noted 10 individual grackles either on rocks on slope or near water. They are most commonly seen in morning or late afternoon and are the only birds among the dam area on N side. Wave action from passing motor boats must be an important factor in fish feeding. One bullfrog (large) among rocks ^{in water} and calling and only one observed. Water among rocks not used by fish.

Lawrence, Douglas Co., Kansas

July 4, 1972

made census of birds, ^{by walking} from museum Natural History at K.U. to 402 Yorkshire, keeping list of kinds of birds per unit of route. Today is characterized by firecrackers on all side and this noise seemed to influence numbers of kinds and especially singing of birds. Left museum 11:28 AM and traversed Fowler Grove and Patters Lake seeing - robin, Baltimore Oriole, starling, Catbird, cardinal, bluejay, chipping sparrow, eastern Kingbird, eastern pewee, swallow sp, mourning dove. At 11th Street + main at 11:55 AM. For the next block observed bluejay, Eng sp, brown thrasher, cardinal, starling, robin. 10th + main. Eng. sparrow, robin, bluejay, starling. 9th + main Eng sparrow, starling, titmouse, cardinal. 8th + main. Eng sparrow, starling, mourning dove. 7th + main. robin, cardinal, Baltimore Oriole, Eng sparrow, starling. 6th + main starling, Eng sparrow, house wren, robin. 5th + main grackle, robin, Eng sparrow. 4th + main Eng sparrow, Catbird, robin, house wren. 3rd + main. no birds, 3 and Missouri - robin, Eng sparrow, bluejay. 3rd + Arkansas - Eng sparrow, eastern Kingbird, robin, 3rd + Michigan - Catbird. 3rd + Florida - robin, Eng sparrow. 3rd and Minn (?) - robin, 3rd + Wisconsin (Newton) - Eng sparrow. now to W which would be equivalent to extension of Princeton Ave - yellow-billed Cuckoo, Eng sparrow, eastern Kingbird, Mt Hope Nursery (entrance) robin, Cuckoo, Eng sparrow, robin, Turnpike no birds. Iowa and Princeton (N) - meadowlark, martin, Eng sparrow, robin. Kingston & (To W) robin, martin, Eng sparrow, Westchester's martin, Eng sparrow, robin. Home at 12:45. numbers of occurrence of birds in each section are:

17	Eng sparrow	1	brown thrasher
15	robin	1	titmouse
7	starling	1	grackle
4	cardinal	1	meadowlark
4	bluejay		
3	Catbird		
3	eastern Kingbird		
3	purple martin		
2	mourning dove		
2	house wren		
2	Baltimore Oriole		
2	yellow-billed Cuckoo		
1	Chipping sparrow		
1	eastern pewee		
1	swallow sp		

Camp Kivawood, SW Ottawa, Kansas

July 9, 1972

In 39 miles of country road from Kivawood Camp to Lawrence noted the following kinds of birds: (route directly N using right hand roads when obligatory and then N again at first available road. This route ends just E of Lone Star Lake. Day hot and slight breeze. Annette P and Glenn S Bailey accompanied.

Mockingbird.

meadowlark

great crested flycatcher

red headed woodpecker

chipping sparrow

tickessell

indigo bunting

Eng sparrow

bluebird

mourning dove

green heron

redwing blackbird

cuckoo

Carolina wren

bluejay

bobwhite

lark sparrow

barn swallow

cardinal

robin

grackle

chimney swift

western kingbird

killedeer

crow

field sparrow

eastern kingbird

pee wee

Baltimore oriole

brown thrasher

scissortail flycatcher

logger^{head}shrike

Cowbird,

Turkey vulture (first ones near Lone Star Lake)

titmouse

weary

36 species.

Lawrence, Douglas Co., Kansas

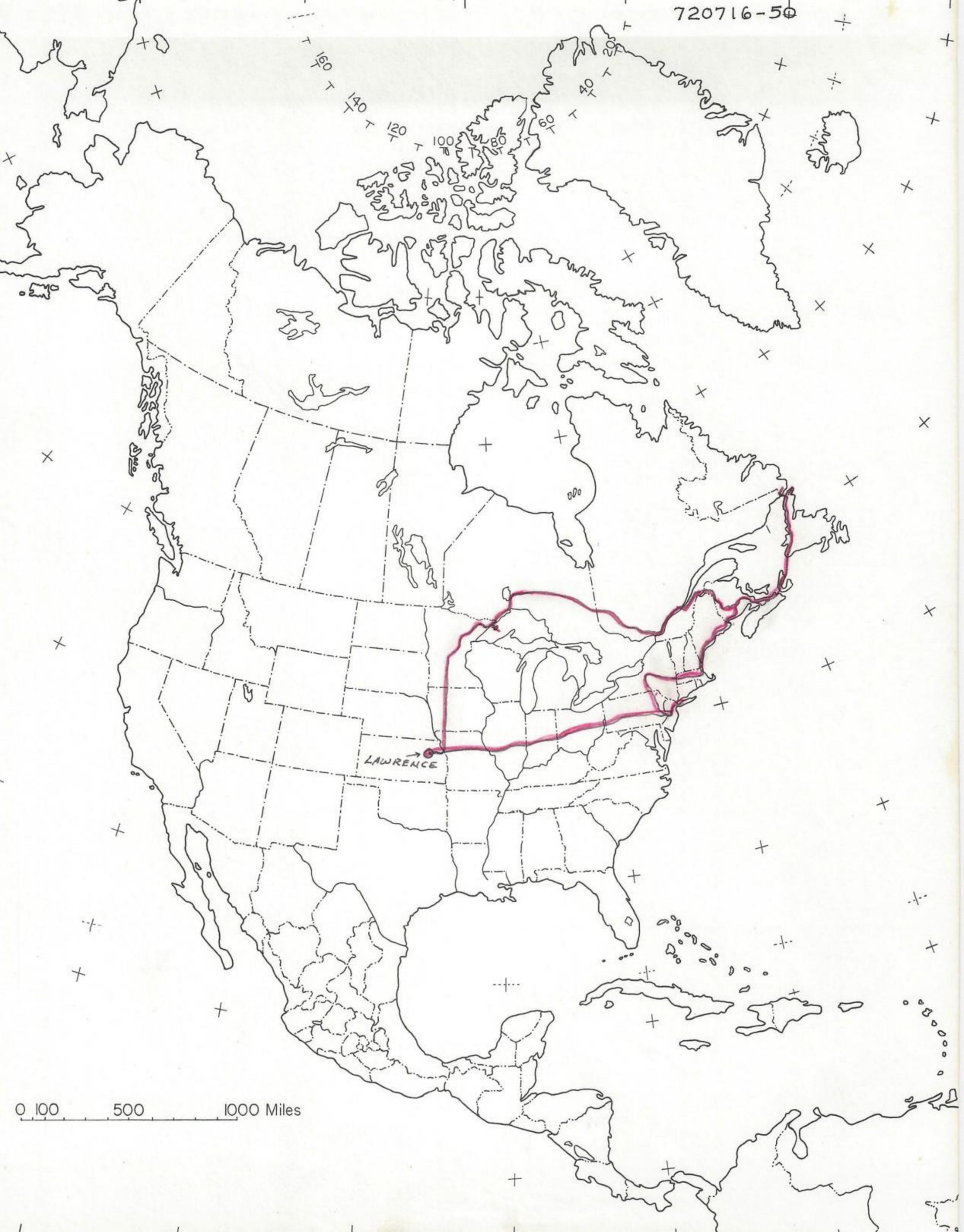
July 14, 1972

made preparations for vacation trip to NE U.S. needed to be done:
adjust brakes, new tires, change transmission oil, check trailer
tires and brakes, butane tank valve and lights. Install battery.
Grease & change oil in car, mammology book, 40 wire for shrews,
thread labels, new valve for butane tank, extra hitch or address
where it can be purchased, insurance card, cotton, rain hat
coat and pants, boots, thin leader for 16 books, 2 fly poles
and line, camera, meter, lens, film, scope, 2 pr binoculars,
dry case, skin equip, traps, bait, jacks, chains, radios, shaver,
hot water plugin, max-min thermometer, tree book, bird book,
cats, fish pond, spectacles, Simpson books, fluorescent lamp,
2 life preservers, small note books & journal paper, drivers
license and registration of car, traveling shoes, hiking shoes,
recorder, watch, field folder note book, hat net, money, teeth

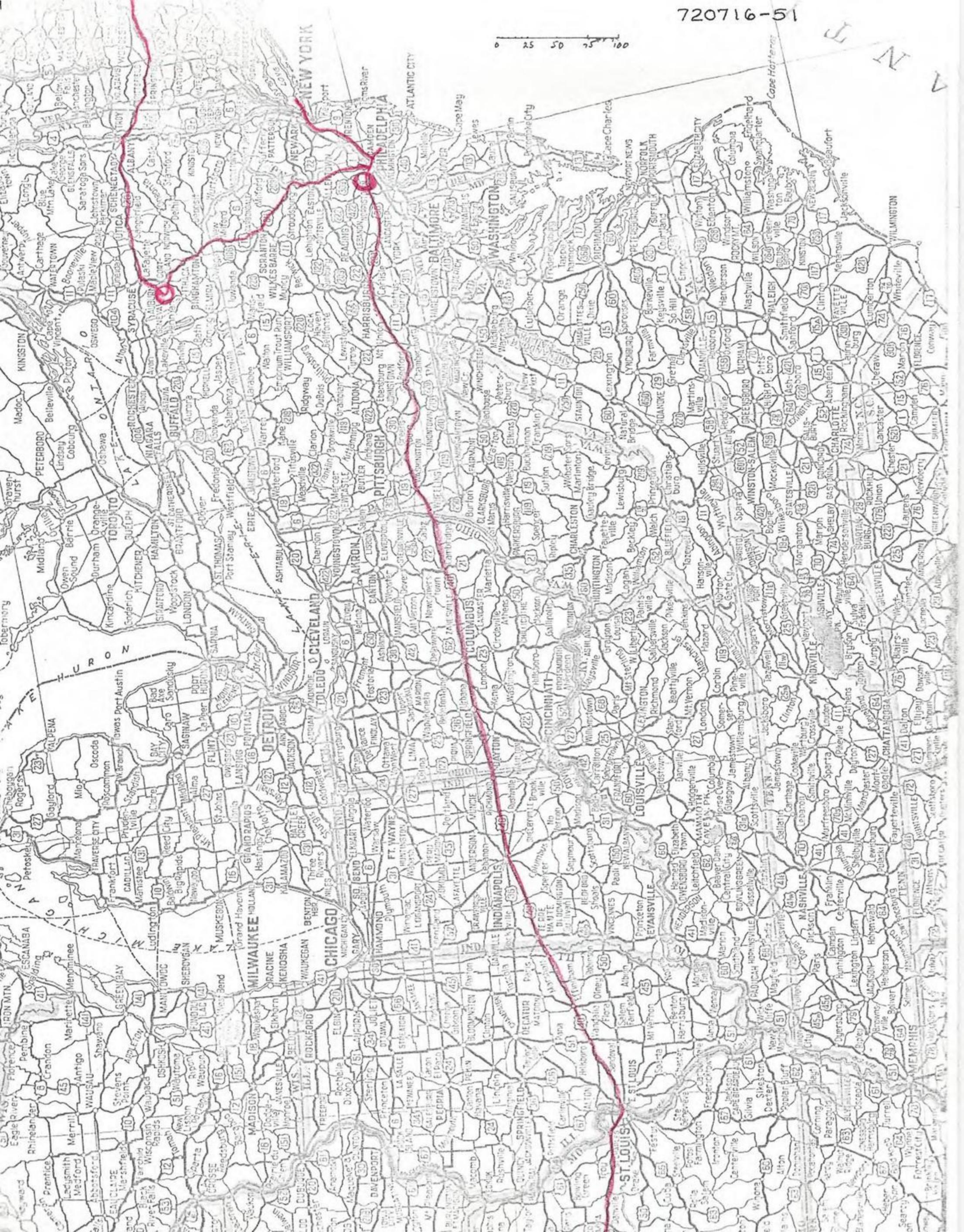
Lawrence, Douglas Co., Kansas

July 16, 1972

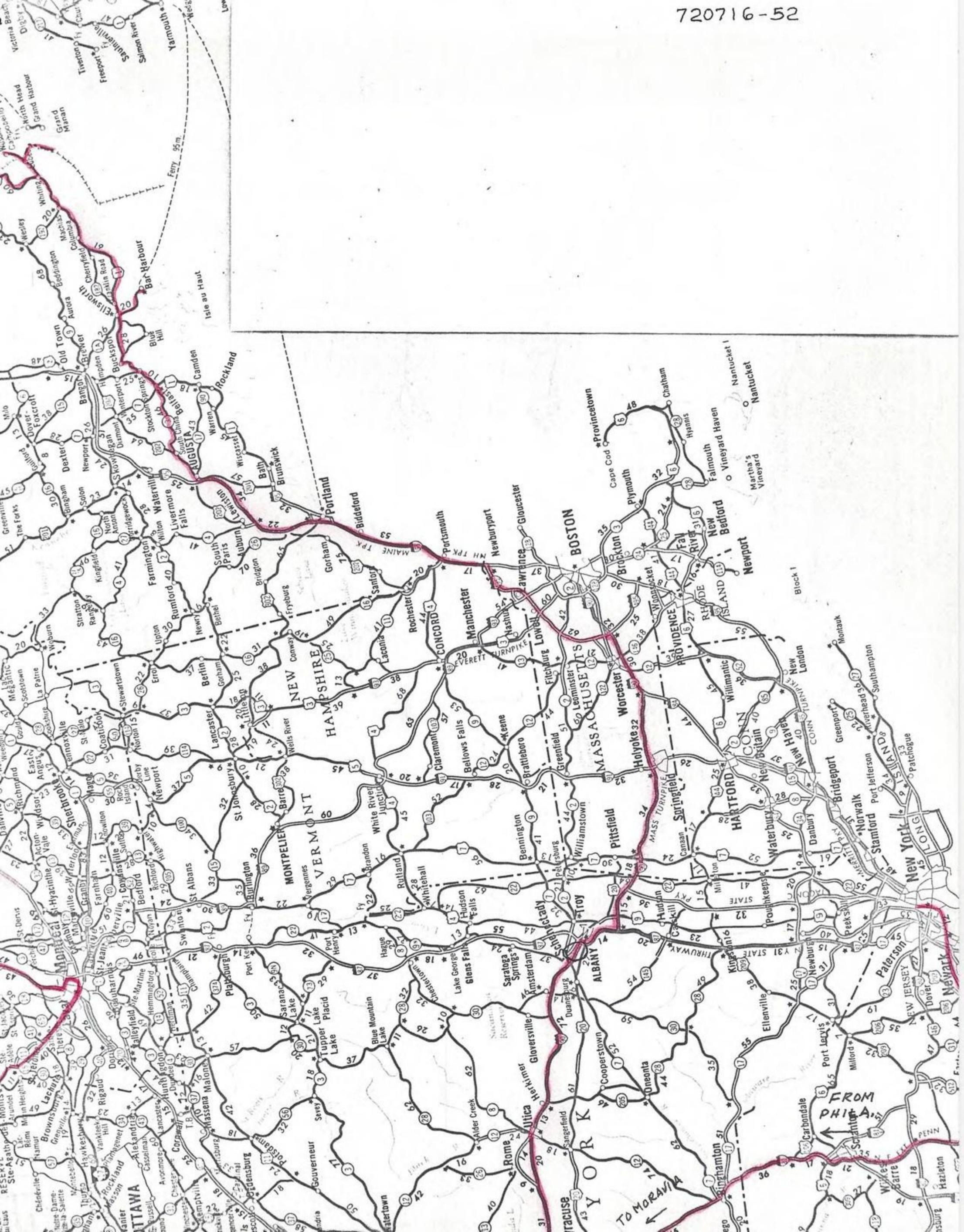
Left 1:00 P.M. at mileage 52630. Interstate 70 route.
 Birds between Lawrence & Kansas City on highway 32 are:
 dickcissel, meadowlark, mourning dove, English sparrow,
 grackle, barn swallow, redwing blackbird, bluejay,
 starling in order of first observed. Beyond Kansas City
 the birdlife was considerably fewer in number and
 in addition to above were red-headed woodpecker, ^{mockingbird, crow,} yellow-
 billed cuckoo and redbellied woodpecker. The first raptor,
 a red-tail was observed at 52758 which proved to be the
 only one observed today. At 52763; near a clear water river
 was a road kill marmot of adult size. 52768 Pilot
 Grove. 52770 first turkey vulture. At 52824 near Lake
 Calwood in extensive forested area (mainly oaks) and first
 such extensive forest, noted 10 turkey vultures in one group.
 No other turkey vultures beyond. From Lawrence to
 about middle of Missouri the forests are sparse and appear
 to be intermediate between prairie and true forests of
 eastern Missouri. The western half of Missouri is hilly while
 the eastern half flat with, as stated above, forested with
 oaks and savannas. ^{Missouri River at 52916 at 8:00 P.M.} Continued to Palshontes and arrived
 at 52952 at 9:15 P.M. covering 322 miles since 1:00 P.M. at
 Lawrence. Gas consumption approx 10 miles per gallon.



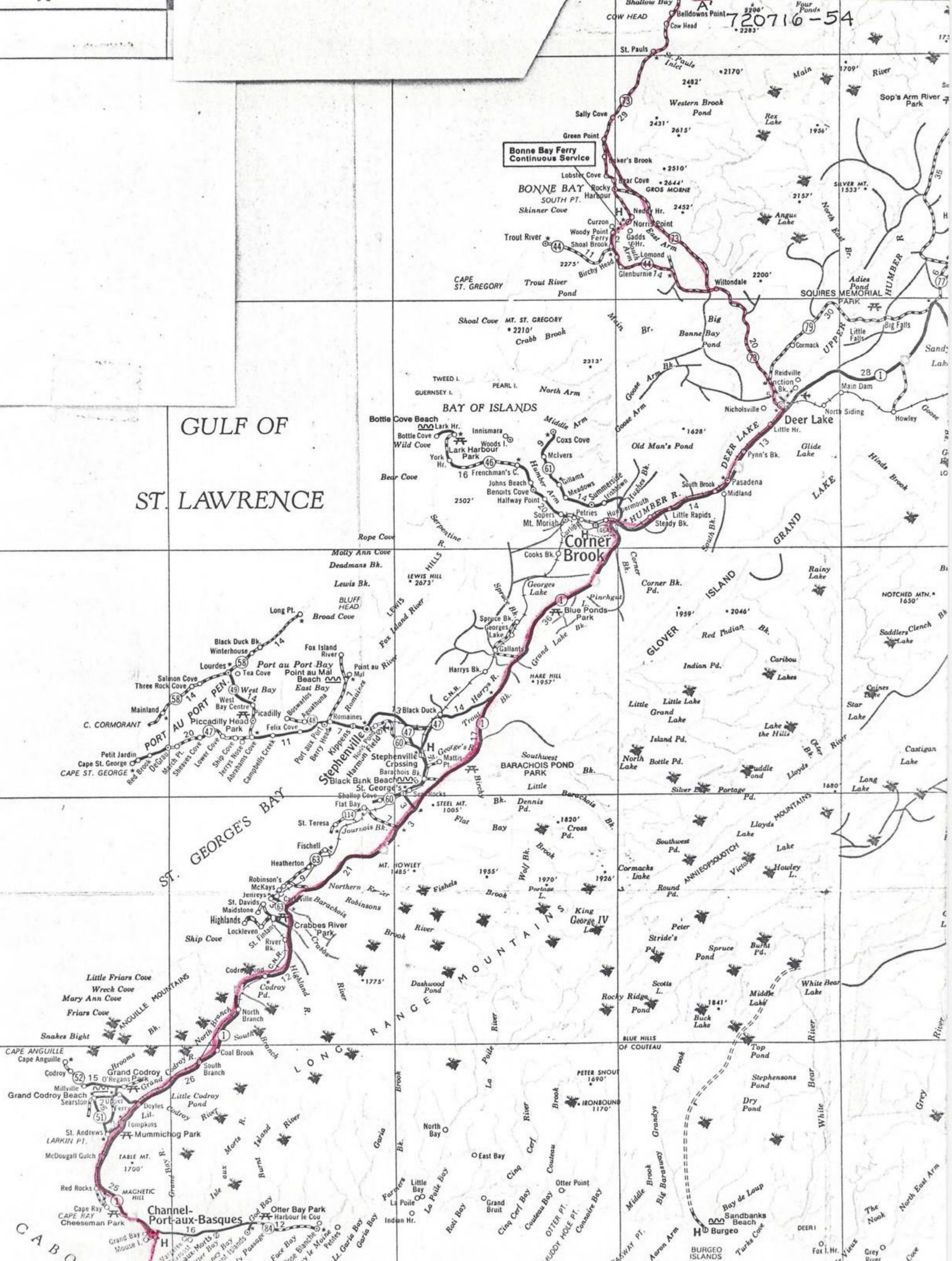
0 100 500 1000 Miles



U
N
V



GULF OF ST. LAWRENCE



WEST PT. Carrol Cove 720716-55

Believed Site of first Viking Settlement in North America

GULF OF ST. LAWRENCE

STRAIT OF BELLE ISLE

HARBOR BAY

ST. JOHN BAY

GREY ISLANDS

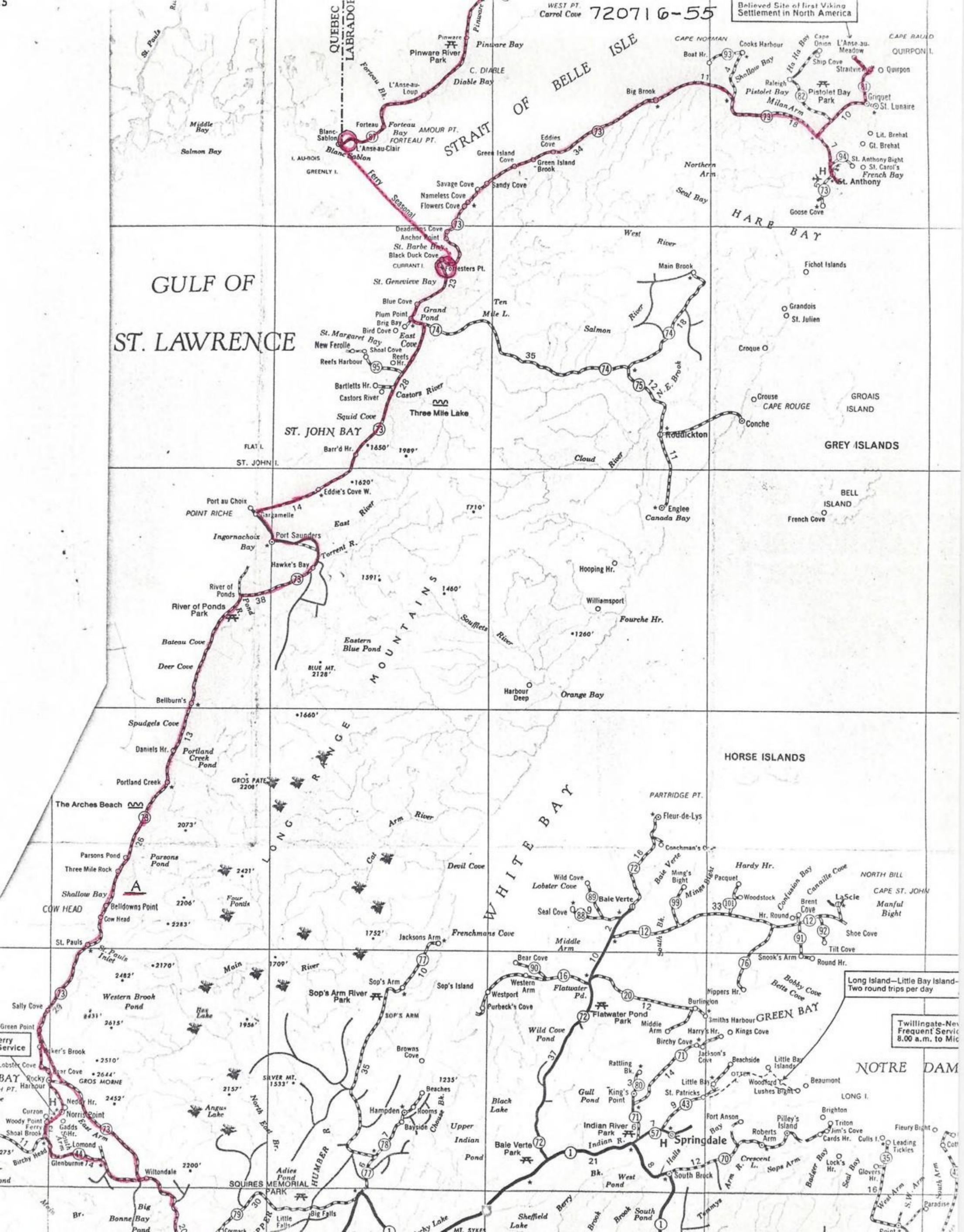
MOUNTAINS

HORSE ISLANDS

WHITE BAY

GREEN BAY

NOTRE DAM



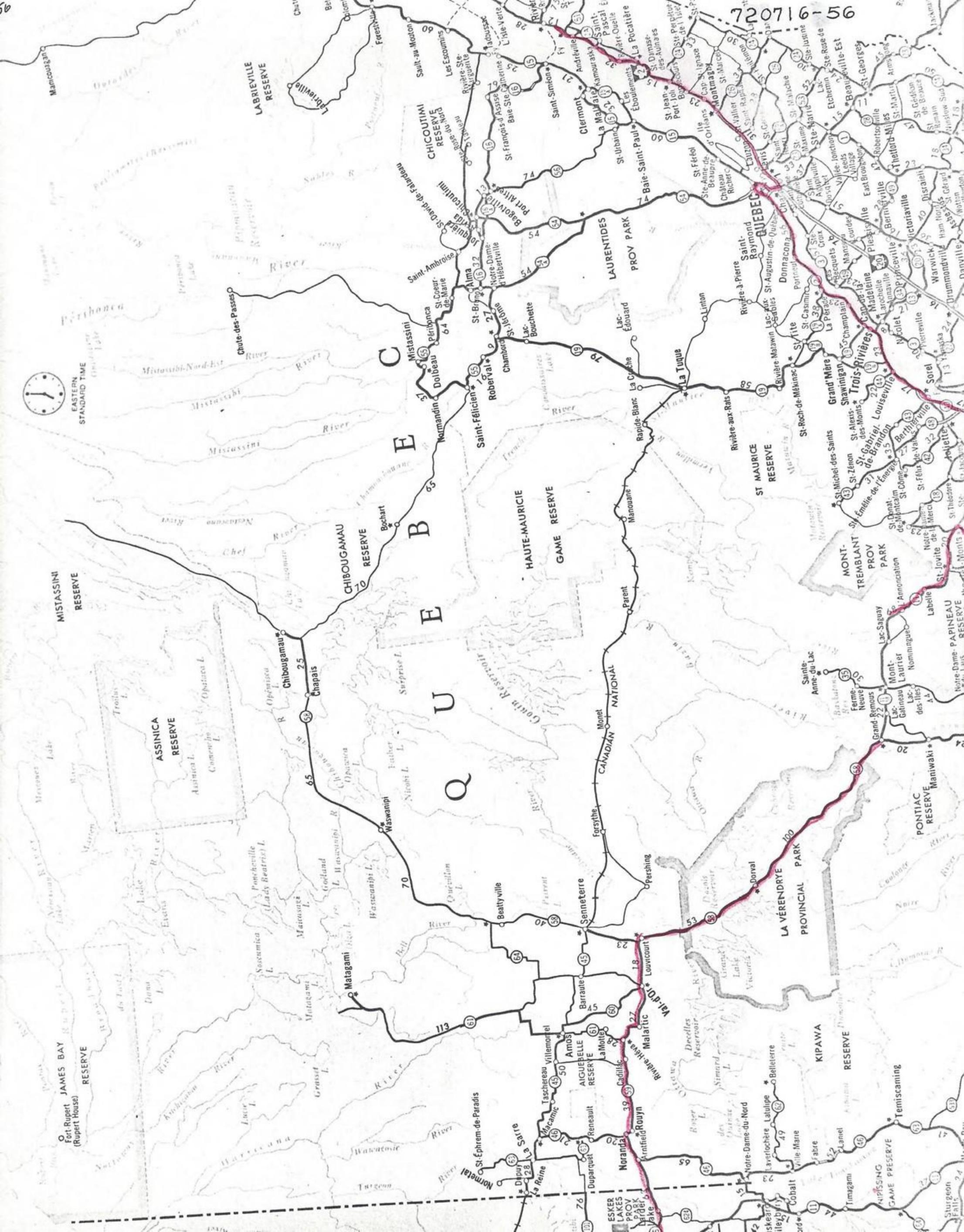
Long Island—Little Bay Island—Two round trips per day

Twillingate—New Frequent Service 8.00 a.m. to Mic

Ferry Service



EASTERN STANDARD TIME



QUEBEC

MISTASSINI RESERVE

ASSINICA RESERVE

CHIBOUGAMAU RESERVE

HAUTE-MAURICIE GAME RESERVE

ST MAURICE RESERVE

MONT-TREMBLANT PROV PARK

PONTIAC RESERVE

JAMES BAY RESERVE

St-Ephrem-de-Paradis

Amos AIGUEBELLE RESERVE

Matartic

LA VERENDRYE PROVINCIAL PARK

KIPAWA RESERVE

Temiscaming

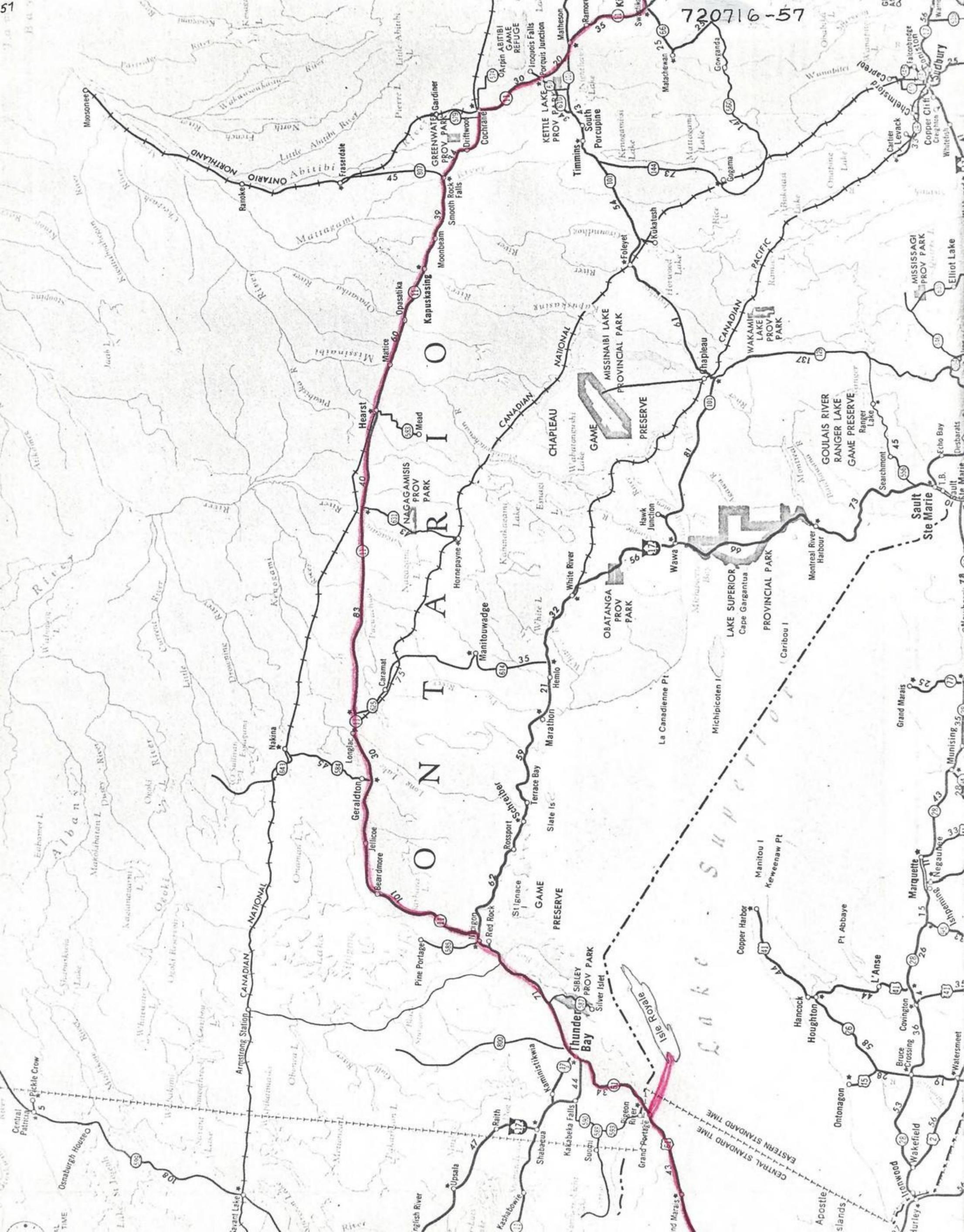
CHICOUTIMI RESERVE

LAURENTIDES PROV PARK

QUEBEC

Trois-Rivières

St-Jovite



ONTARIO

CANADIAN NATIONAL

CHAPLEAU NATIONAL PROVINCIAL PARK

OBATANGA PROV. PARK

LAKE SUPERIOR PROVINCIAL PARK

GOULAIS RIVER RANGER LAKE GAME PRESERVE

SIBLEY PROV. PARK

LAKE SUPERIOR

MANITOU I

WAKAMIA LAKE PROV. PARK

MISSISSAGI PROV. PARK

GREENWATER GARDINER PROV. PARK

KAPUSKASING

HEARST

MANITOUWADGE

WAWA

CHAPLEAU

LAKE SUPERIOR

GOULAIS RIVER

WAKAMIA LAKE

MISSISSAGI

ARMSTRONG STATION

LONGJAC

GERALDTON

MANITOUWADGE

WAWA

CHAPLEAU

LAKE SUPERIOR

GOULAIS RIVER

WAKAMIA LAKE

MISSISSAGI

ARMSTRONG STATION

LONGJAC

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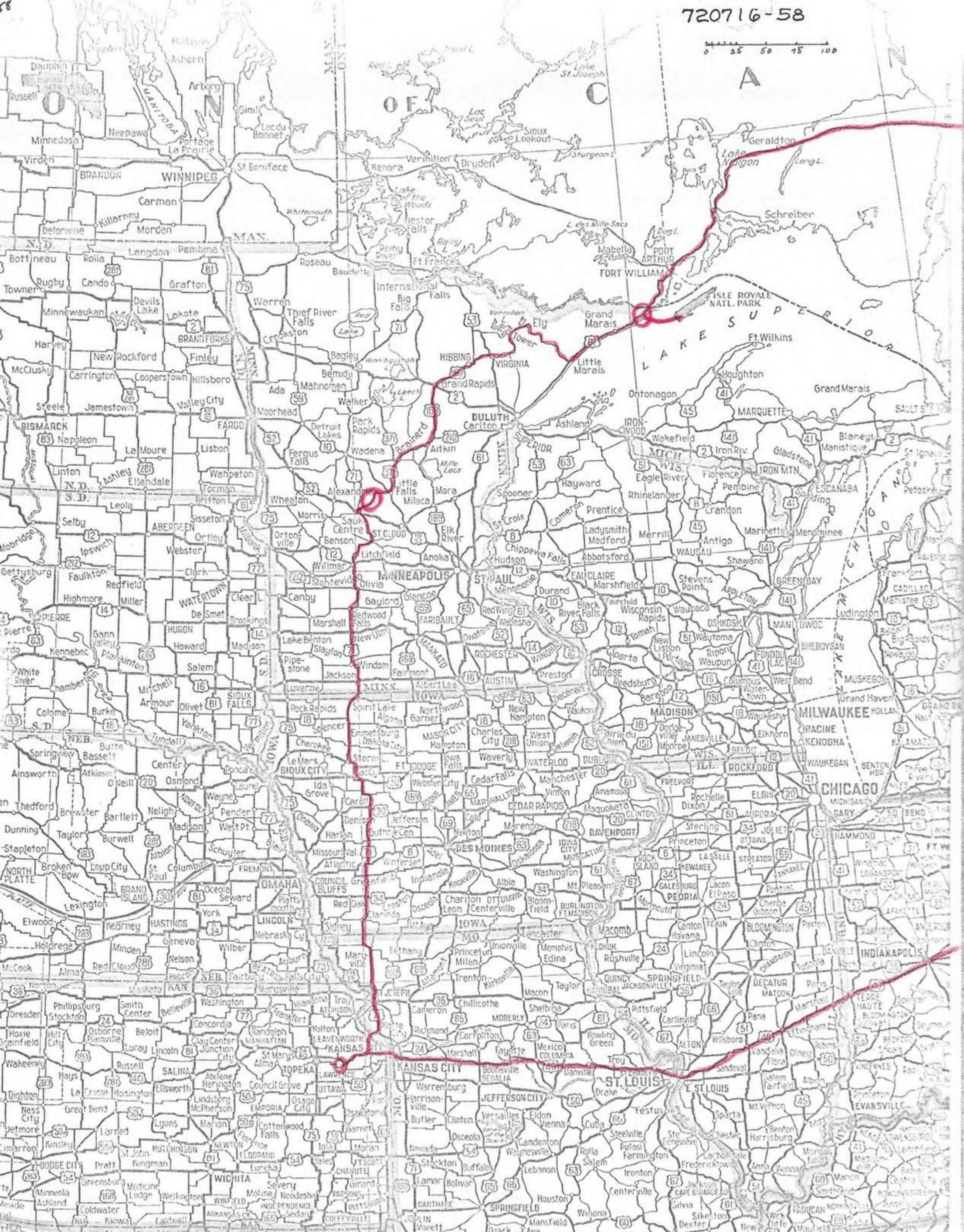
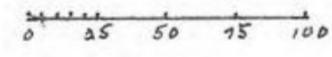
CHAPLEAU

LAKE SUPERIOR

GOULAIS RIVER

WAKAMIA LAKE

MISSISSAGI



Pocahontas, Illinois

July 17, 1972 (Monday)

Left 7:00 A.M. at mileage 52952. Fog, rain and thunder in area, visibility $3/10$ miles. 52960 raccoon road kill associated with vegetated pond near side of road. Grackles are most commonly seen in river valley and in an unusual situation are nearly 100 per cent flying south, even on the uplands. Fog increasing as we travel east. 52984 red tail hawk in tree although raining. The fog bank increased to maximum and then decreased to thin layer with indication of sun at which point it rain very hard after which the road beyond was dry. but fog maintained with visibility approx $1/2$ mile. Wind from south. This highway has created many barrow pits but there are no ducks 52998. visibility approx 2 miles. Grackles moving south and mainly as individuals or small groups. 53006 Little Wabash River 53023 fog increasing to $2/10$ miles. no gopher diggings in road cuts. 53059 leaving flat uplands and entering flat valleys and hills. 53069.8 State Line of Indiana. at 9:15 53079. Wabash River and is about same size as Kansas River. 53082 first sparrow hawk since Lawrence. Strip mining planted to conifers and are doing good. 53104 valleys & ridges like marine estuaries. 53119 2 bald eagles? 53123 first saprophite in trees. Temp at noon under cloudy skies 73° F. 53218 sparrow hawk. 53269 marmot at side of road with heavy traffic 10' away. Creeks with vegetation on sandbars and at edge of creeks, 53373 forests now broadleaf and fewer oaks than to west and are taking on a decided new character. one tree a white barked one. Salt Fork Lake at 4:25 near road turnoff to marina (State Park), 3 marmots. Approx 15 small cottontail rabbits feeding on side of road shoulder. Camped at Salt Lake Fork Lake at 53428 (at first contact of road with lake (on way to headquarters)), after having driven to camping grounds & return. Birds in area on S side of road in area of isolated lakes are: song sparrow, yellow-throated chat, crow, pewee, housewren, thrush (call up & then down), eastern kingbird chased 2 cedar wren from dead tree in lake, barn swallow, goldfinch, titmouse, chipping sparrow, red-billed grebe, yellow ^{shapled} plover, bobwhite.

Salt Fork Lake State Park, Ohio

July 18, 1972.

Morning overcast and hazy. Temp at 6:30 A.M. 72°F. Left camp at 7:40, mileage 53428. Birds in area along road are: crow, cardinal, barn swallow, redwing, starling, purple martin, robin. Marmot road kill. Crows about 1 per mile. No evidence of commercial farming, slopes used mainly for grazing. Corn in small patches sometimes grown. Open or cleared slopes growing back to trees. Crown vetch on road cuts and in blossom. Some flocks of redwing. 53471 St. Clairesville and country less deeply incised than has been the case before. 53487 sparrow hawk. Canyon now 3 times as deep as previous. 8:50 53462 wheeling at Ohio ^{River} Bridge. 53496 Pennsylvania line having cross small section of W. Virginia at 9:10. Few grackles along but very few. Bird life in this area is minimal compared to Kansas. 53515 marmot road kill. 53516 marmot road kill. 53521 marsh hawk being chased by redwing. 53526 marmot road kill. 53549 yukon at 10:15. Starling most common bird along turnpike. Crow also confiding. 53590 Somerset at 11:10. Left at 12 o'clock. In the ridge & valley area the valleys are developed agriculturally; the ridges are untouched and completely clothed in forests. 53671 red tail like hawk and dark. 53071 Susquehanna River. Continued east (all time on Pennsylvania turnpike. Country flattens out and roads are straight. Left turnpike at Valley Forge and continued thru park to Phoenixville, thence to Baker Park where we camp. Arrived there at 6:00 P.M. at 53811 mileage having travelled 383 miles today. Found some early American pottery artefacts on gravel bars of the Pickering Creek at camp.

Valley Forge (Baker Park), Penn.

July 19, 1972

Spent the day in Philadelphia and Camden, N.J. Visited W. Laurel Hills on Belmont Ave, Museum of Art and at at Bookbinder's Restaurant. Photos 720719-1 to 720719-5 of record of Pistor-malised grove stones in W Laurel Hills

Valley Forge (Baker Park) Penn

July 20, 1972

Spent the day in New York City, visiting Am. Mus. Nat History, Rockefeller Center etc. Used Amtrak from Philadelphia. No birds enroute.

Valley Forge, Baker Park, Leann.

July 21, 1972

Left for Moravia this A.M. at 8:15 AM, mileage 53989 or 178 miles in Philadelphia. At mileage 54123 noted first redtail since last one. Raptors and birds in general are scarce in eastern United States. Forests from Philadelphia to Moravia change from deciduous to deciduous-conifer. Great areas are undisturbed, particularly on ridges. Some streams deeply entrenched. Arrived Moravia at about 4:00 P.M. at mileage 54235. Last storm of about 2 weeks or so ago is claimed to be one of the 100 year cycle. Rained for 2 weeks, attributed to storm coming from ocean onto mainland. All crops poor because of rain.

Moravia, New York

July 22, 1972

attended wedding of Betsy Malsed ^{to William Rosendale} in morning and afternoon. From residence of James Malsed collected a Tamias striatus
 SKU 720722-1 ♂ 155-91-35-18-87gms. skull only.

July 23, 1972

Rained last night for short time. This P.M. hiked approx 1 1/2 miles from reservoir to mouth of canyon of the Fillmore State Park. As a result of heavy rains in the last week, mushrooms were growing in unusual profusion, representing several dozens of species. This canyon could be surveyed geologically and biologically with profit. The fracture systems were expressed in the creek floor. Some areas had circular masses of lighter colored shale that might represent colonial formations. The last devastating floods caused soil slippages, entrenched side gullies and displacements of large sheets of shale. Many trees had fallen into creek bed and some log jams had accumulated. A census of this effect on trees should be made, as well as other things, to document the flood rosters. There is no record in the area of Moravia of such flooding of creeks & lakes in the history of man habitation there.
 Photo 720723-1 of a red flower (cardinal red). These forest require humidity & rain

July 24, 1972

Left Moravia this date. Before leaving measured 4 cottonwood trees in town (Moravia). The largest is 2 block N of The Center

of town. It measured 25'9" in circumference at chest height. The other 3 measured were in residential area^s w of town. They measured 19'8", 17'2", 17'3". At Moravia noted whitebreasted nuthatch, grackle, redwing, red-eyed vireo, starling, robin, barn swallow. Birds are unusually scarce in this area. Left Moravia at 1:00 P.M. at mileage 54251 and followed 38A finally reaching highway 20, thence to Thatcher State Park where we camped at Thompsons Lake Camping Area arriving at approx. 6:30 P.M. at mileage 54432. Visited Indian Ladder trail (east entrance) to road trail on w end of trail. Noted a sparrow hawk at base of Helderberg ridge at New Salem. I have recorded all observations of raptors since leaving Lawrence and I might say the population is extremely low. The eastern hemlock (*Touga canadensis*) is common and terminal cones are numerous. The eastern white pine (*Pinus strobus*) is the dominant pine. There appears to be three species of junipers.

Thatcher State Park, New York

July 25, 1972

Drove to Albany and visited the New York State University, the museum and several places of special interest to Annette. Albany Senior High School, three residence of former home of Annette (Lark Street, Chestnut Street, Mercer Street and Delaware Street). ate at Wellington Hotel. Met George Wells at his place of business. Continued east on Mass. Turnpike 90 to Sturbridge where we camped, arriving at 7:00 P.M. at mileage 54590 or 158 miles today.

Sturbridge, Mass

July 26, 1972

Left 7:00 A.M. and drove to Boston, thence N to Gloucester where photo 720726-1 of rocky shore on S side island. Great black back gull, Herring and barn swallow in area. Continued around edge of ~~shore~~ peninsula, thence N to New Hampshire, thence to Maine on 95 highway. At Augusta east on 3 to Belfast and then to Ellsworth and thence to Lamaine State Park where we camped. Arrived 7:00 P.M. at 54949 or 359 miles. Forest from strictly deciduous to deciduous-coniferous at about Maine. Crow most common bird on turnpike and usually in groups of 2-5 and feeding off shoulder of road. No hawks. Starling, rock pigeon (domestic), grackle^{redwing} most commonly seen but even these are uncommon.

Some trees at camp area are: Jack pine (*Pinus banksiana*),
Tamarack (*Larix laricina*) and aspen (*Populus tremuloides*).
Robin, grackle in area.

Lamoine State Park, Maine

July 27, 1972

Left at 8:30 for Bar Harbor. Just outside of park noted a
young raccoon road kill. Continued to Bar Harbor and
visited Jackson Memorial Research Lab and thence to top
of Cadillac Mountain. Pulled trailer to top. There is
a resemblance of alpine on top although only 1500 feet above
sea level. Roche montane in evidence on all slopes, ridges
etc. Took the following photos:

720727-1 Aunette looking south from near top.

720727-2 To west with large lake. Photo framed with lichen

Covered rock & dead tree (fir on top)

720727-3 From top to east showing Bar Harbor & islands to E.

720727-4 Bar Harbor below from about 1/2 way up.

White Crown sparrow present. Returned to Bar Harbor and
ate The Golden Anchor Inn (Lobster of 4:20 ea). At

Bar Harbor photos:

720727-5 Bee's Stationery store. Name of man who built store a
hundred years ago.

720727-6 Docks at Bar Harbor. Lobster boat and placing lobster
in water

720727-7 General shot of harbor.

720727-8 Sailing boat and other row boats surrounding

720727-9 Target yacht and Bar Harbor Inn in background. This
building probably an old home.

At a sail boat rental the following prices are:

14' Javelin \$5 per hour

15' Centerboard \$5 " "

15' Keel Sloop \$6 per hour

16' Bulls-eye \$6 " "

18' Keel Sloop \$6 " "

21' Ventura \$8 " "

24' 7" Corsair \$10 " "

35 Ketch \$30 " "

The cormorant in area
and the scarlet tanager
in low forests just outside
of town in Acadia National
Park. The gulls are
mainly Herring and ring-
billed. Tomisserener in area
as well as a road kill
porcupines.

There are differences between this area and say the west coast:

1. No pollution on beaches even in most concentrated areas of Bar Harbor at fishing wharf. Not a single can or paper or foreign product.
2. Gulls not in area around habitation. Not one gull at docks. Several flew by at high elevation.
3. Marine Crafts are small, and few in number.
4. Stores are not commercialized and are generally distributed, not for instance on one street.
5. Homes too large for such a far removed area of the country.
6. All home reconstructed and painted, many homes joined to bar
7. Driving considerate & moderate.
8. Marine waters relatively calm.
9. Birdlife in general sparse.
10. Canada has developed its area better than Maine.



10. Canada has developed its area better than Maine.

11. Left at 3:00 P.M. at mileage 54987 for Campobello Island in New Brunswick. Trees are becoming more coniferous and smaller. Crows still most conspicuous and generally distributed along way of any bird, generally in pairs or groups of 3-6. at 54027 5 night hawks. at Sullivan

photo 720727-10 of Bar Harbor or Acadia National Park mts. to SW. Arrived at Campobello Island at 7:00 P.M. at mileage 55100 or 151 miles today. At beach measured tide as



Tide moves up grade at 15' per 30 minutes from low tide to top of last wet sands is 200 feet and then 60' beyond to top of ridge. Waters pass over this ridge in storms.

Campobello Provincial Park, New Brunswick, Canada

July 28, 1972

min temp last night 52°F. This A.M. photographed no.

720728-1 daisylike flower on sands near conifers

720728-2 trailer

720728-3 spongy beach to E where above tide transect was made. Rock extensively covered with kelp. The two black guillemot fed about 200' out from shore and then to W.

Birds in area are: Canada jay, crow, black guillemot, barn swallow, song sparrow, robin, Herring gull.

Left area and from island photo 720728-4 of fish traps.
 Photo 720728-5 of Theodore Roosevelt home (livingroom looking
 out of view window. 720728-6 of front of home. 720728-7
 of Roosevelt home and Annette. At Quoddy Head State Park
 photo 720728-8 of marine scene. Tide leave & rise rapidly here.
 photo 720728-9 of Annette, fog bell & lighthouse in background
 photo 720728-10 of simple marine view, clouds & flowers in fore-
 ground to SE. Photo 720728-11 of marine view & beach below.
 These above photos approx 12:30. Two Common eider fed along
 shore about 100' from rocks to very edge of rocks. The
 birds were blackish with no identifying mark. Slope of
 head characteristic. The pine siskin, Song sparrow & pine
 siskin in area. Photo 720728-12 of common flowers
 representative of arctic bog about 1/2 mile to mile W of the light
 house park. Photo 720728-13 of Eriophorum about 2/10 mile
 from arctic bog area. Continued on to St. Andrews
 and photo 720728-14 of red conglomerate rocks below the
 black house. Robin are most common bird and about
 1 per 3 miles along road. No raptors. Arrived
 Moncton at 8:45 P.M. at 55345 Rained late afternoon
 continuously. From Esset to Moncton countryside beautiful
 with farms cut into coniferous forests, all on slopes and
 valleys. Reminds one of what the Alps might look like without
 the mountains. Entire country carved by glaciers. Tonight
 drove to Moncton Tidal Bore Park and watched the bore move
 up river (12:23 A.M.). It is about 1 1/2 feet high and moves as
 a straight line up the river, making a spectacular sight and
 considerable noise. Sometimes the sides would surge ahead.
 Tide rises after much faster than elsewhere.

Moncton, New Brunswick, Canada

July 29, 1972

min temp 57°F Rain & fog. Left at 55370 at noon.
 at 55430 at Shinimica noted a sparrow hawk. Sparrow hawk
 at 55445 at Pugwash. Tatamagouche at 2:15 P.M. Forests
 smaller (height of trees) and open fields damp. Photo 720729-1
 of green meadow and marine beyond approx 2 mi E of Tatamagouche.
 Continued to N Sydney and got in line for ferry ^{departing} at 1:30 A.M. Have
 noticed that crows have increased in numbers to the east and
 may be a piling up effect. They still occur most commonly in
 singles or pairs to 5 but no flocking.

North Sydney, Nova Scotia, Canada

July 30, 1972

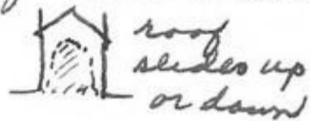
Left for Port aux Basques at 1:30 A.M. Cost of return ^{ticket} \$92.00. Slight swales in sea, bird rare just a few gulls following ship at times. Arrived Port aux Basques which is ~~Basque~~ so far having arctic background of few low trees and mainly bare exposures and short tundra-like vegetation. Mileage here 55680. Between here and St. George counted 18 single robins (mostly flying across road), 1 crow and 3 small unidentified birds. Photo 720730-1 of marine bay with red berries in foreground at Barachois Brook at 55761. At Stevensville photo 720730-2 of pond algae and buildings in background. At 55771 a knifefisher on line with fish. Corner Brook at 12:30 at 55809. Deer Lake 55862 at 3 P.M. Photo 720730-2 at head of Bonnie Bay with fireweed foreground at 55876. Along coast crows (1-3) about 1 per mile in stunted trees above ocean. Arrived River of Ponds Prov. Park at mileage 55963 at 8:00 P.M. Road along ocean not too impressive, beach with boulders and trees or heath toward mts which are in the far distance. Road terrible and construction has pulverized the seashore environment. Road speed from 10-30 miles per hour.

River of Ponds Prov. Park, Newfoundland.

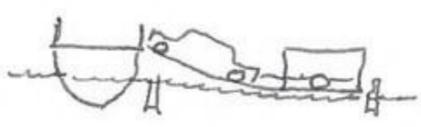
July 31, 1972

Left 9:30 A.M. at 55963. Continued up coast to St. Barbe. min temp last night 50°F. At Castor River at 56024 took photo 720731-1 of village with buttercups + a daisy in the foreground. ^{white} House have screens but ~~fundam~~ all open as well as screens. Road from Deer Lake to St. Barbe all gravel and although good grade the surface is washboard and with chuck-holes that keep traffic to 15-30 miles per hour. The dust is incredible and hazardous for traffic. Unless one has an objective in going I would not advise use of this road. The country is mainly dwarf conifers and heath and not impressive. The shoreline is not as dramatic as other areas and is characterized by extensive fields of boulders at low tide and ^{moving} sand into forests. The road construction is mainly along coast from forest routes to less of conifer barrier to between ocean and conifer barrier. This latter condition ~~has~~ will be handicapped by moving sands. The entire route along sea has used adjacent gravels for road construction and the effect on the ecology & esthetic appearance of the land is disastrous. Moving sands & high water will be

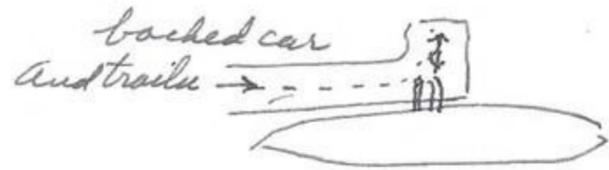
Hay protected by roof that is moveable as hay is used



major problems. Robins still most common bird. A few gulls along shoreline. At Saint Barbe put trailer and car on ferry. Car wheel (right rear left plank and back of trailer dinged on rear bumper. Disconnected trailer and put new inclined ramp for car and with all personnel available pushed car on ferry.



Block and tackle pulled trailer on ship. Car had flat tire on board. Captain and crew complained that



government had forgotten the people and facilities in Labrador and realized the loading system for trailers was inadequate. An ship took photos:

720731-2 of Anchor Point to right as we left the harbor. for 720731-2a-b-c. see April 13, 1973

720731-3 of car & trailer on board.

720731-4 ibid

720731-5 group of passengers, most young people from the more western provinces.

720731-6 Annette and Canadian flag

720731-7 Cuckoo sketch and sea thru parthale

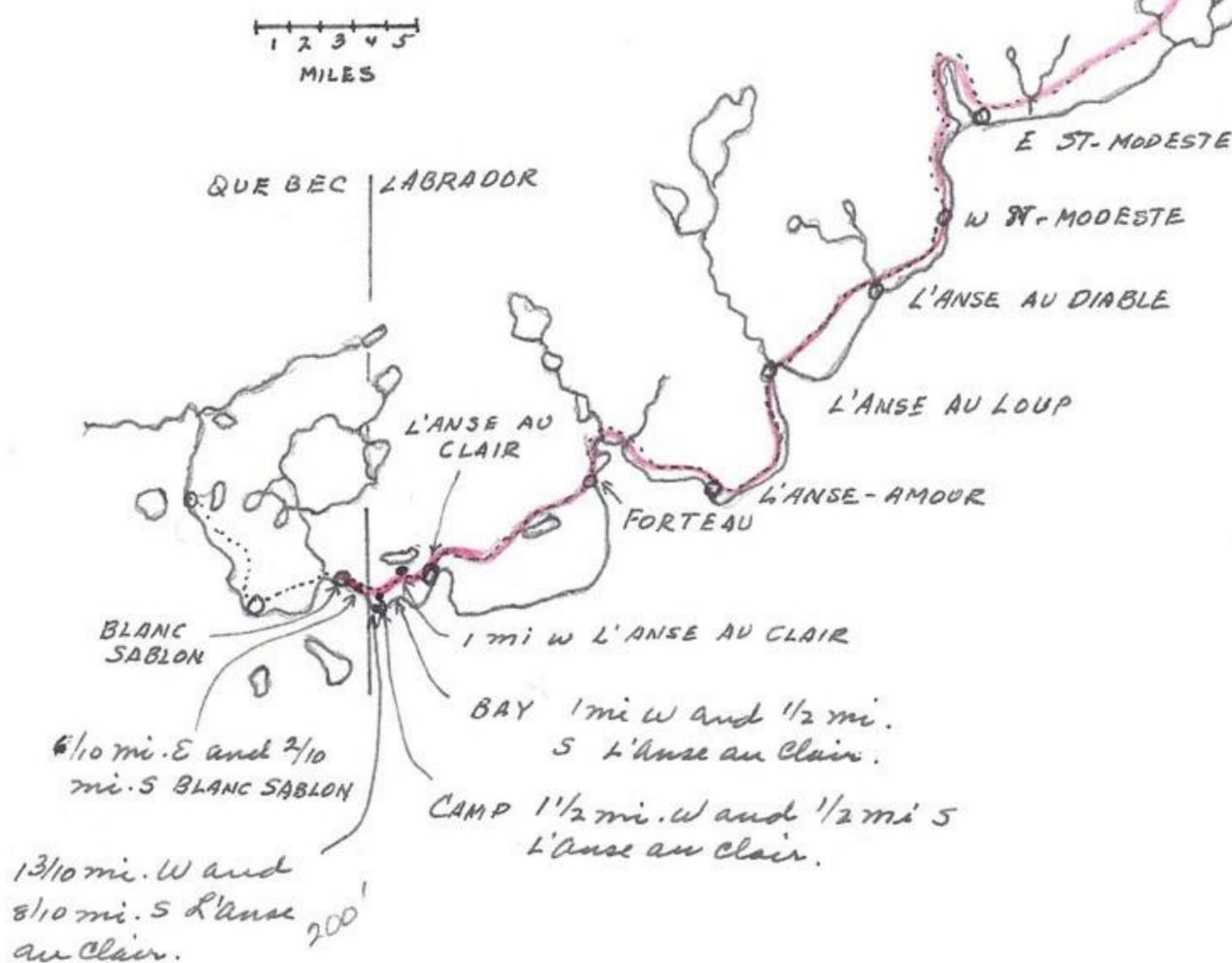
A large whale?, 20' or so surfaced & blew air. Two others were observed about 1/2 way across straits. A sooty shearwater flew by. It flew ^{from} about 40' to water surface and weaved back & forth. It's behaviourism is entirely different than gulls. Arrived Blanc Sablon (2 hr trip) and continued to approx. 2/10 mile east of the village on the high promontory where we camped, overlooking the marine waters for approx. 200 degrees. Photo 720731-8 to S across beach. This slope is soft to walk on and sinks about 6 inches when walked upon.

720731-9 of trailer with water west of area. Photo 720731-10 to E in over line into Labrador showing several sets of elevated marine terraces. Several thousand gulls were generally distributed in the bay below. Larger aggregates in water near fish activity. 2 roven on beach. and horned larks in foreground. The great black-backed gull, herring gull, ring-billed and black-legged kittiwake? in area. arctic tern frequently observed.

Set 100 traps this evening, one group ^{of 50} ^{13/10} ^{8/10 mi. S} in Labrador and 50 ^{2/10 mi. S} ^{mi W. L'Anse-au-Clair} Blanc Sablon, Quebec. Camp is almost on the provincial line. The Quebec set was mainly scaled krumholz on slope above cliffs while the Labrador was, although similar, was associated with water course from springs. Both sets were completely scaled with vegetation of herbs, emifers etc.

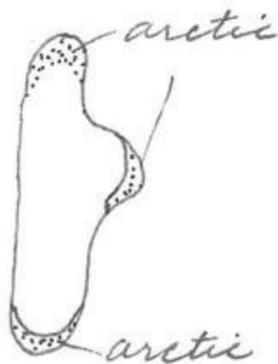
COLLECTING LOCALITIES

AND CAMP SITE



Some of the roads are in approx. position.

Camp was on high ridge east of Blanc Sablon (1 1/2 mi. W and 1/2 mi S of L'Anse au Clair) with view of water in approx 310°. The area is subarctic and at this point is controlled by wind. It is an interesting observation that areas subjected to wind in several directions (for example, this area, N end of Newfoundland Peninsula, SW end of Newfoundland) are more like the arctic than areas, although farther N in position, which received wind from one direction. A model would be thus,



with arctic conditions in exposed positions and subarctic elsewhere. At the camp in Labrador the surface of a typically developed heath was soft to walk in with feet sinking to 6-8 inches. Walking become labored. Other areas on exposed ridges were solid with 2 or 3 inches of mosses and lichens. Some areas were developed to rock basins from action of water and wind. On 5 exposures rock covered with mosses and lichens. Conifers ranged from matlike surfaces to small trees 4 or 5 feet high and these modified to Krümmholz. Some swales and meadows produced typical grass-sedge communities. Water courses were narrow, deep and sometimes covered overhead with mosses and lichens.

6/10 mi. E and 2/10 mi S Blanc Sablon, Quebec, Canada

Aug. 1, 1972

From trapline of 50 traps set last night, caught the following:

	<u>720801-1</u>	<i>Sorex cinereus</i>	102-42-12-6-5gms ♂ (testes 4mm)
SKU	<u>720801-2</u>	<i>Microtus chrotorrhinus</i>	116-31-18-11-15gms ♀ skull only
	<u>720801-3</u>	" "	156-42-23-12-30gms ♀ uterus enlarged
	<u>720801-4</u>	" "	143-38-20-11-26gms 1x3 emb 3mm

13/10 mi. W, 8/10 mi S L'Anse au Clair, Labrador, Canada

Aug 1, 1972

From 50 traps set last night:

	<u>720801-5</u>	<i>Microtus chrotorrhinus</i>	173-48-21-12-43gms ♂ testes 15mm
	<u>720801-6</u>	" "	148-46-20-12-37gms ♀ 1x4emb 5mm
	<u>720801-7</u>	" "	178-52-20-14-44gms ♂ testes 14mm
	<u>720801-8</u>	<i>Zapus hudsonius</i>	231-142-32-14-19gms ♂ testes 6mm
	<u>720801-9</u>	<i>Sorex cinereus</i>	100-40-13-6-6gms ♀ ut normal

minimum temp last night 48°F. This afternoon made trip to Red Bay and return. Recorded a few observations enroute. Left Provincial boundary on road east of Blanc Sablon at mileage 53.7. At L'Anse au Clair mileage 55.5 or 1.8 miles from border. Between L'Anse au Clair and Forteau noted 6 American roughlegged hawks and one snowy owl. The hawks were either flying or sitting on top of telephone poles. The owl was hunting. At Forteau Point took several photographs including:

720801-10 fishing shed

720801-11 cleaning cod. The women made incisions, the middle operator gutted and cut head off body and passed to a fourth member behind him who cut out the tongue. The man on left cut out bones and segregated fish into bins, a pile for drying etc. The livers were in a large barrel and were probably extracted by second operator. The guts were thrown into the water where they accumulated at the bottom some 8-10' deep. The people claim that this material is carried out into the main lake by receding tides. Several foot long trout swarm in sight. They claim that trout are everywhere. These fish appeared to be fresh and in good condition. A new resource in the herring is being pursued. Cod sells for 7¢ per lb.

720801-12 Sheds used by fishermen. They seem to be clean and fresh smelling.

720801-12a of fishing docks & sheds

wheel barrows are used to transport fish from outer sheds to the inner shed on shore. I presume that the outer sheds are so placed for ready contact with the small fishing boats which would be handicapped approaching a land based shed and also for cleaning the fish the outer-deeper water accommodates the debris of the unused fish. Control of insects may also be a factor.

Photo 720801-13 of large metal pot - Annette's hand indicates a comparison of size, is heated by wood from beneath and serves for many purpose from boiling fish to washing cloths. These pots are frequently seen associated with fish operations. Photo 720801-14 are children, all but one from the same family. They are shy at first but soon show their intelligence by action and conversation. Most of these children and adults are able to converse in a very intelligent manner. The large child introduced the rest of the children by name and family relationship. They seemed to be dressed inadequate for the climate and temperature but seemed healthy. Running noses and insect scars on their faces were common.

Photo 720801-15 is a child that is found in every community. They approach you without hesitation and seem to anticipate your arrival before anyone else. They are generally subnormal in intelligence but this is compensated by their aggressiveness. They must spend a considerable time out-of-door and their faces show effect of wind, insect bites etc.

All people are curious of us and the entire family will be standing in the doorway of their homes. The young children are happy and energetic, the teenagers have suffered from proper community contact and proper standard of living. Large families seem to be the usual.

The villages show prosperity as far as buildings are concerned but these are probably being financed by loan or government. The villages are generally at sea level and at ^{or near} the mouth of a river. Roads drop abruptly from ^{the} higher plateau.

Continued to bridge at 64.7 at W Saint Modeste. Pinware at 81.8. 720801-15a good development ^{to led Bay} ~~Exception and hummocky tundra (near above)~~. At 85.0 turned around. Beyond the road follows a wide valley, and is very beautiful in water, trees and distant views. At this point photo

720801-16 of mosses & lichens which have covered the road right-of-way. Snow on sidehill (S exposure) at 87.1 at W St Modeste photo

720801-17 of bog in rock strewn bog. The fog is variable and seems to occur in N-S banks from E to W. Some valleys are open while others are closed in fog. This fog must be common in this area

as is indicated by its control on the vegetation. Need more time to investigate this subarctic land and especially the people & their fishing. 720801-18 of L'Anseau Clair? with steep approaches & dusty road.

1 mi. W L'Anse au Clair, Labrador, Canada

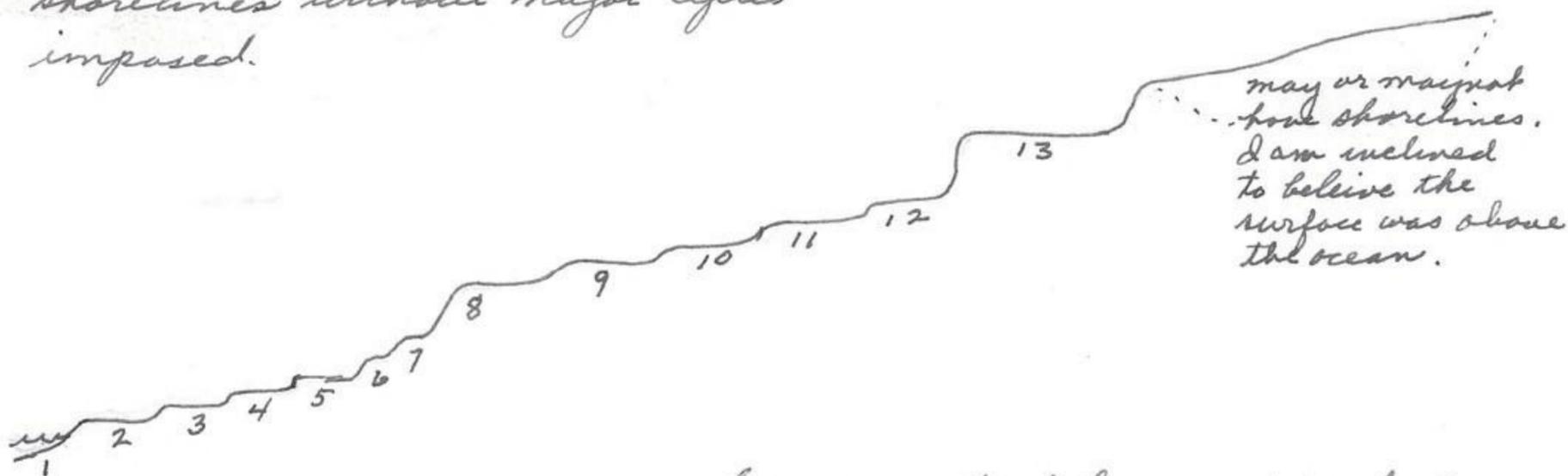
Aug. 2, 1972

min temp. last night 55°F

From 100 traps set in meadow of herbs sealed with sphagnum moss (4-8 inches). The runways were under the cover and trails received 100% overhead protection. Along side of meadow were some grasses with trails but this area did not support mammals. The gophers & mustela were under dwarf conifers on edge of meadow.

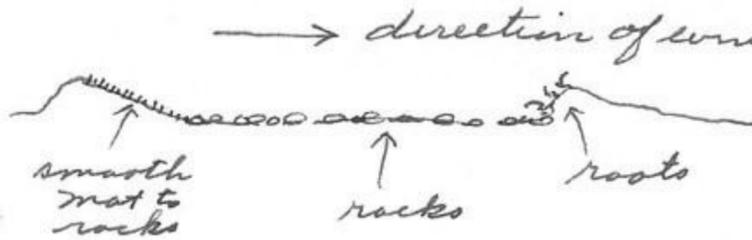
<u>720802-1</u>	<i>Microtus pennsylvanicus</i>	136-37-21-11-22 gms ♂ testes 4 mm
<u>720802-2</u>	"	141-36-21-12-23 gms ♂ testes 4 mm
<u>720802-3</u>	"	142-43-22-12-22 gms ♂ testes 5 mm
<u>720802-4</u>	"	140-37-21-12-23 gms. ♂ testes 12 mm
<u>720802-5</u>	"	136-39-21-11-20 gms. ♀ ut normal
<u>720802-6</u>	"	132-35-21-12-22 gms ♂ testes 4 mm
<u>720802-7</u>	"	122-36-20-11-15 gms. ♂ testes 3 (sk. only)
<u>720802-8</u>	<i>Zapus hudsonius</i>	221-135-31- ¹⁴ 19 gms ♀ 2x2 emb 4 mm
<u>720802-9</u>	"	215-130-32-14-15 gms. ♀ 2x2 emb 3 mm
<u>720802-10</u>	<i>Mustela erminea</i>	250-65-34-16-68 gms. ♀ ut. normal

At a point approx. 1 mi W, 1/2 mi S of L'Anse au Clair in a bay area examined the slope for elevated shorelines. From the present shoreline to top of slope where topography is approaching the plateau, noted 13 well developed shorelines. In areas of sheer cliffs there may be additional ones not recorded because of the solid rock slope. There appears to be a regular periodicity in the successive shorelines without major cycles imposed.

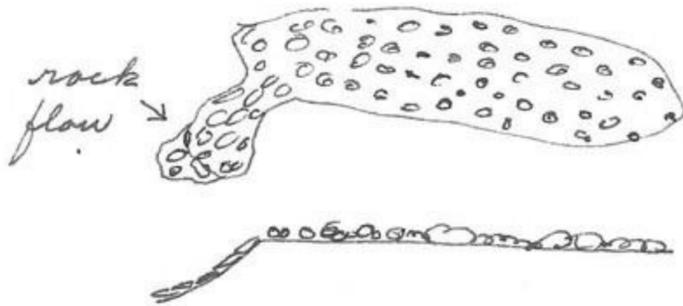


Some resistant layers of rock control the larger intervals as no 8 and 13. It would be of value to survey this area for defining the successional elevation of land since the glaciers left the land masses. It is interesting to speculate on whether climate or irregular uplift produced the shorelines.

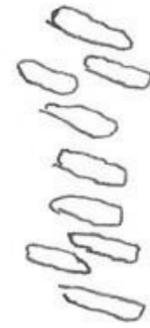
Not all rock basins are flat but most of them are so. At the edges some reservoirs of rocks have flowed down from the sides. The N side is mat vegetation and mat to the rocks while the S side is interrupted tundra with roots exposed. The orientation is thus:



The rock flow appears in areal view thus:



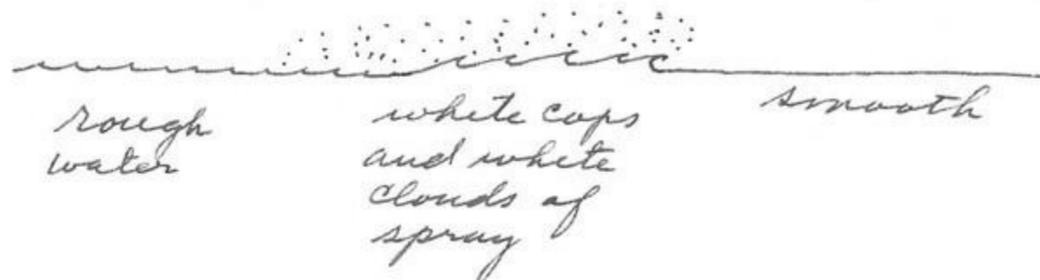
direction of winds while we were in area.



It is believed that these bare rock areas are produced by a combination or singly by wind on the one hand and water percolating up thru the gravels on the other hand.

One hard wind from the NNW blew across the upper slopes and then down on the ocean below. Its advancement across the water was thus:

→ direction of wind,



This afternoon examined the dens of Marmota monax ignava. On flat areas disassociated with rocks the dens are squerrel-like but aperture larger averaging 9 inches in diameter. From this hole, which turns abruptly laterally below, are generally 2 or three trail approaches and at the edge of the hole are well worn. Immediately beyond the hole the trails become unrecognizable beyond the second foot. From patches of krummholz or other masses of shrubs, the trails, while currently used are only faintly discernible and narrow; they appear in fact as old unused trails. They are surfaced with matted green vegetation of the same kind as the adjacent vegetation. These trails are first observed as indication of the marmot in the area. The dens or holes are inconspicuous unless the den has been recently

excavated or the hole or den recently cleaned of its debris. Dens ~~are~~^{near} steep rock outcrops were on flatter slopes adjacent to the rocks but with trails leading to the rocks. One was heard but not observed among dense conifer-shrub mass without noticeable trails associated. It call from this ^{some} place (exact spot) on 3 different occasions I had to pass the area. The call is more squirrellike than marmatlike. The first note (1-3) is a sharp chirp followed by a series of ~~so~~ softer notes (5-8) given in a muttering voice. The call is in the form of the marmat call but sounds more like a Citellus call.

From an area from ocean beach to plateau above collected the following dominant lichens and mosses:

<u>720802-11</u>	720802-36
<u>720802-12</u>	720802-37
<u>720802-13</u>	720802-38
<u>720802-14</u>	720802-39
<u>720802-15</u>	720802-40
<u>720802-16</u>	720802-41
<u>720802-17</u>	720802-42
<u>720802-18</u>	
<u>720802-19</u>	
<u>720802-20</u>	
<u>720802-21</u>	
<u>720802-22</u>	
<u>720802-23</u>	
<u>720802-24</u>	
<u>720802-25</u>	
720802-26	
720802-27	
720802-28	
720802-29	
720802-30	

In the interest of conservation I would suggest that cars and trucks not be driven on the tundra; that excavations for roads ^{material} not be made on ridges ^{but} adjacent to the roads; that refuse be placed in a land fill; that prevailing trash be cleaned from tundra. There has been severe violation of the above, especially wholesale distribution of junk and refuse. It has developed from generally dumping on tundra ridges to concentrated dump over cliff. Polluting the land & ocean is still practiced in this part of Labrador.

This afternoon checks environs at camp and embayment east of camp. From camp dropped down to one of the old beach platforms and followed east to the first bay to examine again the elevated beaches and shorelines. In this area on beach of present level not 2 whimbrels which seemed concerned of the area, flying back and forth on the beach. They are typical curlew in voice and behaviorism. The shorter bill is diagnostic. 2 spotted sandpipers and the gulls were the only other birds noted on the beach. The robin and white-crowned sparrows were the only birds observed on slopes above the present beach, ^{and the horned larks were on the flat plateau on top.} At the point where the ocean water has carved a cliff are many flowing springs from the cliffs. These have produced an unusual array of mosses that are freshwater in character but which at times must adjust to the spray of salt water. The beach is characterized by large round boulders to water edge in some places to small boulders in other places. There are no sandy beaches. The surf rolls the rock landward and then by gravity the boulders roll back following the retreating water. The cliff forming sections of the slope, especially the uppermost one had produced large blocks, some 20' or so in diameter. These slopes of rocks below the cliffs are partly sealed with mosses + lichens. These rocks appear to me to be an unused niche and if one were to predict the kind of animal that might be associated in and among the deep recesses, it would be *Clethrionomys*. Marmots were observed + heard among or at the edge of the rocky area, more at the edge than among the rocks. If I were to look for archaic man in Labrador, I would check these displaced ledge rocks on the uppermost level of the slope. Because most slopes are protected from N winds, but excluding areas that hold snow patches, mammals are found commonly. The snow accumulates on S exposures as in the arctic because of the driving winds from the north. The best mammal communities are in the areas listed 6 and 7 on the previous elevated shoreline profile. On top of the ocean facing slope, one of the most characteristic features is the patches of washed rock surrounded by tundra. These patches are not oriented according to the direct of the winds of the period we were there but with their apices more to the NW to W, which would indicate that the damaging winds are from the NW ^{to W} rather than from the N. The center bare areas of small rocks are lacking small fragments and sand and indicate a washing effect from standing water.

Photo 720802-31 of car & trailer at sundown. Temp this evening 50°F. A high wind started at approx. 8:00 P.M. and blew all night, rocking the trailer. In spite of weather, shortwave reception to all parts of the world is incredibly clear and strong. Purchased minerals, asbestos (720802-32); amber (720802-33), amber (720802-34); native copper (720802-35).

1 1/2 mi W and 1/2 mi S L'Anse au Clair, Labrador

Aug 3, 1972

min. temp 46°F last night. Rained most of night & high wind. Left camp for Blanc Sablon for 10:00 A.M. ferry. Before leaving camp photographed:

- 720803-1 bare gravel on wind swept ridge (see previous description)
- 720803-2 *ibid*
- 720803-3 bay east of camp.
- 720803-4 upper reaches of embayment.
- 720803-5 dominant lichen
- 720803-6 dominant moss
- 720803-7 ferry boat with trailer on deck
- 720803-8 *ibid*
- 720803-9 Annette on board.
- 720803-10 end of dock as we pulled out to sea showing barrels of herring. This fish is being exploited for the first time as salmon and cod deplete in resource.
- 720803-11 Blanc Sablon with remnants of 2 snow banks. ^{720803-11c St Barbe docks show inadequate dock for trailer-car.}
- 720803-11a Labrador in distance and typical fog banks. ^{720803-11b approaching St Barbe Bay.}
- On return noted 2 sooty shearwaters move across the water at about 2 feet from the surface. As a herring (adult) gull approached them they flew upward for approx. 60' and met the gull in combat the shearwaters being the aggressors. In approx 2 minutes they left the gull and continued on their way. Later another shearwater, ^(greater?) with white underparts and black back (greater shearwater?) passed by. One group of 6 northern phalarope fed and rested on the water. There is an eiderlike bird that could be a scoter that was occasionally observed. Also common murre 4, 2 kittiwake and 2 black gull-pots. ^{4 plovers?}
- Arrived St. Barbe. For best facility at boarding the ferry one should consider the tide level. If too high it is difficult to get car or trailer on board. In any case the trailer has to be hauled on separately from the car.

Continued north to L'Anse au Meadow. At mileage 129 noted an osprey fish along edge of water. It dropped to within 3 feet, hovered a second and then dove into water to come up with a fish. Photo 720803-12 of ice berg in Straits of Belle Isle.

This iceberg has drifted in from the Atlantic and could be lodged on bottom. These ice masses are believed to come from the west coast of Greenland and take up to 3 years to make the journey to the Labrador - Newfoundland Coast. At the north end of Newfoundland the topography flattens and become more arctic in vegetation. Photo 720803-13 of Griguet. At L'Anse au meadow (meadow modified from medusae which is a jelly fish) found a very exciting setting of the early (1000 years ago) Viking community. It is characterized by meadows of grass, a small flowing stream thru the center of the community, an ocean front, a small harbor and a ridge to west as a NW windbreaker. It is believed that the shoreline 1000 years ago was much higher than today, possibly to base of exposed rocks on ridge. Took several photographs:

- 720803-14 wall forms (of cut slabs of tundra) before excavation showing walls, a door way & an adjacent room.
- 720803-15 elevation of room with forge. Large rock an anvil.
- 720803-16 a room
- 720803-17 small creek running thru site. Should be checked carefully for artefacts. 720803-17a at village to NE
720803-17b small pit ground to moses & lusher. at village
- 720803-18 shoreline, blue flowers and distant view of Viking site
- 720803-19 fishing wharf. near village to east.
- 720803-20 " " " " " "
- 720803-21 Iceberg in Atlantic. 720803-26 ice berg to E of Viking site.
- 720803-22 wood pile at village E of Viking site. 720803-23 village E of Viking site
arrived St. Anthony. From L'Anse au meadow to St Anthony (an angle or pairs) 720803-24 & 25
- counted 18 rosen - no crows. Drove to light house on south side of bay. Photo 720803-24 of steep cliffs just S & W of the light house. Left St. Anthony (the Grenfell hospital most impressive in such a far north setting). On return to St Barbe passed over the extensive boulder field at mileage 270 which represents the approx. center of this unusual field of rock. There is a feeling of recent activity in this area and may represent a recent disaptarom of a glacial tongue. It is claimed that the top of the mountain range to S is flat and tundra like. Returned to St Barbe and camp there. Enroute in evening along coast on way to St Barbe photo 720803-28 of pond and wrecked ship at beach.

Bay,
St. Barbe, Newfoundland, Canada

Aug 4, 1972

Min temp last night 47°F., light rain occasionally.
Left at 8:15 P.M. at 56319

Continued 5 and for 10 miles took Complete Census of birds: 321 robin, 326 rabin. As has been the case on the trip, all raptors have been recorded. Photo 720804-1 of Point Saunders. Photo 720804-2 of Torrent River. Photo 720804-3 of glacial striae on ocean beach at Hawks Bay. Photo 720804-4 of general views with glaciated rock as flat and extensive as a highway. It is remarkable that the striae have been so well preserved on an eroding beach and that the boulders are still in relative position. Most exposed eroded surface in other parts of the glaciated country are irregular and of the ^{rough} moutonne ^{type}, with smooth surfaces on the glacial side of ice advancement and the quarried side on the lee side of the outcrop. These beach surfaces are absolutely flat and of extensive surface area, moreso than I have ever seen elsewhere. It may be that they were formed and controlled by a particular water level, much on the same order as today. at mileage 290 observed a pigeon hawk flying low over small Conifers. Photo 720804-5 of Portland Creek and Canyon. Photo 720804-6 of Gros Pate Mountain at Portland Creek. Near here are lobster cabins used during season and show in Photo 720804-7. at mileage 432 pigeon hawk south of St Pauls outlet. Photo 720804-8 ^{near} of Norris Point. Photo 720804-9 of Norris Point with deep bay, cliffs and docks in foreground. Taken in rain. Photo 720804-10 of small ferry, ~~car~~ Trailer. Car will be placed on end of ferry. Photo 720804-11 of car with back end overhanging boat. These ferries are just not equipped to handle modern trailer car combinations. Photo 720804-12 of ferry at Woody Point, fjord beyond. Photo 720804-14 of Annette and steep cliffs taken crossing on ferry. It is my estimation that this area is the most beautiful area observed so far in Newfoundland with its fjords and bold topography. In face of the rough country, the villages and fields are peaceful in appearance. I would recommend this route rather than the new highway that bypassed this area. The lombardy poplar trees are unusual for this part of the country. Left Woody Point and at ^{photo 720804-15 just beyond.} 508 mileage (late afternoon) noted a weasel, Mustela erminea start across the road approx. 150' ahead. At about the middle of the road a second weasel came in from the opposite side of the road and there came in contact with the first one, not in physical combat but with keen concern for each other. As the car approached they both left together in the direction of the second pursuer. Continued to Deer Lake, arriving 8:00 P.M. at mileage 522. The road from Deer Lake to n end Great Peninsula (L'Anseau meadow) is of standard construction and base but the surface is wash-board

and deeply pitted to the extent that at 30 miles an hr one could rupture all four tires. Grading of surface gravels is helpful but this does not eliminate the dust which is unbelievable and at times hazardous. Rocks break trailer windows and completely remove paint on basal part of trailer furr. Dust was in effect on way up but rain was problem on way back, handicapping travel, however, in areas of construction where new soils were rutted and in places ^{progress was} almost impassible. On the whole I would recommend this road which can be travelled conveniently with trailer but keeping in mind that in places one has to travel at 10 miles per hour because of the surface of road and in dry condition the dust is solid! Camped at 56535 beyond Deer Lake.

15 mi. S Deer Lake, Newfoundland, Canada

Aug 6, 1972

Left 9:00 AM. at Pasadena The S end of Deer Lake was completely filled with logs averaging 3'2" x 6" in diameter. Several areas of lakes and rivers have been completely utilized by the pulp industry. Log at pulp site are sometimes 150 or so feet high and lower, at the base, a city block. All thru the maritime provinces one sees stacks of these logs along the side of the roads. The native original timber is gone, in some places the second growth has already been harvested and now they are exhausting the second, third and fourth growth! There must be some resource that can be maintained & harvested without cutting down the forest. What is happening is equivalent to removing water of a lake instead of using the water to propagate fish and aquatic life. Photo 720806-1 of hillside of lush deciduous & conifer growth. In areas where conifers have been cut the deciduous trees have grown to large size and look like forests of the tropics. All stages of succession are represented in Newfoundland. Arrived Port-aux-Basque at 12:30 at mileage 56690. Took several photos here.

720806-2 Port aux Basque

720806-3 Trailer waiting to be driven on to ferry. A reservation places one before current ticket purchasers. Ferry hold 120 cars.

720806-4 Glaciated rock and Port aux Basque in background.

~~720806-4a~~
720806-5 Front Ferry (Leif Eriksson) with Port aux Basque in background. 720806-5a Annette on ferry.

720806-6 Docks near by with Coast Guard ships & 2 train cars. The background is arctic at Port-aux-Basque but changes gradually to tiga inland. Area E toward Otter Bay is even more arctic in appearance with house on stilts like Biomed Islands in Behring Straits.

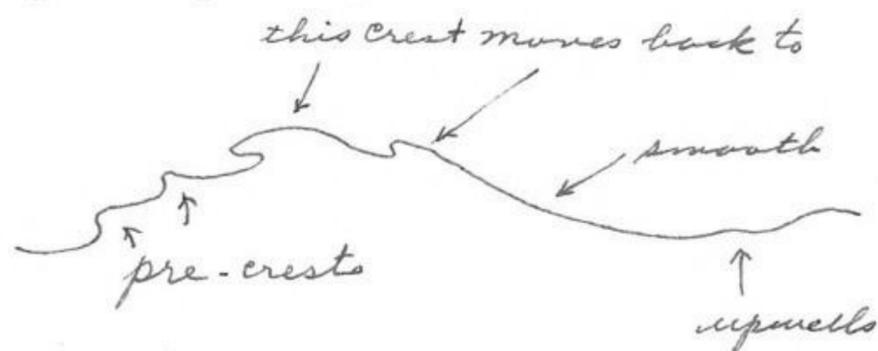
Photo 720806-7 of the ship Lucy Maud Montgomery. This ferry brought us over and holds only 60 cars. The cars are always held to the floor of the ferry with chains whereas the ferry at Woody Point - Harris area hold only loose wooden blocks for keeping cars from shifting. Open seas require solid attachments

720806-8 gang ready to release rope on dock (3 performed at one time)
 720806-8a leaving port of Port of Basque
 Of the ferries I would recommend the larger ship and be sure to take day trip. The night trip is miserable because of lack of comfortable sleeping accommodation. You sit up or recline in chairs. Some rooms & beds are available by reservation.

Before boarding ferry the Dept of Agri vacuumed car & trailer and cleaned all soles from on & under both car & trailer in the interest of the potatoe innestation on Newfoundland.

Areas on Newfoundland not visited by us but considered choice in scenic value is Natre Dome Bay with its hundreds of islands. Left Port au Basque 3:30 P.M. on the Lief Eiriksson.

Photo 720806-9 of light house. Photo 720806-10 of open sea and some development of white-caps showing impracticality of navigating open sea with small boats or canoes.



With additional wind the whitecaps are surflike and a single swell will have secondary crests which in turn have tertiary crests.

photo 720806-9 wake action of ferry meeting ^{swells 15' high} wave action of sea
 photo 720806-10 wake action of ferry.

photo 720806-11 " " " "

photo 720806-12 " " " "

photo 720806-13 " " " " and Annette

photo 720806-14 cloud line overhead -
 720806-15 ⁷²⁰⁸⁰⁶⁻¹⁵ ~~cloud line~~ ^{cloud line} overhead -
 Rainbow colors from spray of front of ship did not record on film.

Birds on sea were black headed gull, Herring gull and these only near land. No other kind of bird observed. Arrived North Sydney 9:30 P.M. and camped just W of town at mileage 56697.

North Sydney, Nova Scotia, Canada

Aug 7, 1972

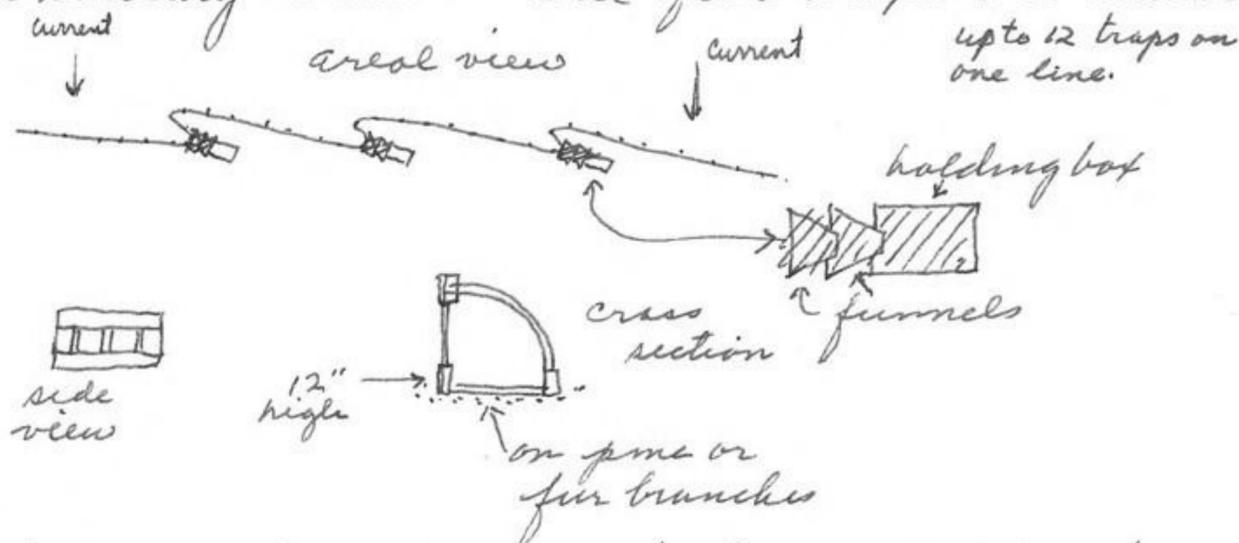
min temp last night 53°F. In travelling across northern Nova Scotia (see maps) have noted that there is a building up of numbers of crows and roven (fewer in numbers) toward the east end of Nova Scotia both in numbers and size of aggregations. Grackles

are common to eastern terminal of island. Rabbits, swallows and grackles most common birds. At ~~the~~ 12 miles west of n. Sidney observed one redtail and 2 Kingfishers. At Whyecomough noted a striped skunk and porcupine road kill within 50'. The porcupine is the most common and generally distributed of the road kills with the striped skunk a close second. Neither of these species or other kinds of mammals are common. At Truro did laundry and serviced car and at 2:20 P.M. left at mileage 56887. ^{west evening} 5₁ grackles fed along side of road. Camped at end of abandoned road that ran into lake at 57137 below Kingsclear near Bruno. Made 251 miles today. Today observed 13 porcupine roadkills which were generally distributed. Both crows and ravens were along road right-of-way. The crows invariably left on approach of car while the raven most frequently remained. The raven can be told from crows by the accentuated wobble in walking. 2 crow road kills today.

n. of Bruno, New Brunswick, Canada

Aug 8, 1972

Min. temp 55°F. Photo 720808-1 of camp with boat pulled on dry dock on old road. Goldenrod in foreground. Left 8:00 A.M. osprey fished off camp. Country side all along the way is similar to n. New York in the fingerlakes region with glacial earned slopes with lakes and conifer-deciduous forests and cleared farmland and old reconstituted houses. ^{at Riviere du Loup first morning done only better (camp dev)} Continued to Pointe provincial park where we camped. This evening foamed at low tide n. to actual point. Marine biome well defined. mud flats possible but appear supported by mans influence in area. The semipalmated plover is the most common bird. Feeds like killdeer but flies more like spotted sandpiper with rapid wing beats. Herring gulls, a black-crowned night heron, crows and seaters? were in area. Also some small sandpipers & one larger sandpiper of a solitary habit. The fish traps are numerous



all trap construction of boards and curved limbs held together by wooden dowel effect & pegs. Rows chinked base. 1 foot rise directed fish to traps unless the fence supported nets at the time they are used

Fisherman trail thru forests to point among almost clear forests -

Prov.

Camp au Pointe, Quebec, Canada.

Aug 8, 1972

Min temp 55°F. visited City of Quebec. Conversation is in French and English is not understood. all signs are also in French. The City is interesting but historical ^{old section} area too concentrated and renovation is too late. The newer (not newest) part of City is more interesting and authentic. Of all our trip we would have to get stuck in mud in the very center of this old City, just outside the walled section. A wrecker was called and the main traffic thru the gate was interrupted. The souvenirs are trash. Continued toward Montreal on N side river, following St Lawrence waterway route which passes thru the small villages. Camped near Lanaraie at mileage 57646 or 234 miles today.

Lanaraie, Quebec Province, Canada

Aug 9, 1972

Min temp last night 51°F. Visited Montreal Exposition today. main part on island not being used but regular section is still maintained enough to get the general idea of the original and is worthwhile. The China exhibit is outstanding, but as with Russia they both are peddling Communism as their theme. France is strictly modern and is unexceptionable. all in all its worth the trip to see. The river was in flood. Continued N W thru City which has an infinity of residential habit homes, all about the same size and in juxtaposition & with a specialty of iron work on steps, particularly circular type stairway and on porches. Camped at Val David in Campgrounds at mileage 57741. A large pond had overflowed its dike and had eroded the dike down below the level of the pond. The last water going thru the bottom of the pond had created deep erosional channels in the sedimentation.

Val David, Quebec Province, Canada

Aug 10, 1972

min. temp 49°F. At mileage 57822 sparrow hawk. 830 marmot road kill at Mt. Lanier. 865 entering La Verendrye Prov. Park. 956 marmot. 973 mileage a photo 720810-1 of pollution from a plant at Rouyn. The smoke expands as it leaves this area and is traceable for 50 miles. Continued to 13 miles W of Noranda Rouyn where we stayed at a lake in a Provincial Park. Photo 720810-2 of telephoto of sunset from camp. Measured bear track as 3 1/2 inches wide. Adult twice the width. Covered 346 miles today.

13 mi W Noranda-Rouyn at junction 59-46 hwy, Quebec, Canada

Aug 11, 1972

min. temp 43°F. Left at 8:30 A.M. at mileage 58087. Birds in area are common tern, family of mallards, killdeer, swamp sparrow, Herring gull, pied-billed grebe, grackles. The grackles are the common camp birds and feed inside the 50 gal. drums for food. There is considerable squabbling on the rim of these drums. They seem to be more dedicated to camp areas than birds in Kansas area. At 58095 striped skunk road kill and 5 evening grosbeaks. At mileage 58098 at Ontario Provincial line. Will keep complete census of birds from here across Province or to W of Lonlac. Observation will be correlated with mileage. Started at 9:00 A.M. 99 song sparrow. Sky overcast and blue 10% 00. small bird, beaver dam. 101 Virginia town. One travels across Canada but does not see lakes. 103 grackle. several lakes have been drained. 105 Bear Lake. 109 Harder Lake. 110 robin. 111 Sparrow hawk. 115 2 crows. 120 Mud Lake. 121 2 swallows (probably barn). 121 Kingkerland. 123 Gull Lake, small bird. 125 Turkland. 127 robin, crow. 128 crow. 130 Swastika, Chipmunk. 131 skunk road kill (striped). 136 roven. 137 pine siskin. 139 2 crows 141 small bird. 143 roven. 143 now in Arctic watershed. 151 sparrow hawk. 154 sparrow hawk, 2 crows. 155 30 grackles, crow, sp. hawk. 158 robin. 160 6 crow, one eating spotted skunk road kill. 161 sparrow hawk, 2 crow. 164 starling. 168 matherow. 171 2 crows. 172 Turnoff on highway 11, 3 crows. 175 crow, sp. hawk & small bird. 177 crow & 40 starling. 179 small bird. 181 crow. 185 robin. 186 2 cowbird. 188 Dringois Falls. 189 crow. 192 Belly? Lake. 193 crow. 196 sp. hawk. 198 sparrow hawk. 199 sparrow hawk. 203 crow. 213 4 swallows & small sparrow. 216 Cochrane. 220 2 starling. 225 40 starling. 226 2 crow, E Kingbird, 2 starling. 235 small bird. 248 roven, sparrow hawk, song sparrow. 250 Smooth Luck Falls. 257 crow. 258 50 starling. 260 2 grackles. 261 Struckland. 263 sparrow hawk. 264 sparrow hawk. 265 2 swallows, 8 swallow, 2 starling 267 sparrow hawk, small bird, crow, crow. 268 Sauguiet. 8 grackles. 269 Grand Nag River, 6 starling, 2 swallow. 271 sparrow hawk, song sparrow, crow. 273 crow, 2 barn swallows. 274 moonbeam. 275 3 crows, 2 swallows, 5 starling. 277 sparrow hawk, sparrow hawk. 278 2 crows. 278 2 roven 279 sparrow hawk, sparrow hawk. 281 crow. 282 2 sparrow hawks.

sparrow hawk. 283 sp. hawk; 2 swallows. 284 redwing
 285 song sparrow, robin. 288 Kapuskasing. Stopped for
 lunch. 297 Lost River. 300 sp. hawk. 301 approx 60
 starling; 1 Eng sparrow (there have been other Eng. sparrows
 but not recorded). 302 sparrow hawk. 304 20 starling.
 308 roven, roven. 309 crow. 311 5 starling, 8 starling
 313 sp. hawk, roven, 2 small birds. 316 sparrow hawk.
 317 sparrow hawk. 318 sparrow hawk, 2 crows. 320 sp.
 hawk, sp hawk. 326 swallow. 327 small sparrow at Mattice
 329 roven, sp. hawk, crow. 332 sp. hawk, 2 crows.
 334 6 crows. 334 Val Cate, 7 swallows, 2 starling. 336 sp hawk,
 grackle starling. 340 2 starling. 341 2 starling. 342 2
 starling, 2 swallows. 346 bearst. 350 sparrow hawk.
 352 50 grackles. 353 sp. hawk. 354 sp. hawk. 355 sp hawk
 356 2 starling. 359 Valentine River, 2 crows. 361 crow.
 364 crow. 367 sp. hawk. 368 sp hawk, 3 crows, 370 crow.
 sp. hawk. at Ford Creek. 371 crow. 375 18 blue jays
 in one group, 1 crow, 2 crow. 378 sp. hawk. 379 sp. hawk,
 2 crows. 379 E. Skekak, Crow. 381 sp hawk. 382
 crow at Skunk River. 382 sp. hawk. 383 crow. Naga
 gami River at 385. 386 2 crows. 387 roven. 390
 roven. 407 roven. 408 crow 409 swallow. 410
 sp hawk. 411 roven. 415 Pagwa River 416 roven
 417 roven. 423 roven 436 sp hawk, robin. 437 crow
 442 Klotz Lake. 446 2 crow. at (sounds like Mann
 Provincial Park). 2 grackles. 450 crow. 453 E. Kingbird.
 455 Paffy Lake, ducks. Photo 720811-1 of a road injured
Thamnopis _____ 24 inches in length. Longlac
 at 58475 at 7:30 P.M. Camped W of here at 58484 at 9:05
 P.M. Covered 387 miles today. Camp in clearing of forest off road.

9 mi. W Longlac, Ontario Province, Canada

Aug 12, 1972

Tamiasciurus, Chymunk, 5 Canada jay in area. Also moose and
 bear tracks. Min temp last night 49°F. Will keep complete
 records to Thunder Bay. 58487 Canada jay. 488 small bird.
 492 kingfisher. 493 LMF Ranger Station 494 Ring-billed gull
 and common tern. at Keogamisis Lake. 495
 Mc Cleod Provincial Park. Prior to this area there has been
 no fall colors but here the yellows are just noticeable but
 uncommon, just a few isolated trees, mostly aspen trees.

-THEME- (TIME 10'45" BY
END 3 NOTES HIGHER AND INCREASED CADENCE.)

PHRASE A

STARTS WITHOUT QUE

3 (NO. ACCUM BARKS)

PHRASE B

← LEADER →

2A
11A LEADER INTO
FIRST 3 NOTES OF GROUP

3A
4A

5A
6A
7A
9A

8A NOTES HIGHER
INCREASED
CADENCE

10A
12A LEADER AND
GROUP IRREGULAR

14A SYNCHRONY
15A IRREGULAR
16A

NO. TIMES SUNG

PHRASE PHRASE

1	A	B
2	A	B
3	A	B
4	A	B ACCENTED BEAT
5	A	B
6	A	B
7	A	B
8	A	B
9	A	B IRREGULAR BEAT
10	A	B
11	A	B
12	A	B IRREGULAR-SOFT-PAUSE
13	A	B
14	A	B
15	A	B IRREGULAR-SOFT
16	A	B IRREG-SOFT-TWO FAINT HIGH D NOTES-YELL-2 YEPS-END. NO BARKS

NOT PLAYED OR SUNG

Thunder Bay is not impressive as a town but high mountains to SE may be interesting. Photo 720812-~~10~~¹¹ of flowers in park in Thunder Bay. Photo 720812-10 as above but into light. ^{720812-12 of home in city}
 at 58695 sparrow hawk, 699 sparrow hawk. Check Middle Falls and river. Photo 720812-13 and 720812-14 of these Falls. These are the kinds of falls that are by-passed by the Grand Portage. Returned and continued to U.S. border at 58722. Continued S to Grand Portage where we camped. Travelled 238 miles today. The country from Lake Nipigon to this area is interesting and variable, not like the monotony of the transcontinental flat forested areas of middle and eastern Manitoba. This evening recorded the sounds ⁷²⁰⁸¹²⁻¹⁴ of the dances of a pow-wow of Chippewee Indians and others invited from as far as Montana. One group arrived by home mode canoe from Wisconsin via Superior Lake. This canoe was basic wood and covered with large sections of birch bark and tarred at the seams. I would estimate the length as 30' long. The music was produced by three large drum, each group of operators playing for a particular dance. The one recorded and analyzed was on a drum approx. 40" wide. Six musicians each controlled a drum stick and for the most part played in perfect unison except where the song required variation. It takes well coordinated effort and memorization. One of the men (with a high pitched voice) was the song leader. He put his whole soul into the rhythm and volume of the song. The women crowded around the drummers and sang while the braves danced around the periphery of the singers.

The area of Grand Portage has considerable historical interest especially the Grand Portage trail which we followed for a half a mile or so. The Fort seems to have been restored too late and the facility is obviously reconstructed and too new.

Grand Portage, Minnesota, U.S.A.
Aug. 13, 1972

Min temp last night 54°F. We were surrounded at camp by 9 camps of Indians. Made trip to Isle Royale and return same day. Left at 10:00 A.M. on Ferry (Passengers only). At Washington Harbor on Isle Royale noted Herring gull, red-breasted merganser, crow, Canada jay, ring-billed gull, chickadee, thrush, song sparrow, chickadee, great blue heron sparrow hawk, moss tracks 7 1/2 inches in length. Did not

observe birds except an occasional gull on trip over to island. at dock made photo 720813-1 and 720813-2 of ships at dock, no 720813-3 on trail S of harbor, 720813-4 of a white berry on the trail. Photo 720813-5 of sail boat at dock. The trails are spongy of forest debris and do not look as overused as in other national Parks. The shelters I do not approve. Connoery is interesting but require long portage on the inland lakes. All in all this island should be an interesting place to hike, especially in the interest of the 15-20 wolves and ^{the} moose on the isle. I cannot see how these animals can live in natural relationship with each other with the extensive human interference. Certain areas of the island should be held in absolute inviolance for their needs and protection. Left at 3:10. The captain had lived in this area as a boy and had a tremendous truthful knowledge of its history. He pointed out his home on one of the islands. The old resorts and other buildings are gradually been raised to return the area into a natural setting for tourists to take over of completely ruin. There were no birds observed on return across the open waters. The captain told of how the eggs and young of the herring gulls had protective value on the nesting grounds. Arrived Grand Portage at 6:15 P.M. write to the captain for early info on the wildlife of the area, especially as it relates to changing conditions. It is surprising to me that the National Parks did not invite the pow-wow to be held inside the fort yards and the building he made available for their use for both housing and eating. a free trip to Isle Royale would have been in order. Left at 7:10 P.M. at mileage 58734. Camped at mileage 58757 at edge of lake where the waves had eroded a half of the road, no abandoned. This area is 10 mi n. of Kodance River. In the evening noted a muskrat on peninsula of rock jutting 40' into lake. There was a few blade of grass but otherwise bare and devoid of vegetation. at 4 feet it jumped into surf. approx 3 minutes later it crawl out of the water and headed toward long over the bare rocks. as it approached the trees & shrubs I tried to force it to the back on to the rock peninsula. It could not be diverted from going landward. ~~By~~ being windy & cold it was about 50 per cent disabled. It had the alternative of going to the water or around my barrier but it chose to move directly into my position. Protected water among vegetation was on lee side of the trees.

10 mi N Kodance River, Minnesota

Aug 14, 1972

min. temp. 54°F Left 8:00 A.M. 759 Kodance River. At mileage 58776 at Pike Lake Road a lynx was noted crossing the road at a leisurely gait some 300' beyond. As we pulled up to the position where it crossed the lynx had moved up the graded slope some 30' from the road where it stood in plain view for at least 20 seconds before it continued up slope to top of cut where it jumped over patches of low shrubs as would a deer in its high jumps. A hummingbird (ruby throated) in same area. at 842 a myrtle warbler and black & white warbler. 850 yellow-shafted flicker. Both the Raven and Crow were in area from main road on Superior Lake to Ely. Road has changed and is losing its character. Ely at 58877. Bought Duluth Pack (\$23.00). Arranged for Cessna flight (pontoon) to see moose. On a 20 or so minute flight (\$10.00) we saw one moose (3:05 P.M.) in a marshy surrounded lake just N of Ely between Ely & Bass Lake. From this plane we could see all lakes in area even into Canadian Lakes. This type of flight is a must. One is impressed with the great amount of forest and marshy-boggy areas outside of the lakes proper. The pilot says they have 30 bears and several wolves on telemetry. Returned to Ely. The ideal trip of limited time would be to fly canoe & pack into distant lake beyond near portages and then be picked up at a later time. Continued S. At 59013 a sparrow hawk. 6 striped road kills since Ely. At 59015 a sparrow hawk. 59044 Red foot rd kill, at Deerwood, 59045 sparrow hawk and first mourning dove on return across Canada. 59082 sparrow hawk. At 59105 first meadowlark. Color of trees begin at Canada-U.S. border. Between Superior Lake and Ely spotty but noticeably showing color change. S of Ely yellow starting & some reds low in understory. In area S of Ely there are more ducks than we have seen elsewhere. Camped at 59117 just E of Grey Eagle on a lake (Bass Lake). 360 miles today.

Bass Lake, Minnesota

Aug 15, 1972

Min temp 64°F. at Iowa border made census of cranes and raptors. None was observed to Missouri border. Arrived Lawrence at 10:30 P.M. at mileage 59670 or 7040 mi this vacation. (See next page)

The following is from tape recorded overlooked at time of recording last days trip. It supplements the above from the note book. Left Bass Lake with visibility approx $\frac{2}{10}$ of a mile. at ⁵⁹ 120 sparrow hawk. mourning doves have increased since first ones observed yesterday. 29
 junction with 71 59131 Sault Center. 133 2
 crows. From here to Missouri will keep complete census of crows and sparrow hawks. There are considerably more birds in the ~~prairie~~ prairie area than the Trans-Continental Coniferous Forest including meadowlarks, ducks, gulls (some Franklin), cowbirds, grackles, bowwites etc. now in area of Kettle Lakes, 650 marsh hawk, 156 some large flocks of grackles which is new to the landscape, 172 Wilmar. Black terns in lake, 177 sparrow hawk. 184 sparrow hawk. 209 sparrow hawk. 245 fox squirrel road kill, 293 2 crows, 296 3 crows, 409 2 crows at junction 217 and 71. 441 Audubon 499 first red-headed woodpecker. 517 second redheaded woodpecker. 544 Pickering, Missouri. 552 Maryville, Missouri at 7:25 P.M. 570 first evidence of bag worms; raccoon road kill. mourning doves across Iowa average ^{1 per} 3 per miles and occur as singles or in pairs. 59579 Savanna. 8:10 sundown. Still no crows in area where they should have increased over the Iowa populations. Cicadas heard for first time in this area and then the call was continuous. End of census. Continued to Leavenworth, thence S to highway 40, thence to Lawrence arriving at 10:30 at mileage 59670 or 7040 miles covered in last month.

Lawrence, Douglas Co., Kansas

Sept. 7, 1972

Mary discovered a red bat in home at 402 Yorkshire Dr. It was captured with a butterfly net and prepared as a specimen (Mary's no. 1) The cat alluded to it position in the house and would jump 3 feet into the air in attempting to capture this mammal as it flew around the room. (see field no 720904-1 James W Bee. *Lasiurus borealis* 108-45-9-11-8.9gms, wing spread 312mm) (♂ testes 6mm)

♂ (testes 6mm) *Lasiurus borealis*. 108-45-9-11-8.9gms. wing sp 312mm

Perry Lake, ~~Jefferson~~ Jefferson Co., Kansas

Sept 10, 1972

Fished the first 300 feet of base of dam from beginning at east end. Caught 2 green sunfish measuring 151 and 130 mm respectively. One bass measured 98 mm. Fished from 11:30 to 12:00 noon. No unusual or aggregate of birds. The Kaw River has been high the last few days. Chimney swifts still in area. Noted a sparrow hawk near home.

Perry Lake, Jefferson Co., Kansas

Sept. 17, 1971

Fished (fly) from gate to east end of dam from approx 25' lakeward to 5' from base of dam. Rock bottom as a continuation of the slope of the dam. 10:00 to 2:00 P.M. morning 10% in clouds, later 100% clear sky. Temp after noon 90°F. Wind from SW and about 15-20 M.P.H. and was a handicap in fly fishing. Water level at gate 93½ feet. Caught the following species. Blue-gill, *Lepomis macrochirus*; green sunfish, *Lepomis cyanellus*; crappie, *Pomoxis* sp. Arranged as caught: (standard length)

B 116	B 109	B 110
B 85	G 140	B 98
B 105	G 120	
B 148	B 115	
B 103	B 92	
B 114	B 112	
G 132	B 111	
B 116	B 122	
B 115	B 103	
C 207	G 143	
B 108	B 118	
B 101	G 123	
G 132	G 122	
B 107	B 108	
G 121	G 110	

The green sunfish are in good condition.

Totals

Bluegills	22
Green sunfish	9
Crappie	1
	<hr/>
	32

Lawrence, Douglas Co., Kansas

Sept 18, 1972

hawks
 Nighthawk in area in evening. Also chimney swifts.

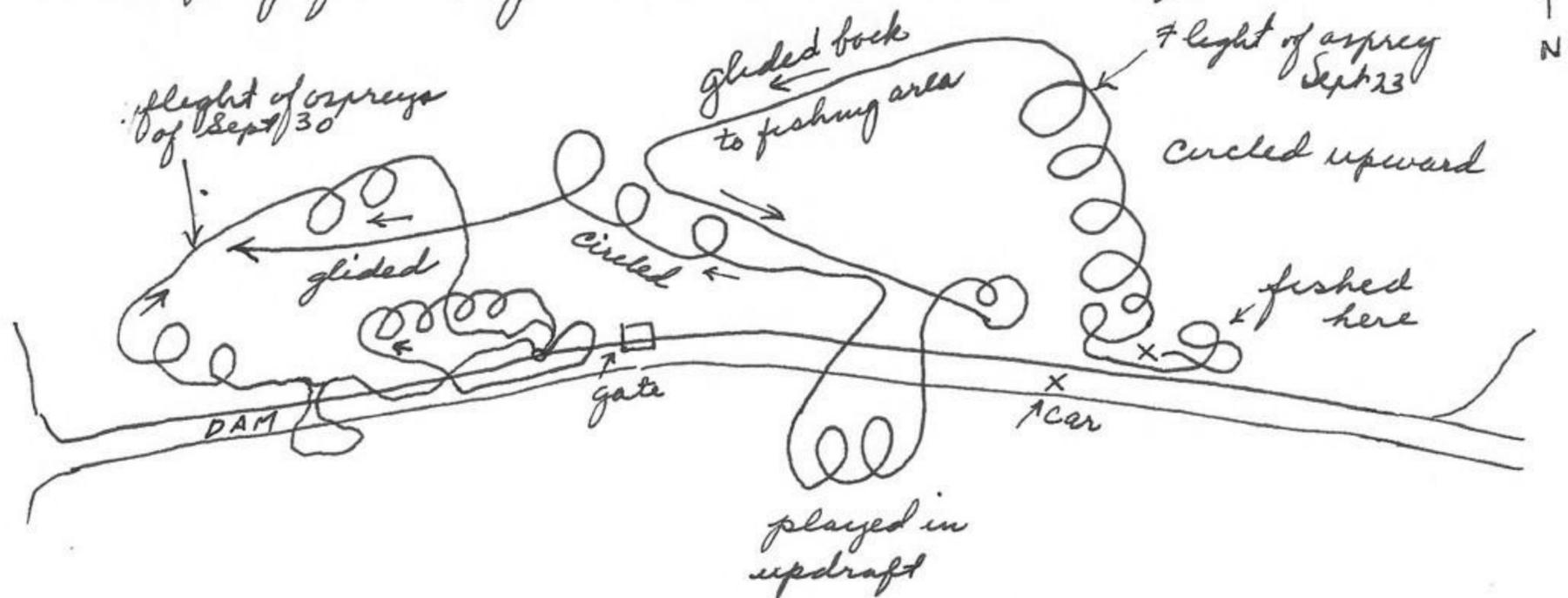
Perry Reservoir, Jefferson Co., Kansas

Sept 23, 1972

Fly fished from west end of dam to outlet gates along shore of dam from 30' out in lake to about 5 feet from shore. Day cloudy, 100%, no sun, fog drifted over lake once, occasional showers, wind about 8-10 MPH from south and lee side dam with minimum effect of wind. Always some surface action (of water). Temp about 70°F. Started at 9:50 A.M. and completed fishing at 2:00 P.M. at gate. Water level 92.80 ft. Caught the following fish: Blue gill, Lepomis macrochirus; Green sunfish, Lepomis cyanellus; Lepomis humilis, orange spotted sunfish; Lepomis microlophus, redear. The gizzard shad, Dorosoma cepedianum and a bull-headlike catfish (4-9" long) were common in shallow water among rocks at shore and where they occurred they were generally in groups, especially the shad that worked the upper surfaces of the rocks for algae. The catfish worked with backs out of water. A fly placed in the center of their activity did not stimulate these species to accept the artificial lure. The following fish were caught, in some places more commonly, than elsewhere and are recorded as caught: (no. 10 hook fly).

B (bluegill) 108mm	B 121	B 99	B 137	B 111
B 111	B 133	B 135	B 144	B 139
B 125	B 118	B 140	B 118	B 117
B 132	B 122	? Orange spotted 108	B 118	B 139
B 123	B 110	B 127	B 116	B 117
G (green sunfish) 162	B 107	B 109	B 109	B 137
B 132	B 129	B 125	B 148	B 113
B 110	B 111	B 118	B 151	B 136
B 118	B 137	B 132	B 131	B 129
B 135	B 128	B 142	B 126	Total 80
B 125	B 133	B 118	B 138	
B 142 (longear?)	B 118	B 135	B 118	See July 1, 1972
B 133	B 128	B 117	B 109	for this information
B 133	B 143	Bar 230	B 141	superimposed as a
B 122	B 116	B 106	B 125	graft on the data
B 117	B 110	B 126	B 130	of that date. There is
B 129	B 118	B 132	B 120	a shift in size of
	B 106	B 112	B 109	the September population.

An osprey fed along the shoreline at east end of dam



The osprey hovered several times while fishing and although it dropped down to water did not dive or capture fish, at times it flew by the car as close as 40-50'. Barn swallows, approx 150 all told fed on south side of dam and rested on pavement on top of the dam. 2 crows fed on west side of lake. did not see or hear ducks or gulls. 2 sparrow hawks were observed to fly from Perry Reservoir from Lawrence. no unusual bird aggregates. Grackles are forming long lines in Lawrence in evening. The only bird observed along dam in fishing area was one spotted sandpiper (exclusive of an occasional barn swallow). The grackles that are present here in summer are not here now.

Lawrence, Douglas Co., Kansas

Sept. 24, 1972

Netted small sunfish from Peterson Pond. They ranged from 1/2 inch to 1 inch. One was definitely the green sunfish.

Sept 27

Chimney swifts still in Lawrence area.

1 mi. N, 2 mi. W Lawrence (P.O.), Douglas Co., Kansas

Sept. 28, 1972

Set 50 museum special traps in area in and around a semi-permanent man made pond consisting of short compacted grasses, hullocks of soil now covered with grasses, small willow, super-saturated soil supporting damp-loving plants. Area undergoing succession from clean barren soils to grassland to deciduous shrubs and trees. Highest temp today 80°F. no chiggers in an area that would support max. numbers. Mosquitoes common.

1 mi. N, 2 mi. W Lawrence (P.O.), Douglas Co., Kansas

Sept 29, 1972

Collected the following mammals from traps set last night. Temp. at 7:30 A.M. 45°F, slight rain in air and some wind.

720929-1	<i>Peromyscus leucopus</i>	171-72-22-14-28gms ♀
720929-2	"	175-82-22-15-25gms ♂
720929-3	"	186-83-22-16-28gms ♀ post parturition
720929-4	"	172-74-22-15-26gms ♂ Testis 12mm
720929-5	"	175-78-22.5-15-28gms ♂
720929-6	<i>Microtus ochrogaster</i>	150-36-20-12-45gms ♂ testis 13mm
720929-7	"	151-32-20-11-49gms ♀ 1x3emb 12mm
720929-8	"	144-33-18-12-45gms ♂ testis 12mm
720929-9	"	160-37-21-12-44gms ♂
720929-10	"	153-30-20-12-46gms ♂
720929-11	<i>Sigmodon hispidus</i>	196-76-27-15-54gms ♀
720929-12	"	183-68-27-14-43gms ♀

A road-kill *Sciurus niger* adjacent to wooded area near pond 720929-13 *Sciurus niger*. 470-201-68-32-515gms ♂

Perry Reservoir, Jefferson Co., Kansas

Sept. 30, 1972

Fly fished from west end of dam at a point where current begins to the NW. to the outlet gate. Caught the following:

bluegill 108mm standard length

B 110 G 150

Green sunfish 146 G 110

B 116 G 104

B 123 B 118

B 118 B 109

B 88 G 128

B 115 G 142

G 112 B 103

G 94 B 106

B 110 Arrived gate 12:30 P.M.

B 92

B 109

Day clear, wind 4 mi per hour. Temp approx 68°F. Water level at gates 91.80.

One spotted sandpiper along dam and kept osprey, was only bird along dam. At a point NE of gate about 1/3 way across lake were approx. 2000 American Coot in a long linear raft formation. No ducks were associated. Two osprey hunted and

rested on the N side of dam (see map of Sept 23, 1972 for flight) These birds were in area from 11:30 to 11:55 A.M. Their movements were synchronized and they generally flew together or rested together. One cormorant observed flying by at 11:35 A.M. A sparrow hawk was on S side of dam.

Lawrence, Douglas Co., Kansas
 minimum minimum in minimum
 Oct 5, 1972

Beginning of main color change. Mainly few individual trees.

Oct 15, 1972

Maximum color in native forests and colors there well synchronized. In the city the colors have not been synchronized.

Oct 16, 1972

Three sparrow hawks between 402 Yorkshue & Lake View.

Oct. 25, 1972

Just beyond the middle of the month Lawrence had sub-freezing temperatures which was considered a near record for early seasonal freeze. Of this date the colors are intensified because of the rain of about a week ago. Many trees are without leaves and the green leaves are curled and greyed from the freeze. This freeze effect is noticeable of the riparian cottonwoods and black willows along the Wakarusa River ^{and Kaw} which are still green but greyish from the freeze and are curled.

15 mi. SW Meade, Meade Co., Kansas
 minimum minimum minimum

Oct. 30, 1972

Mammalogy class presented me a Dipodomys ordii from above locality and collected on Oct 28, 1972. This specimen is:
 721030-1 Dipodomys ordii 260-146-41-12 gms ♀ 2x1 plac. scars.
 This specimen was prepared as a museum mount. Three live Dipodomys were placed in one 10 gal aquarium and the reaction was like a chain reaction. Remove 2 and single specimens lived satisfactorily. ⁷²¹⁰³⁰⁻² An Onychomys ⁷²¹⁰³⁰⁻³ was placed in some aquarium and in three days the two species were compatible and on occasions rested together. The Dip is the aggressor.

Lawrence, Douglas Co., Kansas
 minimum minimum minimum
 Nov 1, 1972

In city the elms are yellow and just beyond maximum. Oaks deep morose and dominant color. 1/4 trees bare or with light green color from freeze. Maples just beyond maximum color. This year like last year but colors not as well synchronized. Color on native hills precede city color this year by about a week.

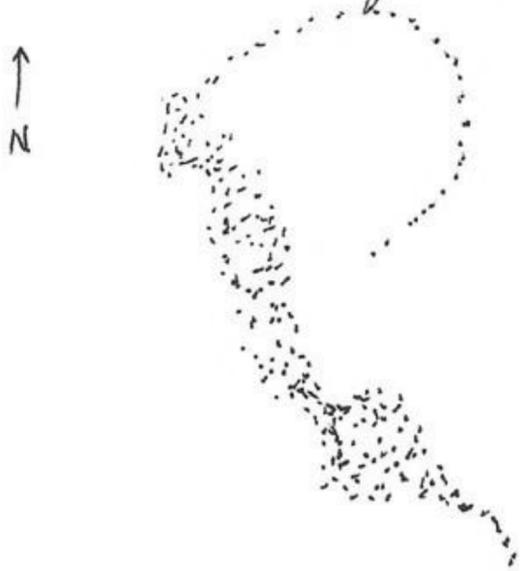
Nov. 7, 1972

Major color gone and leaves 70° off trees. Yellows of elms and maples on leaves low on trees as result of winds. The fractured leaves remain on trees and are greenish grey. Nov 16, 1972 First ground snow 3". Layer of slush on water in streets like ripples (side road down, top 

Perry Lake, Jefferson Co., Kansas

Nov. 25, 1972

Kept list of birds between home (402 Yorkshue, Lawrence) and Perry Lake via road that parallels turnpike, thence LeCompton etc. ^{10:30 A.M.} Mockingbird; sparrow hawk, 5 on entire trip; redwings, approx 5,000 in one flock which also included grackles, starling and cowbirds representing about 10%; yellow-shafted flicker; crow, meadowlark; red-bellied woodpecker; downy woodpecker; cardinal, tree sparrow, slate-colored junco; at the dam at Perry Lake noted approx. 15,000 mallard ducks. They were in center of Lobe #1 of dam formed a rather unusual raft thus:



with a long single line of 3-5 birds forming as a circle off the main group. Along north edge of dam counted 38 American golden ducks in small groups of 2-8 and generally distributed along the entire length of the dam. One isolated bufflehead also along dam. These ducks (golden-eye & bufflehead) feed out from edge of dam at about 20'. Also associated along dam were 13 horned grebes, feeding in the same areas as the ducks. One group consisted of 6 birds.

Eight ring-billed gulls hunted the shoreline and occurred as singles. 2 Coot were noted.

Clinton Lake, Douglas Co., Kansas

Nov. 27, 1972

Base of dam from W side to Wabarusia with a shallow layer of sand, nothing beyond to SE contact with side of valley. Most surfaces graded as associated with dam on W side. Trees cleared above dam along river. From the overlook at mileage 78.8 made census of birds along newly paved access road to highway 40. at 79.9 marsh hawk. 80.2 13 redwing blackbirds. 81.2 highway 40. No other birds except marsh hawk noted. Time 9:00 A.M., sky clear, temp 38, wind approx 10 M.P.H. The newly graded sides of the road, especially near headquarters should be checked for Indian artifacts before grown to grass or weeds.

Lake View, Douglas Co., Kansas

Nov. 27, 1972

18 ♀ and 9 ♂ American mergansers, 1 pied-billed grebe, 1 ring-billed gull and 1 bufflehead on lake.

Clinton Lake, Douglas Co., Kansas

Dec. 15, 1972

Annette and I made reconnaissance trip to N end dam site. There were no birds between the overlook and highway 40 on new road.

Dec. 17, 1972

Made census of birds in area of proposed dam site. No birds from highway 40 to overlook. No birds to bridge over Wakarusa (all trees have been removed and ground cover disturbed or graded). From bridge just beyond forks (house & barn have been raised to Collins home on Clinton road) noted 1 crow and 2 groups of 4 meadowlarks. From Collins corner to S end of proposed dam noted 35 meadowlarks in groups of 18-7-4-2-4. In fallow field 1/10 mi W of S end dam noted 18 marsh hawks in general area, some hunting near ground level, other flying or circling above. The time was approx 20 minutes before sundown and these birds were collecting for roosting. A sparrow hawk and 2 redtails were also in area. Most of the trees have been cut N of the Clinton road to N side of valley and the lack of trees give one the impression of greater distance to the landscape.

Lawrence, Douglas Co., Kansas

Dec. 18, 1972

Noted 2 redtail hawks systematically hunt a mile field near home. 402 yorkshire

Clinton Lake, Douglas Co., Kansas

Dec. 24, 1972

Left museum at mile 62895 at 8:40. Foggy and temp. 26°F. Robins singing on campus and have been doing so all winter. On highway 59 at Wakarusa bridge the ice is in large sheets and water 50% open. Water muddy from Clinton dam operations above. At 62903.4 at 9:05 AM at first farm house on west south side of Clinton road beyond S end of dam. Will keep complete list of birds and mammals in the area (see map). Farm house completely raised and barns and sheds partially down. Crow calling. 3 redtails, 2 of which could be Harlan's circling junco point at south end of proposed dam. They definitely favored this area as a hunting site. 2 Song sparrows and 1 savanna. 8 meadowlarks. 8:15 song sparrow. 8:20 redtail flew over and one of three from junco point

6961 (CLIN)

11 4312

12 950 900

Levee

950 900

852 857

Levee

847 850

850

14 850

13 850

55' 4310

900 850

854 864

918 850

4309 900

23 865

24 850

BR 862 859

4308 900

26 950

25 900

1018 1003

1010 898

4307 1000

26 1018

25 1003

1010 898

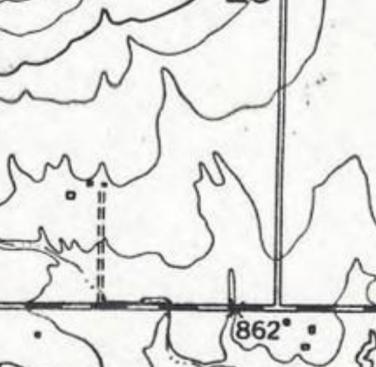
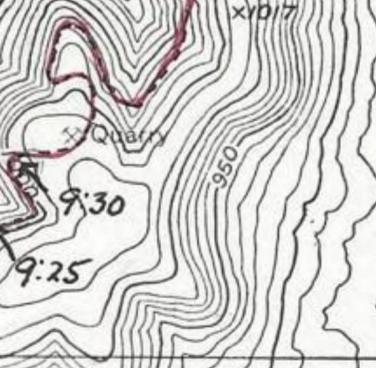
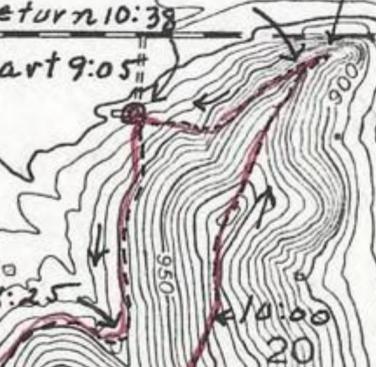
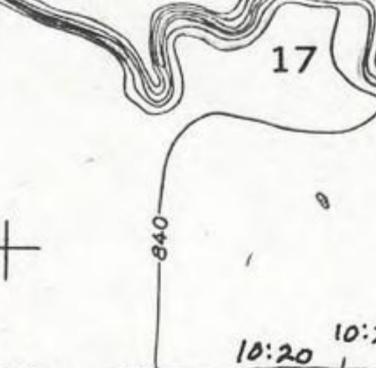
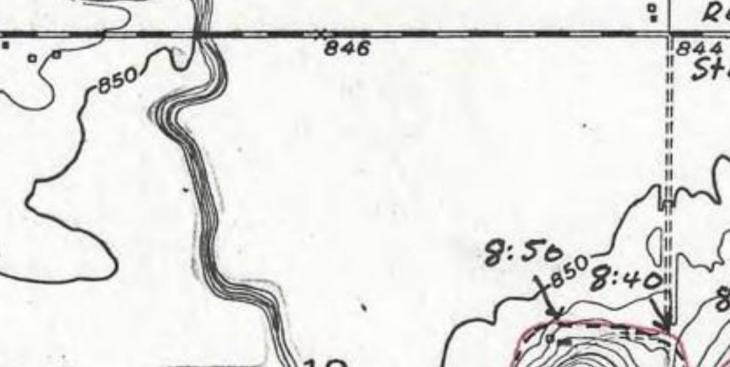
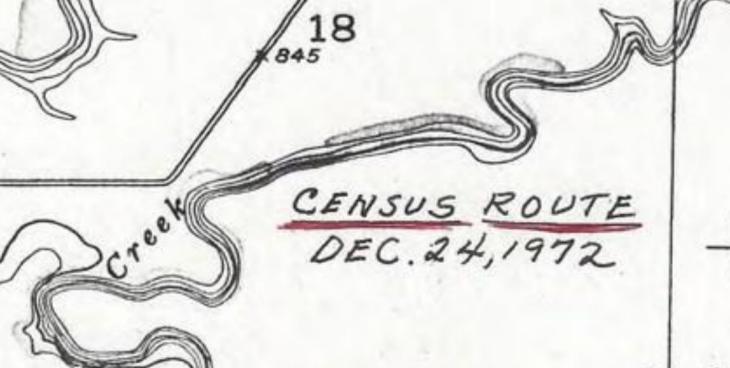
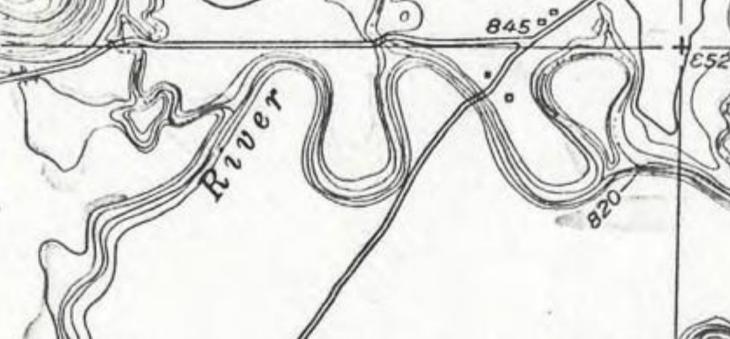
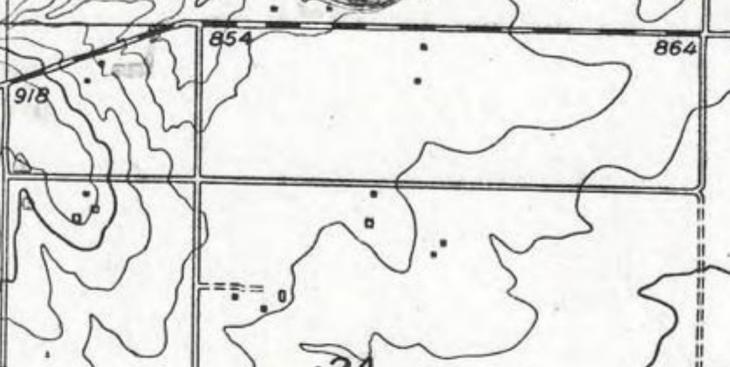
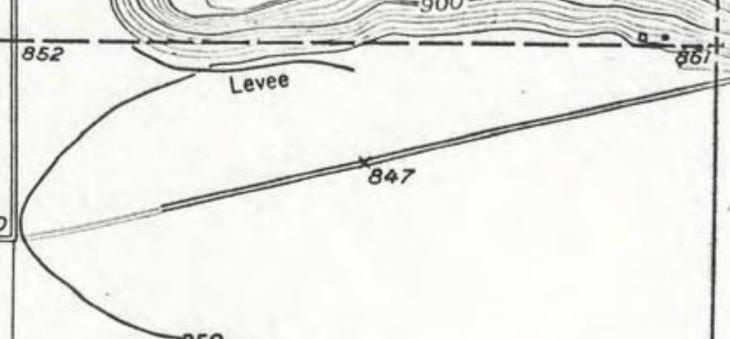
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1018 1003

1010 898

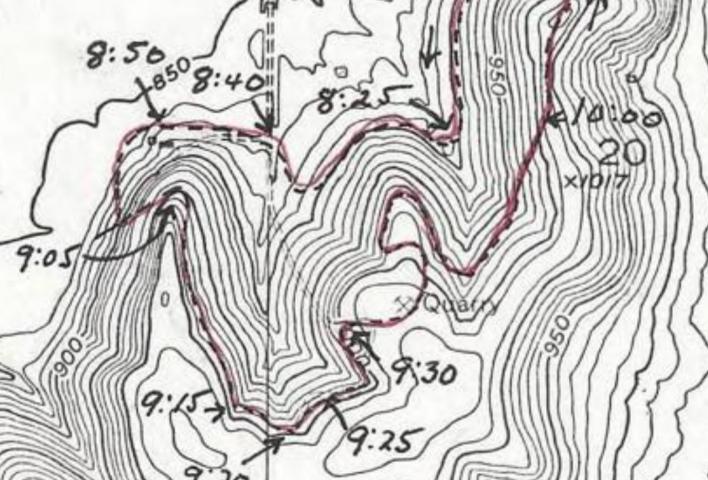
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210 000 FEET



CENSUS ROUTE
DEC. 24, 1972

Return 10:38
Start 9:05



Washington Creek Sch

210 000 FEET

8:25 farm pond, 18 goldfinch and 2 oneadaworks. Pond frozen. 10 slate colored juncos fed in weeds on lee side of dam. 3 crow. 8:40 now at road leading to second abandon farm house on hill, house gone and ancillary buildings nearly demolished. 2 swanna sparrow. 8:50 above farm area. Rank grass down slope from barn. Red-headed woodpecker flew N. This area has supported *Synaptomys* and conditions are ideal for good populations now. Considerable activity of neotoma as evidenced by houses and eaten osage orange seeds. 9:05 point above farm and now following upper bench just below rim. 9:15 head of gulch. Great horned owl and 2 bluejays. 9:20 crossing section road (old) just above squirrel site (see notes of several years ago) and still on upper bench. 9:25 goshawk flew thru timber with either a squirrel or rabbit kill and flew W across canyon thru trees. 9:30 gravel pits; cottontail. On weedy knoll to right of entrance noted a flock of birds composed of 15 cardinals, 40-50 slate colored juncos, 2 Titmice, 3 downy woodpeckers, 8 tree sparrows, 2 bluejays, 4 crow call beyond and one rabbit. Approx 30 more juncos beyond three gravel pit area. 10:00 top of ridge: Grass grown considerably having now sealed in cacti that was prevalent during time of overgrowing ^{Trees grown in} area. On ridge noted 2 yellow-shafted flickers, 5 bluejays, 12 juncos. 4 crows in area calling almost continuously to east in fields below. Continued down ridge to juniper point arriving 10:20. The three redtails were overlying the point. Mockingbird & one cottontail here. East point 10:24. Car 10:38 A.M. 2 marsh hawks in field at base of ridge to east.

Clinton Lake, Douglas Co., Kansas
 Dec. 25, 1972

Made census of birds and mammals in ridge areas S and W of the S end of proposed dam site. Left museum at 7:20 A.M. at mileage 62925. Waparusa 50% open and ice sheets as barriers. Left car at base of slope on east side of ridge (see map), at 7:45 A.M. 2 crows, 2 marsh hawks, gray squirrel, 4 slate colored juncos. Under one osage orange tree counted 80 uneaten fruits and 65 eaten fruits (tree 30' high) most trees with fewer fruits



CENSUS ROUTE
DEC 25, 1972

210 000
FEET

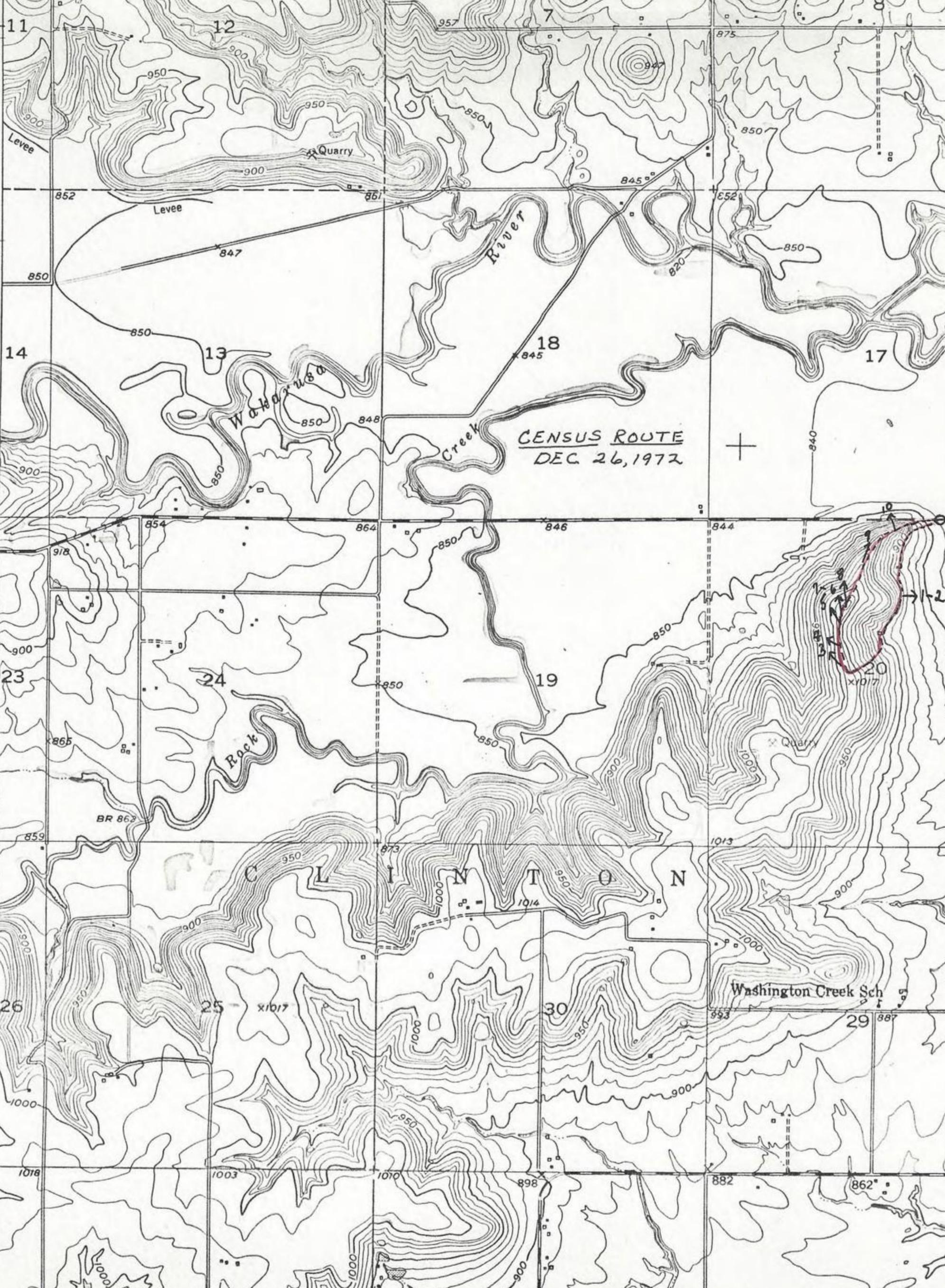
had a greater number or percentage of the fruits consumed by the neotoma. There is a high population of these animals in the area with houses of extra large size. The population has not reached the point where nests are placed in trees although a few are so placed. The state of freshness of fruits would indicate that they have been eaten for some time up to just recent consumption. Grey squirrel. 8:00 first erasional gully + shed. Barred owl left trees and was chased by 2 Crows. 8:06 second erasional gully with red barn + silo. old road above (cause of erosion). In field below are two marsh hawks and one Harlan hawk. 8:16 red barn and silo. Neotoma and nest of dry fibers and another of green leaves under old wagon body a few feet from silo. Yellow-shafted flicker, red-bellied woodpecker. Because of the numerous orange trees there are many neotoma in area. Just beyond the silo area is a rounded knoll with a single tree with ground covered by green mosses and lichens. This condition is due to complete drainage on all sides. 4 slate colored juncos, 8:25; main hedgerow from valley to top of ridge. 2 blue-jays and 1 great horned owl. 8:30 deer tree of shredded bark. This tree is in area of Andropogon Cottontail, 2 marsh hawks in field to east. 8:40 2 morning doves, song sparrow and mockingbird. 8:50 fox squirrel. 8:55 8 marsh hawks in field ^{directly below} just N of hedgerow directly W of the Wakarusa School. 2 crows resting in same field. Red-bellied woodpecker, 4 bluejays. Wind noticeable in open exposures but windless among trees. Most of the marsh hawks are hunting low but 2 are circling 300 feet above field. 9:00 fence row that runs straight S to Wakarusa school. 9:10 Cottontail 9:12 Lightning Point (red limestone from burning stumps). No hawks in broad open valley below. No evidence of coyotes. The area reminds one of the treeline area to W of Topeka. (7 lub hills). 2 redtails to NW. Left point at 9:25. Just beyond point on W ^{dry} exposure noted in one group. Approx 18 Harris sparrows, 150 slate colored juncos, 80 tree sparrows, 2 downy woodpeckers, 3 black-capped chickadees, 4 white-throated

sparrows, 6 white-crowned sparrows, 3 cardinals, 1 yellow-shafted flicker, 12 bobwhite. These birds worked uphill and took 15 min for them to pass. 5 minutes later the tree & junco ^{sparrow} returned from forested area. Up to now, on each exposure there has not been many small birds. In continuing along fence line counted 5 nest of neotoma spaced 20-10-30-50-30 feet apart. 9:50 yellow shafted flicker. 9:55 ^W end of milo field at road. Estimated in one group; 8 cardinals, 30 Harris sparrows, 4 white throated sparrows, 2 white crowned, 3 downy woodpeckers, 2 yellow-shafted flickers, 150 tree sparrows, 100 slate colored juncos, 5 song sparrows, 6 chickadees, 3 bluejays, 3 marsh hawks. This ^{is} a conservative estimate. 10:05 road running n-s. 10:30 marsh hawk, 30 tree sparrows. 10:15 bluejay, redbellied woodpecker. 10:25 point. 10:40 back to road & milo field. On n side observed a fox squirrel, 2 bluejays, 15 Harris sparrows, 2 cardinals, 12 quail, 18 tree sparrows, 60 slate colored juncos, white-breasted nuthatch. In among this group of birds in the ecotone between deciduous trees & open milo field was a sharp-shinned hawk. The small birds seemed to tolerate the predator. 11:00 field above rock quarry. Group of 30 tree and 15 juncos, 2 savannas. 11:02 beginning of ridge trail, Red-bellied woodpecker, 2 bluejays, 8 juncos, 11:06 redbellied woodpecker. 11:08 open prairie of ridge. 1 marsh hawk hunting and circling on ridge, one Harlan associated. 11:15 woodrat house in group of trees on top of ridge measuring 44" high. 11:20 marsh hawk caught a Sigmaston from brink of ridge to west. Several marsh hawks hunted this area. 11:35 Juniper Point. Sharpshin hawk here but no small birds. 11:40 most eastern point, flicker. Car 11:45.

Clinton Lake, Douglas Co., Kansas
 Dec. 26, 1972

made census of birds and mammals in vicinity of 5 end proposed dam.

6967
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55'
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4307
210 000
FEET



CENSUS ROUTE
DEC 26, 1972



Washington Creek Sch

Rock
Creek

Washington
River

Levee

Quarry

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Mary and I left car at east side of ridge at road. 2 redtails and ³ crows in field. Photo 721226-1 of fence line trees and field below. Photo 721226-2 of erosional manmade gulch bordered by trees. Field to house will be lake area property, now in fallow fields. The marsh hawks hunted these fields. Photo 721226-3 from S end of open ^{ridge} field showing grasslands to N. Photo 721226-4 from ridge to W. Photo 721226-5 to NW across valley now denuded of riparian forests. Starling & marsh hawk hunted in foreground. Photo 721226-6 to N down grassy ridge. Photo 721226-7 to west. Photo 721226-8 at sign reference marker at exactly in center of dam axis showing outline of dam and beginning of sand base just beyond river. Photo 721226-9 of jumper point and E line of dam. This knoll is a favorite place for hawks to sail in up-drafts. A mockingbird and 8 goldfinch among jumpers. Photo 721226-10 at most easterly point showing down area three interlocking of trees. 8 western evening grosbeaks, 2 cardinals and 7 junco-like in jumpers at base of ridge below point.

Lawrence, Douglas Co., Kansas

Dec 26, 1972

This year has been characterized by fewer grackles, ^{and} more redwings remaining later in season than on previous years.

Clinton Lake, Douglas Co., Kansas

Dec. 27, 1972

Annette P and I made trip to ridge on S end proposed dam. Left car on east slope (see map) at 3:25 P.M. 3 redtails in field to immediate east and calling. 3:30 yellow-shafted flicker, meadowlark. 3:38 4 juncos at red barn. Woodrat under wagon bed and new nest of green vegetation. 3:46 3 juncos (all slate-colored), 4 crows. 3:55 large group small birds including 20 juncos, 15 tree sparrows, 7 Harris sparrows, 1 white-throated sparrow, 2 bluejays, 4 cardinals, 2 downy woodpeckers. 4:06 top ridge & now to N. 2 crows, redbellied woodpecker, cardinal, mockingbird. 4:20 beginning of open prairie. Photo 721227-1 to NE across prairie, Lawrence in background. Photo 721227-2 as above with rocks & pond in foreground. Photo 721227-3 to NW. Photo 721227-4 to N at axis of dam (at marker) Annette in foreground. Photo 721227-5 same area but to E with sunlight on foreground. 4:15 jumper point. Photo 721227-6 of dam area three locs of trees in foreground. Shorteared owl feeding hunting below to N. 2 marsh hawks also feeding in same area. 4:55 return

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to ear. Temperature 52°F but ice frozen on exposures and among trees. A great blue heron left water near bridge on Wakarusa River below dam. The prairie ridge should be preserved as is.

Clinton Lake, Douglas Co., Kansas
Dec. 28, 1972

Made census of birds and mammals on ridge area S of the south end of proposed dam (see map). Left 10:05 A.M. from home in Lawrence at mileage 63089. Left car at dam at 10:20. Day overcast, some blue sky, slight wind. 40°F. At first contact with trees on hill found unusual blue-grey lichen on bark of trees. 2 Red-bellied woodpecker here and one grey squirrel. Will keep complete list of birds and mammals. 10:40 first drainage beyond shed. 20 slate colored juncos, Carolina wren. 10:50 drainage beyond red barn and silos. 2 white-throated sparrows. 11:00 graded road to top. 3 cardinals, 18 slate-colored juncos, 5 tree sparrows, 3 bluejays, mackinbird in one group. 2 Crow below in field. 11:07 5th minor drainage. Cottontail, crow. 11:10 7th minor drainage. 5 black capped chickadees. 11:13 8th minor drainage and supporting flowing water. blue jay. 11:20 point. 3 redtails circling above and thence to ridge to W. Usual complement of birds consisting of approx 150 tree sparrows, 80 slate-colored juncos, 18 Harris sparrows, 3 cardinals, 2 downy woodpeckers and 2 cottontail rabbits. Continued ^{south} west and at 11:25 at drainage. many large Neotoma nests. Considerable dampness in soils. Marsh hawk. 11:30 rock fence line and open beyond. 11:33 Lightning Point. 3 redtails of above moved W to next ridge and remained together and called. Cottontail, 20 slate-colored juncos. 11:50 road near drainage to lakes below. Along here in loose aggregate noted 40 Harris sparrows, 12 black-capped chickadees, 1 brown creeper, 80 tree sparrows, 8 song sparrows, 1 Carolina wren, 12 meadowlarks, 3 bluejays, 1 fox sparrow, 3 white-throated sparrows, 1 white crowned sparrow, 3 downy woodpeckers, winter wren. Many Neotoma nest along ledge to W. 2 Bluejay, black-capped chickadee. 12:05 N end of ridge to W. where rock fence runs down slope. 12:08 most northern point of ridge. Photo 721228-1 of a red fungus and green moss. 1:34 Minor Point 1:35 minor drainage 2 crows. 1:45 Major Point above farm below. Photo 721228-2 of locust tree holding ledge of rock. A Neotoma nest under ledge. This ledge has been previously named (earlier notes) and is near point. motorcycle trails have been recently developed in this area and trails

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have been cut thru forests and on top of ridge. This would be a violation of land use of the Clinton area. These ^{motor} eyelets must be provided with a recreational area, confined and especially planned for their use. Mufflers must eliminate noise if used in connection with Clinton Lake area. 12:55 old road grade up W side drainage. A vine leaf  is still bright yellow and alive. 1:00 first major drainage. 1:04 old road bed and 2 double wire fence line on each side of road. 1:05 W drainage head (double) 106 road from S that leads to gravel pits. Birds rare today except as in groups. 2 bluejays. 1:10 S^E drainage. 1:15 entrance gravel pits. In the area of the gravel pits are 18 tree sparrows, 30 juncos, 2 cardinals, 1:25 head drainage. On ^{main} ridge noted 2 cottontails, 3 crows, 6 bluejays, 2 yellow-shafted flickers, 2 Cardinals. 1:32 open field. Overcast of sky complete (no blue). marsh hawk. 1:53 S end dam marker. 1:55 Cedar Point. mackinbird, cottontail. 2:00 most eastern vantage point. 2:10 car.

Clinton Lake (at S end dam), Douglas Co., Kansas
Dec. 29, 1972

Mary and I to S end of proposed dam for photographs:
721229-1 on east side of fence line & trees from old road
721229-2 *ibid*.
721229-3 Top of ridge to west toward Lack Creek.
721229-4 Mary on top ridge to NE.
721229-5 Directly N along axis of dam from S side marker.
721229-6 *ibid*

Clinton Lake (at S end proposed dam), Douglas Co., Kansas
Dec. 30, 1972

Annette P. and I to south side of proposed dam for photographs.
721230-1 Annette N end ridge with some area of proposed dam and jumper point to right.
721230-2 Grass and to east from ridge.
721230-3 as above but highlights in foreground.
721230-4 Annette and I along axis of dam from marker.
721230-5 To north near axis of dam.
721230-6 Interlucent trees and dam site to N. from jumper point.
Last night thunderstorms, thunder and lightning with temp 40°F.
At midmorning today temp down to 33°F.

Lawrence, Douglas Co., Kansas
 Dec 31, 1972

Left for Provo, Utah at 10:30 A.M. at mileage 63167. Mary and Annette preceding by one week. The Datsun broke a crank shaft at Vona, Colorado and they continued by bus to Mary's. Temperature in Lawrence 24° F. Clouds 40 per cent with blue sky between. Wind from North. At 175 sparrow hawk. As is customary will keep list of all raptors and complete list of all birds at designated areas. 183 sparrow hawk. 192 main highway leading off Topeka avenue, 10:55. 203 sky clearing and 10% in clouds. No snow, even on exposures but ice on water. 205 redtail hawk. 208 at 11:12 Wabunsee Co. line. 201 sparrow hawk. Grasses of Flint Hills reddish with some yellow. Birds seen since Lawrence are cardinal, starling, Eng. sparrow, grackle, meadowlark. High wing from NW keeping birds low. Swift flowing creeks open, no snow. Grasses in Flint Hills does not appear to be as heavily grazed as in previous years. 215 Coyote roadkill. 221 first horned lark. 11:31 Clouds about 1 per cent. Areas of limestone, green clay and a variegated red in road cuts up to 241. 242 redtail. 245 sequence of rocks the same as above. 248 redtail. 249 3 redtails sailing above ridge E of airport using updrafts. 253 Smoky Hill River, open, no snow in area and water muddy. ^{small} Birds have been virtually absent from Lawrence to here. 254 2 redtails. Exit 296 at ~~2:55~~^{2:55} at 12:05 256 redtail on post. Travelling along lee side of ridge produces very irregular currents. 260 marsh hawk. 262 entering Dickinson Co. Sky now 100% clear of clouds at 12:14. 264 redtail hawk on post. 267 redtail on post. 275 first evidence of snow cover and this from yesterday's snow and preserved on exposures. 276 abelene at 12:28. 279 redtail. Snow cover increasing but still only a trace. In last 20 miles Andropogon in hummocks rather than generally distributed as is the case farther east. Decided increase in meadowlarks since Junction City. 285 entering Saline Co at 12:37. 286 redtail at Solomon River. No snow but considerable ice in fields like spring flood. 288 mallards flying in distance 291 redtail. 294 sparrow hawk. 296 Saline River at 12:49 297 81 South at Salina. 302 redtail on post. 304 redtail in tree in protected area. 314 entering Lincoln Co. trace of snow.

318 redtail in tree. 321 snow general and approx 1 inch entering
 Ellsworth Co. 323 redtail. 328 snow on shoulder of road for
 first time, 2 crows. 332 Vesper turnoff. There have been no
 meadowlarks on shoulders of road since Lawrence. Snow drifts
 from clear fields (plowed or closely grazed), elsewhere no drifts (tall
 grasses. 342 road kill horned owl at 232 highway (Texas, Wilson)
 343 entering Russell Co at 1:39, redtail. 350 sparrow hawk. 358
 redtail. 359 Russell exit. 363 junction of 381 highway. 371
 redtail. 372 entering Ellis Co. 382 redtail. 386 2 crows. ~~at~~
 Ft Hays exit at 387 at 2:40 400 2 redtails 401 Ellis. redtail,
 sparrow hawk. 402 ^{SP?} Segal Co. at 2:55. There is less snow here
 than 50 miles to E. 407 redtail. 413 first pheasant. 414 redtail.
 418 junction 283 wakeeney. Definitely less snow than to east.
 426 marsh hawk. 431 American roughleg. 434 marsh hawk.
 438 Quinter at 3:38. no jackrabbit along route. Snow cover
 decreasing except for drifts. 451 Grenfield 3:45. 453 marsh
 hawk. 468 entering Logan Co. 469 entering Thomas Co., 469
 first noticeable yucca. 487 marsh hawk, striped skunk
 road kill. 489 Atwood, Colby turnoff at 4:27. Will keep
 complete census of meadowlarks and horned larks. 490
 redtail. High Cirrus and lower clouds approaching to W.
 498 redtail, 4 horned larks. 507 Sherman Co., 2 horned larks.
 511 3 horned larks. 515 Edson turnoff and end of above
 census. 520 approx. 150 horned larks. 524 Goodland
 turnoff at 5:06. Sun within 30 min of setting. 541 Kansas
 State line at 5:23 Central time (will change to MT time at 4:23).
 Lights fading for census. 549 roughleg. 555 snowdrifts
 getting larger and deeper but road dry & has been since
 Lawrence. 562 sundown and end of census. Continued
 to Vona and checked with garage about Annettes datsun car.
 Left tow bar and continued after dark to Denver, thence
 N to Johnson's Corner where we stayed for the night. mileage
 63750 at 10:00 A.M having travelled 583 miles today.
 Road dry all the way.

[Continuation of trip to Provo in 1973 journal]