

JOURNAL 1988

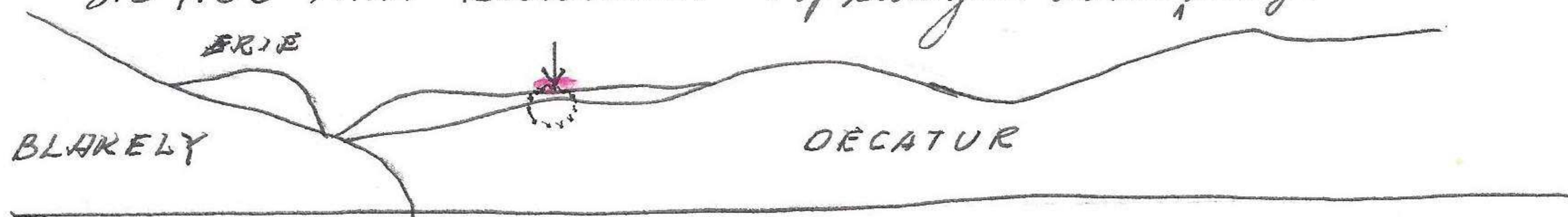
JAMES W. BEE

JOURNAL 1988

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa.

Jan. 2, 1988

8:09:05 A.M. sunrise. Top sun just above ridge. (at)



9:30 A.M. Lion's mane (jellyfish) 7" diameter, 2 feet from shore in front Bee House. (Cyanea capillata)

by ferry, Jan 3, 1988
To Anacortes, A.M. Birds observed: (wind NE, high tide.)

- 21 mew gulls one group.
- 1 red-breasted merganser
- 6 double-crested cormorant
- 8 glaucous-winged gulls.
- 8 mew gulls
- 2 pigeon guillemots
- 1 pelagic cormorant
- 1 glaucous-winged gull
- 1 " " "
- 2 double-crested cormorant

Willow Island:

- 2 glaucous-winged gulls
- 1 pelagic cormorant
- 1 glaucous-winged gull

W end Thatcher Pass

- 1 double-crested cormorant
- 4 mew gulls
- 4 glaucous-winged gulls
- 1 mew gull

5 Pointer Island

- raft 126 glaucous-winged gulls
- 120 mew gulls.

(9 private sport fishing boats 5 of Blakely)

glaucous-winged gull

" " "

" " "

" " "

Jan 4, 1988

Radical parotid, submaxillary and neck lymph nodes at Skagit Valley Hospital, Dr. Gary Johnson.

Jan - 5 to Jan 9, 1988

Recovery of above.

Jan 10, 1988

First purple finch at feeder at Bee House on Lopez Island.
2 ♂ and 1 ♀.

2:30 P.M. to river otter swimming S past Bee House.

Jan 11, 1988

7:35 A.M. 1 river otter swimming to S 15' SE of shoreline below Bee House.

10:15 A.M. 31 common merganser in front Bee House

10:30 A.M. a boat from Oregon City, Juneau, Alaska anchored N side Leo Reef, dove for 5 minutes, then repeated at Little and Big Flower Rocks and then beacon out from S end runway on Blokely Island.

6:45 A.M. One group of fishing birds in area of approx. 20' x 20' consisted of:

18 double-crested cormorant

6 common mergansers

13 glaucous-winged gulls

5 red-throated loon

5 common murre.

1:10 P.M. adult bald eagle on beacon of Leo Reef, 11 harbor seal, no other birds. Later a ^{American} crow arrived and alighted 6' from eagle. It ^(crow) remained 4 minutes and then left beacon.

The following birds have been in sound in front of Bee House for practically 95% of the time.

double-crested cormorants, singles to group of 30.

pelagic cormorants, singles to groups of 8.

common mergansers, singles to group of 32

hooded mergansers, singles to group of 3

glaucous-winged gulls, singles to 20 dispersed individuals.

mew gulls, singles to groups of 10

red-necked loon, singles to groups of 5.

common murre, singles to groups of 5

bald eagles, 1 to groups of 3.

kingfisher 1

In summer, there are times where no birds of present between Bee House and Leo Reef and laterally in North Lopez Sound.

Jan 16, 1988

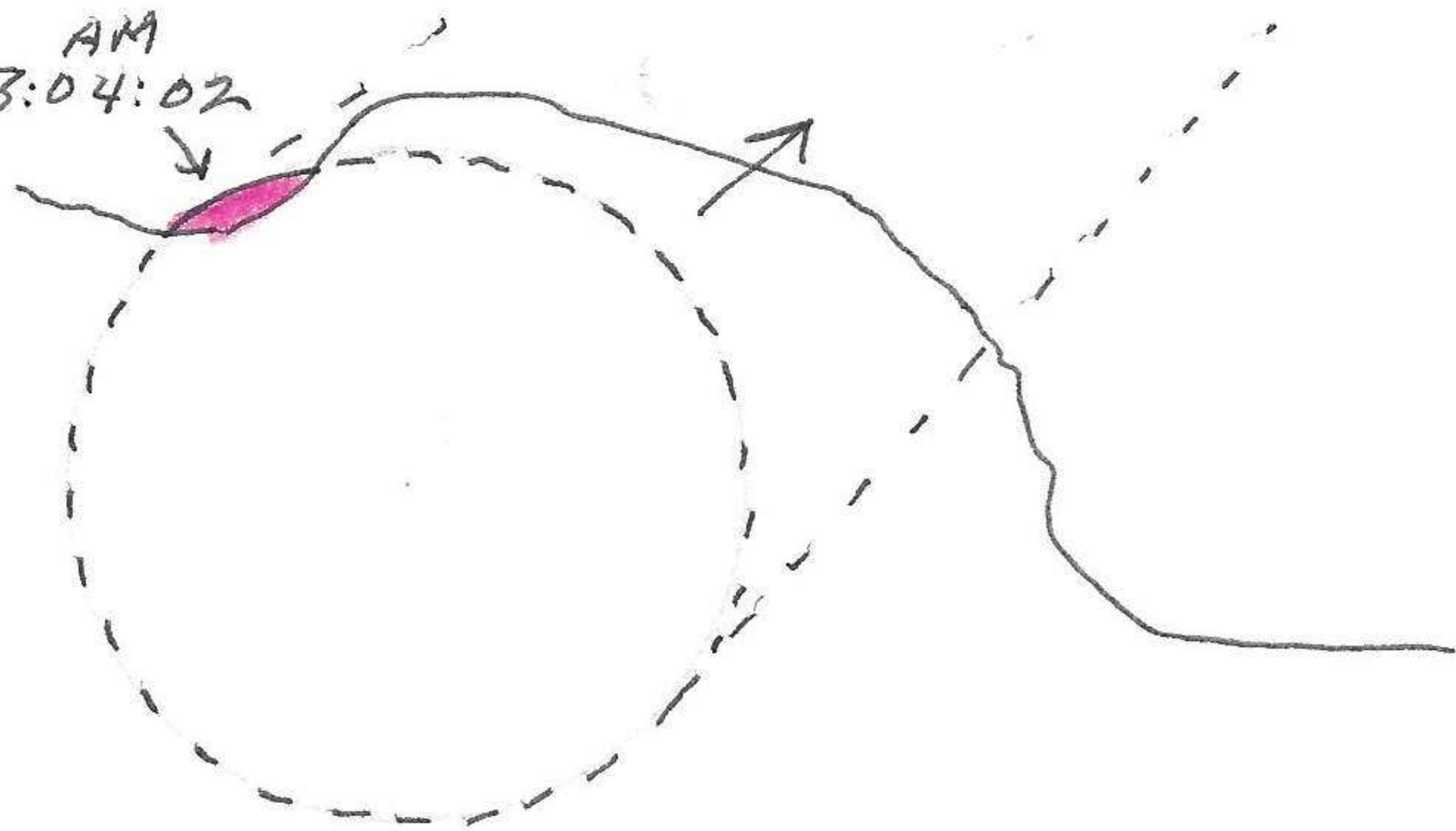
7:45 AM 8 bald eagles in air at one time. For last week the sightings average 5 (3-8) per day.

8:05 AM adult bald eagle on shore rocks below Bee House. It left and flew out 20', picked up a 10" fish and flew to Flat Point Tree.

Jan 17, 1988

8:04:02 AM. Sun up on mt. Erie.

8 bald eagles flew NS in front Bee House at about 40' high between 7:20 AM and 8:20 AM.



Jan. 19, 1988

880119-1 *Peromyscus m. holisteri* 176-81-23-18-24 gms ♀

7 bald eagles flew by Bee House average 60' above water and 50' out from shore, between 7:30 AM and 8:00 AM.

Jan 20, 1988

8:45 AM. ad. bald eagle on shoreline rocks, 3 feet from water, below Bee House, left to 150' SE, displaced 13 mew gulls and 5 double-crested cormorants who were fishing in an area of 8' x 10'. The eagle sailed to fishing area, dropped with fully extended legs and displaced water 1/2 way of body. It lifted off water and with extended clinched talons flew to Boundary Point Tree (3/4 up tree). If a fish was taken it was too small to see. Four minutes later, after gulls & cormorants had reemerged over ball of candlefish, the eagle slowly dropped to fishing area and repeated.

repeated the same action as before. It flew S with legs and talons trailing horizontally behind. On other occasions I have observed bald eagles capturing candlefish and eat them in flight. If glaucous-winged gulls or mew gulls have prior warning of an eagles approach they will leave at about 100' distance and occasionally as little as 30' from eagle. When eagle is in process of capturing fish the gulls will return and compete with the eagle. The cormorants collect in small groups and paddle out 100'-200' feet from eagle activity.

This evening toward dusk, Single Type, a mule deer fed at feeder. It measured $34\frac{1}{4}$ inches at shoulder height. This is the first time I have observed this male without its antlers. The name Type is a misspelling of the word tine but is retained as there are too many references in the journal to correct.

June 22, 1988

Seven bald eagles flew N or S in same pattern as previously described between 7:15 A.M. and 7:30 A.M. Other bald eagles flew by Bee House at other times of the day. Rain all night and this A.M.

11:20 A.M. 154 mew gulls used a water corridor from a point directly E of Bee House to 200' N of Flawin Island between Leo Reef and Bee House. Wind from S and wave just under white-caps. Mew gulls averaged 2' above water ^{and} to 10' above water. They flew just above water or walked on water with wings always extended for balance. (at least 50% of time). There was no stopping and settling on or in the water. all birds participating. Birds arriving at W end of corridor, or at segments of the corridor would fly N and start over along the route. This behaviorism was definitely special from what I have observed in the past.

10:30 A.M. For 25 min. a young immature bald eagle rested on lower flat rock of Flat Point. Feathers were wet. It finally flew S and beyond Lichen Point.

In last three days have observed 2 seal swimming together each day at about 75' from shore.

Double-crested cormorant are not as common on Leo Reef

as they have been a month ago. Harbor seal average 10 (6-14) on Leo Reef. No river otter since last recorded in journal. Ram, a mule deer, still carries deformed antlers.

Jan 23, 1988

Between 12:10 AM and 12:35 AM, 2 bald eagles and the following birds competed for fish during greatest activity:

54 double-crested cormorants

6 pelagic cormorants

1 Pacific loon

15 adult glaucous-winged gulls.

21 juv. " " "

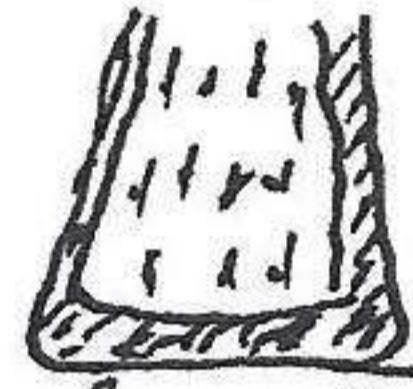
9 ad. mew gulls

14 juv. " "

1 ad bald eagle.

3 imm. " "

1 " " " with white tail bordered by brown and center mottled with dark feathers



The above birds constituting the fish pod started out as 9 glaucous-winged gulls and 12 mew gulls. The locality is 100' E of Flat Rock.

12:14 ad. and imm. bald eagle arrived from N and alighted in tree (large Douglas fir) above Flat Point shoreline.

12:15 P.M. The above ad. bald eagle left tree and glided E in descending steps to area of fishing birds, birds left fishing area, eagle dropped to water (half way up body), picked up a small silver fish (Candlefish), ate while circling and returned to perching tree.

12:16 AM. 6 glaucous-winged gulls returned to fishing area along with 6 common mergansers and 3 double-crested cormorants. The ad. & imm. bald eagle left perching tree, glided to water, picked up small fish, ate in flight and then returned to tree. On return was attacked by glaucous-winged gull.

12:17 P.M. now full complement of fishing birds and greatest fishing activity.

12:18 3 imm. bald eagles arrived and alighted in Douglas fir above Flat Point. The adult bald eagle left tree and glided straight to fishing pod. Gulls left and the mergansers and cormorants formed separate pods and swam away from the main fishing area. The ad. bald eagle picked up a 5" candle-

fish? with legs extended down and body into water $\frac{1}{2}$ way. For small fish it has no problem leaving water again. Again it ate the fish in flight and then returned to perching tree. It was chased by 2 glaucous-winged gulls.

12:20 P.M. Ad. bald eagle made pass over fishing area, hovered over water 2' above surface but did not enter or take food from the water. Directly above the glaucous-winged gulls and mew gulls circled and hovered above the eagle as if it were not present. A mew gull chased the eagle as the eagle flew to perching tree.

12:21 P.M. An imm. bald eagle left tree, glided to fishing area, did not capture fish, and then returned to tree.

12:22 P.M. An ad. + imm. left perching tree and circled low over fishing area. Gull and other fishing birds react to eagle positively if eagle approach at fast low or high angle but are less concerned if eagle approaches indirectly or by circling. Fishing area has now drifted or moved toward Lichen Point from approx 150' out to 50' out from point. The ad. bald eagle captured and flew to tree. It was chased and displaced in the tree by the immature bird (old eagle). If a fish is captured, even small ones, the leg of the eagle are held down and claws clinched, otherwise legs brought back to body. The common mergansers have now moved E to 150'-200' in a group. The cormorants have moved S some 200'. The fishing group now consists of 8 common mergansers, 13 glaucous-winged gulls and 2 mew gulls.

12:25 P.M. 3 imm. bald eagle left tree perches and move S into Swift's Bay.

12:28 P.M. The adult bald eagle repeatedly dove for fish. It was chased by imm. bald eagle and other returned to perching trees.

12:30 P.M. The common mergansers (8) and gulls still active. The group of cormorants flew N.

12:31 P.M. The adult bald eagle left tree perch, capture a fish 5"-6" long and returned to tree to feed on it.

12:33 The imm. bald eagle left tree at Lichen Point, flew low over gulls and then to tree at Boundary Point, then returned to Lichen Point.

12:34 P.M. Ad. bald eagle ^{left} to N out of sight.

12:35 P.M. Fishing group ceased activity and became generally dispersed in general area. (250' out from shore).

Bald eagles interfere with fishing activity of aquatic birds by gradually displacing them

1:30 P.M. to 2:05 P.M. An imm. bald eagle left Douglas fir tree on Lichen Point and flew down to rounded rocks below on the point at a point 2 feet above water. It moved 10' up rocks to top of prominent rock, faced the water and remained for the period indicated above (35 min.) At one time a group of 54 Common merganser flew past point some 25' out from shore. The eagle did not react.

Jan 24, 1988

7:30 A.M. First bald eagle flew S past Bee House at approx. 60' above water. Beautiful red clouds before red sunrise.

To Agate Beach S end Lopez Island between 1:20 P.M. - 3:00 P.M.
Birds at Humphrey Lagoon, 3 glaucous-winged gulls, 2 American crows, 4 buffleheads.

at Swift Bay at Low Beach: 25 glaucous-winged gulls, 12 mew gulls, 42 American crows, 3 American baldpate, 8 mallards, 3 northern pintails, 1 great blue heron.

Swifts Lagoon: 13 ^{northern} pintails, 8 green-winged teal.

no crows on island to Agate Beach.

Mackaye Harbor (along beach) 7 buffleheads.

Barlow Bay 1 ad. bald eagle on tree on E side bay at point.
8 buffleheads.

Agate Beach on Outer Bay: 2 common loon, 8 glaucous-winged gulls, 6 American crows.

Returned Bee House on Humphrey Head.

3:30 P.M. 4 river otter swam S in front Bee House at 15' from shore.

4:05 P.M. 8 river otter deliberately swimming and diving and fishing. moved N past Bee House. From shore to 10' from shore. 2 of the otter came ashore and checked two plastic artifacts.

Jan 25, 1988

This A.M. an imm. bald eagle flew S past Bee House and alighted in tallest tree (at top) on Lichen Point

2:00 P.M. ad. bald eagle on Leo Reef beacon. no other birds but harbor seal. 12 cormorant on Leo Rocks no 10 and 11.

2:08 P.M. 4 mew gulls diving in area 5'x5' 150' SE Bee House.

2:09 P.M. now 6 mew gulls and 5 glaucous-winged gulls at above (5'x5') area.

2:10 P.M. 3 double-crested cormorant, 5 glaucous-winged gulls arrived. 23 common merganser arrived and alighted 30' beyond local area and then swam or ran on top of water to fishing area. All birds were successful in capturing a silvery fish (Candlefish?) 2"-5" long.

2:11 P.M. 6 double-crested cormorants arrived. Also 2 common murres (summer plumage), 4 marbled murrelets, 1 red-necked loon alighted out 30' from center of activity. At this time a distinct brownish red mass ^{8'x12'} moved north and on surface the common mergansers ran on water out 40' from center of fish mass, then immediately return and all successful in capturing fish. Now 2:13 P.M. the following birds present and actively fishing:

- 46 double-crested cormorant
- 11 pelagic cormorants
- 32 American mergansers
- 5 marbled murrelets
- 1 common loon
- 1 red-necked loon
- 18 glaucous-winged gulls
- 9 mew gulls.
- 2 harbor seals
- 4 river otter.

2:13 P.M. An adult bald eagle arrived in area from N and glided down to red mass of fish, capture one, ate in flight and flew to top of tall Douglas fir on Lichen Point. The gulls momentarily left but they immediately returned. The double-crested cormorants and common mergansers swam away from area and remained out 40'-50' from fish pod. The same eagle returned, captured a fish and returned to fishing tree. A second ad. bald eagle arrived and both eagles captured small 5"-6" fish and flew to Douglas fir tree on Boundary Point. Both birds ate fish in flight. These two ad. eagles made 3 other flights over fish mass and captured small fish each time and each time flew back to tree perches, one to Boundary Point and the other to Lichen Point.

2:16 P.M. double-crested cormorant now 150' away from center of fish activity and the common mergansers 250' away, both species moving SW. At this time all birds had dispersed and the red mass of fish had disappeared. The cormorants finally flew back to Leo Reef no 9 Rock. The mergansers swam SW into

Swift Bay. The eagle previously perched on Leo Reef beam did not participate and remained on beam to at least 2:40 P.M. All birds and mammals participated in fishing in the red mass area. At 2:50 P.M. the three ad. eagles still in their perching areas (beam, Boundary and Lichen points). The loons, murres, marble murrelets in periphery area. The fishing activity lasted from 2:08 P.M. to 2:18 P.M. or 10 minutes.

3:00 P.M. 18 harbor seal on Leo Reef.

Single Tyne, a mule deer 34 1/4" at shoulders at feeder this evening as it has been in last 5 days. Antler base approx 1 inch diameter at bony skull level. Color of base light gray and wavy texture of surface. It fed with Buster, also a mule deer.

4:20 P.M. 3 river otter toward me to 20' when I was at edge of water below Bee House. A single sharp whistle was given at various positions but not certain whether given by the same individual.

A large ♀ mule deer at feeder, measuring 31" at shoulder. It was unusually aggressive.

Jan 26, 1988

First bold eagle this AM at 7:10. Between 7:10 AM and 8:00 AM. 7 sightings of bold eagles but not know if some repetitive.

8:10 AM 6 glaucous-winged gulls over fish ball 150' SE of Lichen Point. Then 12 more and then 42 gulls including 6 mew gulls in the next 2 minutes.

8:12 AM. In same area as above fish ball, the double-crested cormorant increase from 1 to 8 birds. Also a red-necked loon arrived. An immature bold eagle flew to area from N and all gull retreated to 100'-200'. The eagle passed over the area and then all gulls returned.

8:15 AM an imm. bold eagle returned to fish ball, circled 6 times but did not enter water. The gulls (glaucous-winged and mew gull) also circled close to eagle (10'-30' above water) but after eagle left only 1/4 of the gulls remained and the others dispersed to 200'-300' beyond where the cormorants had retreated. The aquatic birds did not return to fish ball area. The eagle left and alighted in Douglas fir on Boundary Point.

8:50 AM. Harbor seal swam by Bee House.

An adult bold eagle rested on Leo ^{Reef} beam from 9:10 AM to 9:20 AM.

10:50 AM The light doe (29 1/2" at shoulders) feed with 2 fawns also light pelage (one measured 25 1/4" at shoulders).

After feeding there was 30 minutes of grooming each other, including adult ♀ mother.

1:20 P.M. 12 common mergansers including 2 males. The males were the first males observed this winter-spring season. The common mergansers are characterized by being constantly on the move and travelling at faster speeds than other aquatic species.

1 ♀ bufflehead along below Bee House.

Jan. 27, 1988

7:10 A.M. first eagle sighted this A.M. Between this time and 8:10 A.M. 6 sightings of eagles flying N or S past Bee House.

9:00 A.M. a harbor seal 10' out from shore below Bee House.

9:20 A.M. single ♀ bufflehead in front Bee House and in Spring Cove for 1 hour.

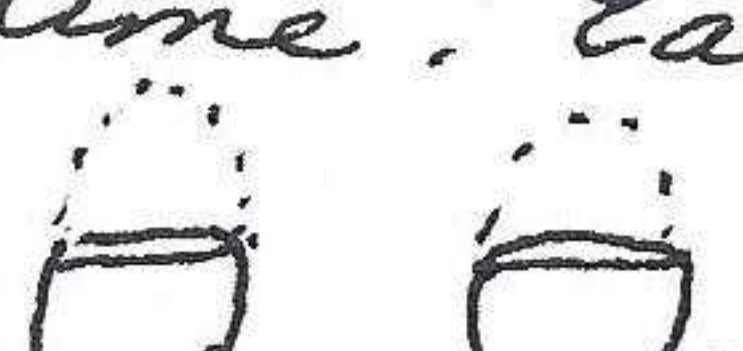
9:20 A.M. 42 common mergansers swam past Bee House to Spring Cove. Another group of 16 swam to Lichen Point from the E. The 42 to Spring Cove on approaching the Cove ran on water the last 30'. (to N shore of Cove) then reversed direction and swam out of Cove as if a the fan action of a counter wave. They continued S along shore-line to Lichen Point where they joined the 16 other common mergansers that had previously arrived from the E. all 58 mergansers formed single line and continued S into Swift Bay. These mergansers travelled long distances without diving or engaging in fishing. Only 1 ♂ in the 58 birds.

12:30 P.M. 11 mew gulls, 3 of which were adults, swam S past Bee House and picked small organisms or debris from surface of water.

4:55 P.M. noted a white mass 8' x 10' NW of Leo Reef Rocks nos 9, 10, 11. It was moving S with currents. Wind from SE. It had definite borders. It was the only such mass observed ⁱⁿ the entire N Lopez Sound. It was still intact up to 5:50 P.M. when lights faded at dusk. This mass could be a secretion of herring produced in breeding. no birds or mammals concerned with the mass. (see similar occurrence at Lone Tree Point at Thousand Trails in La Corner area of last year notes or perhaps the previous year).

This evening noted a brown creeper at Bee House. In a Douglas fir tree.

Jan 29, 1988

- 7:20 A.M. First bald eagle flew S past Bee House.
- 7:40 A.M. 3 bald eagles flew S and 1 to N past Bee House.
- 9:30 A.M. Following birds in N Lopez Sound approx. out to 300' and not in fishing formation.
- 3 double-crested cormorants.
 - 2 pelagic cormorants
 - 3 mew gulls
 - 3 common murrelets
 - 4 marbled murrelets
 - 1 red-breasted merganser
 - 1 western grebe
- 10:10 A.M. 7 bald eagles circling above NW end of Frost Island, for at least 1/2 hour.
- 10:15 Ad. bald eagle 1/2 way up Douglas fir tree on Boundary Point.
- 10:16 Ad. bald eagle (Douglas fir) above Dissected Point.
- 11:18 A.M. 12 common murrelets in one group approx. 300' SE of Bee House. Most common murrelets are in pairs, 3's, 4's or singles. Before diving murrelets hold head and neck horizontally and as head + neck goes under water the wings are extended and used as water propulsion for downward thrust.
- 1:55 P.M. An adult bald eagle sailed in circle from the south end of N Lopez Sound to above Bald Bluff (approx. 600' high) thence W to Lichen Point in a straight glide, thence into Swift Bay.
- 1:59. An eastern gray squirrel arrived at first time. Ears tipped to half length ear as if cut by scissors 
- 2:01 P.M. 4 mew gulls some 250' SE of Bee House dove 15 times in a false behavior and in the first minute 18 glaucous-winged gulls and 4 mew gulls, 6 pelagic cormorants and one double-crested cormorant, a ♂ + ♀ red-breasted merganser, 2 common murrelets and 4 marbled murrelets arrived at the site, but no fishing activity resulted and in 5 minutes the birds dispersed from the area.
- 2:38 An imm. bald eagle alighted on small Douglas fir tree 10' from the NE corner of bed room and on same level as bedroom floor.
- 2:40 P.M. 3 ad. and 5 imm. bald eagles passed bedroom windows of Bee House out 35', 4 of them flew S and 4 to N.

2:50 no cormorants or glaucous-winged gulls on Flower Island, the common murre and marbled murrets have similar diving patterns.

The red-necked grebe has a forward arch dive, sometimes out of water 10".

3:37 P.M. 46 double-crested cormorants on Leo Reef Rocks near 3, 4, 5. no harbor seal. from Bee House

3:38 P.M. Imm. bald eagle flew N 18' out and 10' above water.

3:42 P.M. with intense low angle sun rays on alcids in N Lopez Sound making their bodies plainly visible, counted 162 birds, 60% of which were marbled murrelets and 40% common murre. They were in small groups and generally distributed.

3:54 P.M. 110 glaucous-winged gulls in a raft 200' long and moving S by birds from rear of raft flying forward over raft and alighting in front of raft. Birds in Thatcher Bay. Wind from N.

3:57 False fishing pod of 6 glaucous-winged gulls and 15 mew gulls, 4 double-crested cormorants and 2 red-breasted mergansers. As a bald eagle circled directly over the fishing activity the gulls left but immediately returned after the eagle left and flew to Boundary Point Douglas Fir. The other birds left area by swimming.

5:05 P.M. 2 common mergansers observed for first time today.

Jan 30, 1988

8:20 A.M. In an area from directly E of Bee House to W side Flower Island and from Bee House to Leo Reef in radius were approx 30 mew gulls forming a continuous raft of gulls, all in flight from temporarily contacting water to flying 2' above water. Only 1 in 20 would land on water to pick up debris or food and then only for 3-4 seconds. They were generally distributed. Considerable walking on water. Wings all times outstretched but not flying as such.

8:30 A.M. 2 imm. bald eagles on Leo Reef beacon from 9:10 AM to 11:10 AM and no other birds on the reef where ordinarily there are from 30-50 cormorants & a few (10 gulls).

To Spencer Spit Lagoon and observed:

8 American widgeon

- 12 mallards
- 11 northern pintail.
- 4 buffle head
- 3 American crows

Approx 150 mew gulls at E end Spencer Spit.

Feb 1, 1988

Sunrise 7:51:45, upper edge sun at top of trees on ridge,
7:00 A.M first bald eagle flying N past Bee House, 60' above
water 150' out from shore.

7:01 A.M bald eagle flying S past Bee House.

At Hummel Lake at 10:20 A.M. 5♂ + 4♀ Common mergansers.
Lake 95% frozen.

Feb. 2, 1988

880202-1 *Peromyscus m. hallisteri* 184-83-23-18-24gms ♂
Caught in Bee House last night.

880202-2 *Peromyscus m. hallisteri* 186-87-23-19-25gms ♀
Caught in Bee House, this evening.

8:20 A.M 4 ^{mule} deer at feeder at Bee House.

5:02 P.M 7 ^{mule} deer at feeder at Bee House and first deer
since 8:20 A.M this morning. This is the pattern of the last week,
especially when temp. is cold.

11:30 A.M first dark-eyed juncos (Oregon race) in last 2
months (see notes)

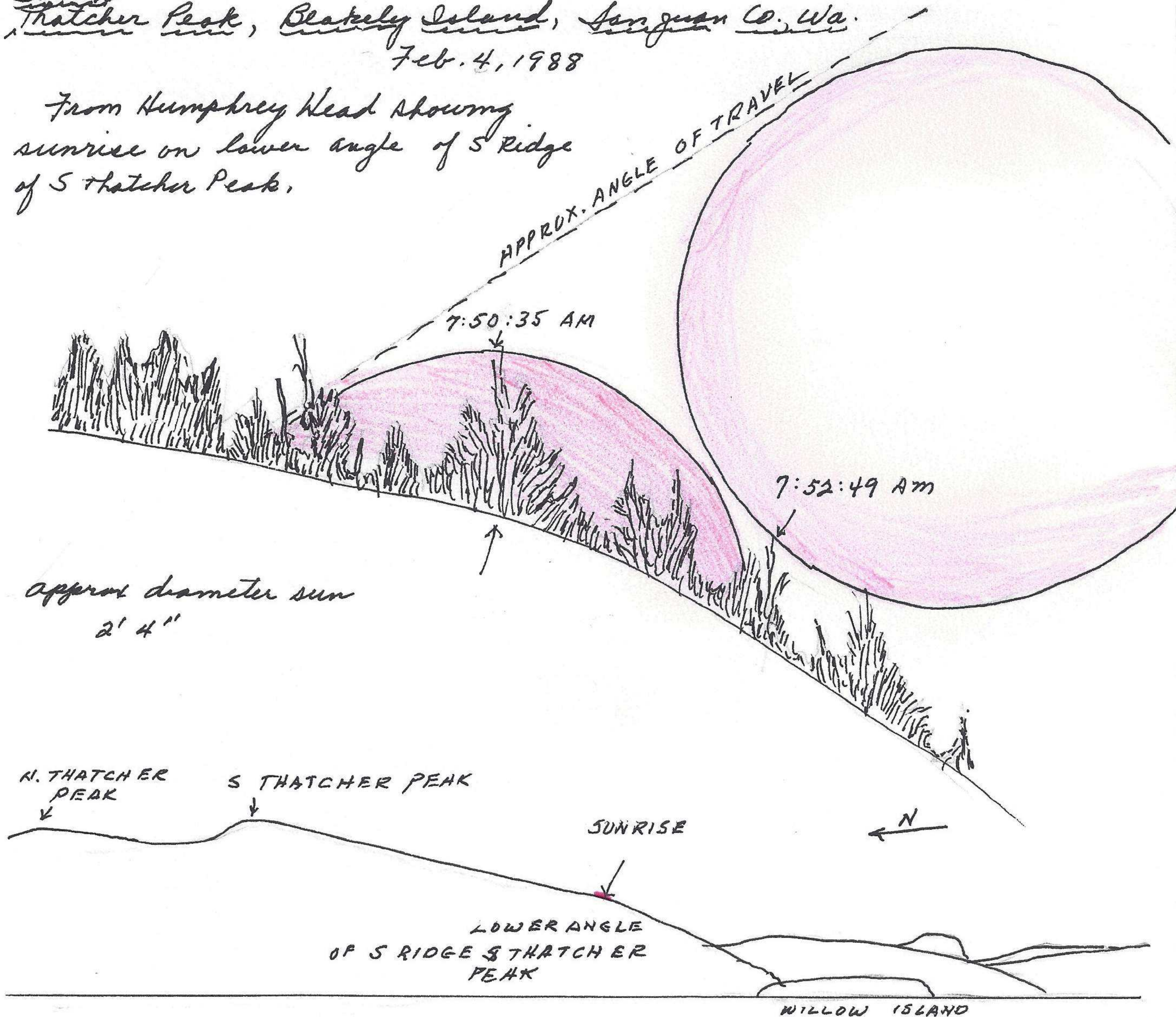
1:30 P.M 2 adult bald eagles on Leo Reef beacon.

This evening at 5:30 P.M (late twilight) 3 ad. ♀, 4 young
of year and a buck at feeder. The buck mule deer measured
34+'' at shoulders and had just recently (last week) shed its antlers.

South Thatcher Peak, Blakely Island, San Juan Co. Wa.

Feb. 4, 1988

From Humphrey Head showing sunrise on lower angle of S Ridge of S Thatcher Peak.



approx diameter sun
2' 4"

N. THATCHER PEAK

S THATCHER PEAK

SUNRISE

LOWER ANGLE
OF S RIDGE S THATCHER
PEAK

WILLOW ISLAND

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington.

Feb. 5, 1988

880205-1 *Peromyscus m. hallisteri*. 165-76-23-19-18gms ♀
from Bee House last night.

11:20 A.M. a double-crested cormorant on shore 50 NE Bee House. Stood for 20 minutes with wings fully spread.

11:21 A.M. a ♀ hooded merganser swam along shore, 1-2 inches from land, passed a glaucous-winged gull which was standing 16 inches from water, and neither seemed to be disturbed as the merganser passed by.

11:25 A.M. a river otter swam from Lichen Point directly to Boundary Point in a broad by-pass of Spring Cove. At one time swam 100' without diving.

11:28 A.M. 7 river otter swam SW past Bee House, Both fished and played in front of house in water for 5 minutes.

Feb. 6, 1988

8:00 A.M. a boat Paper Clipper, ^{arrived} from Orcas with a fisherman caught 2 silver Salmon approx. 150' SE of Bee House at 8:10 A.M. and 8:15 A.M. At 8:50 A.M. fisherman still trolling with down regger in same general area. Left at 9:20 A.M.

8:40 A.M. Beginning of dive fishing of 6 mew gulls, 2 double-crested cormorant arrived ¹⁰ seconds later and enhanced the diving action of the gulls.

8:41 A.M. Now 11 mew gulls and 4 glaucous-winged gulls making up fishing activity.

8:42 A.M. Now 16 mew gulls, 6 glaucous-winged gulls, 1 pelagic cormorant, 5 double-crested cormorants and 2 red-throated mergansers in fishing pod. All strictly diving birds rearing candlefish (average 2 1/2" long).

8:43 A.M. Gulls now resting on water but diving birds (not including gulls) still diving and catching fish.

8:45 A.M. An immature bald eagle circled Flower Island 6 times. There were no gulls on the island at the time of the arrival of the eagle, in fact there is seldom seen gulls on Flower Island during, at least, the daylight hours.

8:46 A.M. 2 ad. bald eagles on beacon of Leo Reef. Another adult bald eagle flew from Blakely Island (Thatcher area) to Lichen Point where it alighted in second high Douglas Fir.

6:00 P.M. Ram, a mule deer ♂, at feeder at NW Bee House. Still has antler, height at shoulders 32 1/2". Also single fawn (eye type) at feeder, and antlers shed. Measurements at shoulder 34 1/2". It is believed that both of these deer are progeny of mamma Deer, a mule deer. Also at feeder were Buster, a mule deer, family of light colored doe and her two light colored young of the year and also 2 dark young of the year.

Feb. 7, 1988

9:40 A.M. 1 river otter swam NE in front of Bee House. It by-passed Spring Cove.

Six bald eagle sightings this A.M. from shortly after day-break to 10:00 A.M.

10:40 P.M. 2 adult bald eagles on high rock on Flower Island. They were approx. 2' apart. They left at 11:08 A.M.

10:50 A.M. 41 double-crested cormorant, 4 harbor seal, 3 glaucous-winged gulls on Leo Reef. 1 hr earlier no seal on Leo Reef.

12:50 P.M. single ♀ common golden-eye 15' out from shore at Bee House. I have never seen more than 2 together at least this winter.

2:40 P.M. 18 harbor seal, 61 double-crested cormorant on Leo Reef. At this instant 3 ad. bald eagles and 1 imm bald eagle arrive and circled Leo Reef. All cormorants left reef and swarms SW. ^{Seal remained} Two of the ad. bald eagles flew S, circled 4 times and then 2-6 feet above water flew to Flower Island and alighted on uppermost bare rock (same position as of 10:40 A.M. this A.M.). The other two eagles dispersed but when I rechecked Leo Reef 3 minutes later, 2 adult bald eagles were resting on top beacon stand on Leo Reef. The cormorants were still swimming as a group to SW.

2:50 P.M. Arimo (boat) fishing in front Bee House

2:55 P.M. 13 common murre swimming in a line approx 100' SE Leo Reef, all in summer plumage except 5 of them.

3:00 P.M. Single ♀ common goldeneye still in area, first observed 12:50 A.M.

3:05 P.M. 3 harbor seal on N. Flower Rock, also 4 cormorants

4:05 P.M. a sharp-shinned hawk made its approach from NE at deer + bird feeding. A rufous-sided towhee ♂ left feeder and flew to brush pile associated with wood pile on NE end of Bee House. The hawk almost made contact with bird as it dove into brush pile. The hawk followed for 1 or 2 seconds but unsuccessfully, then flew 5 feet to limb only 8' from me. As soon as it recognized me it flew down to Spring Cove and then into trees of Spring area. I have noticed that the song sparrows (4 or 5) and towhees (2-3) are frequently at brush pile and at times are very confident while I work on the wood pile. I now see why they favor this spot. I am also wondering if it might be a good idea to place a brush pile 10-15' from feeder which now is relatively open.

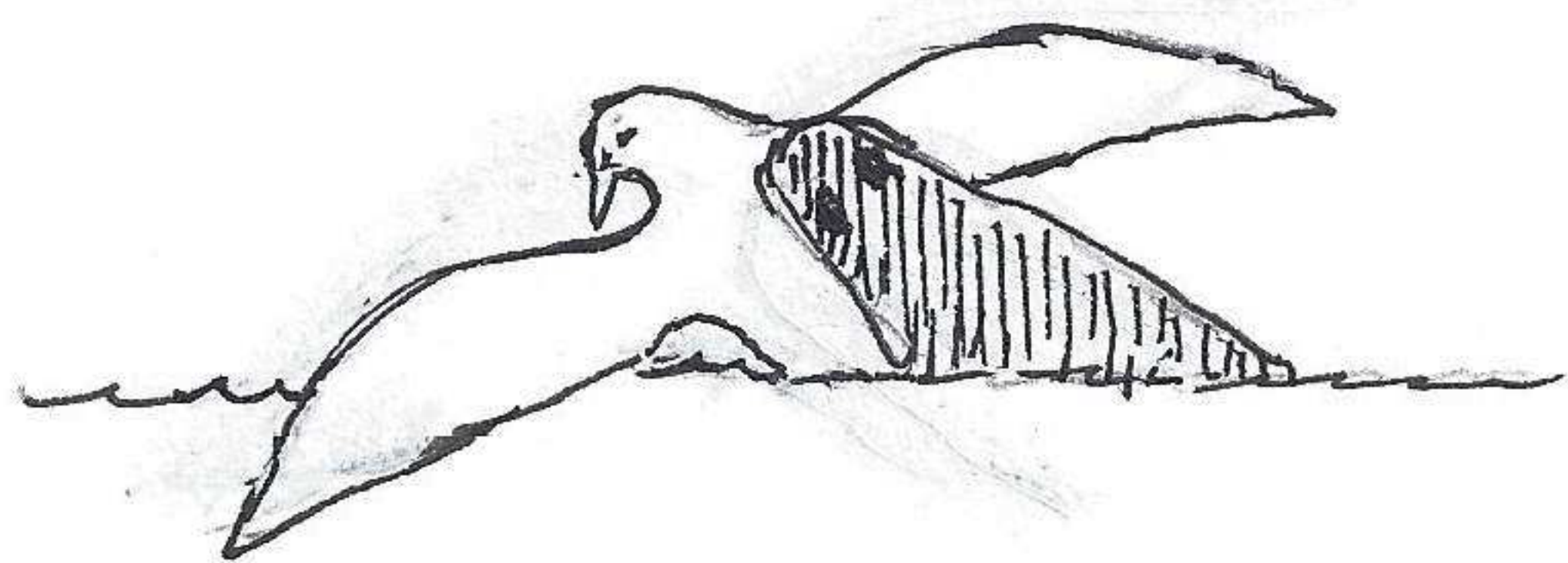
This evening collected a flying ant from inside Bee House. no 880207-1

Feb. 8, 1988

7 sightings of bald eagles between 7:00 AM and 9:30 AM.
2 hooded mergansers ♀ and ♂ fed in front Bee House approx. 20' from shore. Female dove 5 times as frequently as ♂.

880207-1 *Peromyscus m. hallisteri* 176-84-22-19 - 24gms ♂
From Bee House.

1:50 P.M. 16 mew gulls (5 adult, 6 second winter, 5 first winter) fished area from Otter Cove to Spring Cove on a systematic basis, keeping a group formation and circling above water from contact to 20' high. ^{waves but no whitecaps} Out from shore up 5' to 40'. When a candlefish was found, the gull would dive and either consume while on water or fly into air and consume in flight. Most diving gulls were successful. This behavior is of general distribution to concentrated diving into ball of fish. At 2:01 P.M. a single river otter, while under water captured a first year mew gull as the gull fed on a candlefish while resting on the water. The attack was from rear of the mew gull at a point of body and upper wing (humerus). The appearance was an otter with extended wings from its head. The kill was almost instantaneous or at least the struggle feeble from almost the beginning. The bird was taken approx. 12' from shore and from the first the bird was moved landward. From near contact with shore (2 feet) the otter moved around Boundary Point. I picked up camera and glasses and went to Boundary Point to see if otter may have stopped at Otter Cove to feed on bird but did not see the otter at any point along ^{to} the visible shoreline. From the time the otter captured the mew gull, Boundary Point, all the mew gulls circled immediately overhead and called. The otter maintained its hold on the gull as pictured above which proved to be a detriment for forward navigation as the wings would dip into water and impede forward movement. The otter tail continually extended above and beneath the water in adjustment to the resistance of the wings and head of the gull.



At dusk 7 mule deer arrived at feed, all from trail that leads down from top stairs. They include, Buster, 4 young of the year and 2 ad. females. They arrived on the run. 10 minutes later Single Tyne ♂ and Lam ♂, both mule deer arrived.

Feb. 9, 1988

880209-1 *Peromyscus m. hollisteri* 181-85-22.5-19-25 gms ♂
From Bee House.

9:30 AM. 4 otter swim and fished in front Bee House 10' from shore as they moved N. When I went out onto porch and in plain view, one called 4 times in a high pitched note.

10:05 Adult bald eagle arrived beacon on Leo Reef and on approach 36 double-crested cormorant walked into water and swim SW. At 11:00 the cormorants were still in water as a group & now 3/10 mi. N of Leo Reef. The eagle is still on beacon. Only one harbor seal on Leo Reef the same period of time.

This A.M. from daybreak to 11:00 A.M. 9 sightings of bald eagles, and as usual could be duplicates of same bird.

Flower Island has 15 glaucous-winged gulls, some in area of breeding sites of last year, 2 in pairs, rest on upper crest of island or on rocks on N end island.

11:30 A.M. Ad. bald eagle still on beacon Leo Reef. One harbor seal still there and group of double-crested cormorants (now 24) and in middle of N Lopez Sound directly E of Bee House. A second ad bald eagle arrived at Leo Reef and sits 3' from the one already there. Now 4 glaucous-winged gulls on Flower Island.

18 dark-eyed juncos (Oregon juncos race) in area all morning. This number is usual for this time of year.

12:00 noon 5 river otter feeding leisurely and systematically between 5' and 20' ^(15' average) out from shoreline below Bee House, moving SW., thence into ^{Spring} Cove.

12:14 left Spring Cove and now to SE along shoreline.

12:18 Flat Point (passing)

12:23 Passing Round Point.

12:26 Put out 20' N of Licken Point. Immature glaucous-wing gull arrived, lit 20' away and became interested in otter.

12:28 In water

12:29 Put out again in same area.

12:31 Back to water and swimming N.

12:35 Passing Round Point.

12:38 " Flat Point.

- 12:40 now reverse direction and going S. around Flat Point.
 12:44 Reversed direction and now passing Round Point.
 12:46 Passing π around Dissected Point.
 12:47 Put out Cove Point but immediately back in water
 12:48 By pass Spring Cove to Tide Point, thence NE.
 12:54 Passing below Bee House going π
 12:57 Passing Boundary Point.

1:45 P.M. Immature bald eagle alighted on rock directly below Bee House. It investigated 2 legs of a starfish (leg 6" long) but did not consume. Two photos of this eagle.

880209-2 and 880209-3 It left 2 minutes later and flew to Lichen Point Tree where it alighted half way up tree. Remained 20 minutes then left to S.

2:20 P.M. The emergent, ^{time of} gates of tidal pool below Bee House can be compared to Leo Reef Rock no 10 and no 11. Rock π side gate = no 10 and rock S side tidal pool = no 11.

4:42 P.M. 14 harbor seal on Leo Reef. 21 double-crested cormorant on Leo Reef Rocks 10 and 11. no 9 not exposed at low tide today. no gulls on Flower Island.

6:00 P.M. Ram, a mule δ deer still carries deformed antlers

Feb. 10, 1988

To Mt. Vernon. while waiting for ferry at terminal (Lopez) noted an adult bald eagle circling π end. Upright, ^{head} at 9:10 A.M. and at 9:31 A.M. an immature bald eagle circling same area.

Feb. 11, 1988

11:30 ^{A.M.} 3 river otter swam and hunted in front Bee House as they swam NE along shoreline

2:25 Sharp-shinned hawk in lower branches of Douglas fir NE (30') from Bee House. It left out over water then back to mainland near Boundary Point.

Feb. 12, 1988

From sun up. 7:42:16, cleared top tree 7:45:13 or 2 mi 57 sec diameter.

From sun up to 4:00 A.M. 3 to 7 eagles at Lichen Point. at one time 3 on rocks, 2 in trees (1 at 1/2 way up Lichen Pt tree, and 1 in Douglas fir nearest shoreline. 2 others in air circling.

10:40 A.M. Fisherman in Paper Clipper caught salmon 300' SE of Bee House. Played for 1/2 hour at which time he was middle Channel directly E of Bee House.
(^{the Lopez Sound})

7:40 A.M. [put in proper time sequence] Approx. 1800 mew gulls random distribution in N Lopez Sound from Bee House to Leo Reef and from directly E to point beyond Luchen Point. None beyond this area. They moved S, then flew back N to continue southern fishing. Birds about 1 to 2' above water and fishing and feeding on surface debris. No congregation of birds over fish balls.

Feb. 14, 1988

10:20 A.M. 8 river otter fished for candlefish in front of Bee House (15' from shore) as they swam S.

Feb 15, 1988

8:40 A.M. Dead double-crested cormorant drifted to shore in front of Bee House. It measured 701 mm total length. (end tail feathers to end bill). As the bird drifted to shore at 80' out from shoreline, an adult bald eagle attempted twice to get bird but although it contacted cormorant with feet, did not lift bird from water. I placed bird on bank below house and at 9:45 A.M. all breast meat gone and most of internal organs. as result of one immature glaucous-winged gull. This bird, ^{the cormorant} had been shot thru the head. The gull kept a crow from approaching cormorant. 9:50 A.M. a second glaucous-winged gull (an older bird) arrived and displaced the first gull. In 10 minutes one of 4 crows fed 6" away from gull, but crow cautious at all times. Later 2 crows and 1 gull fed together. Between 10:00 A.M. and 12:30 P.M. The glaucous-winged gulls (5 now in area) had moved the cormorant from upper ledge to lower ledge to water. Feet, wings & head still intact but most of body muscle & digestive tract gone. at 1:05 P.M. 8 river otter ^{by the} swam N out 20' but did not see cormorant in water. Tide current to N. when otter were approx. 30' beyond the cormorant, they turned around and came directly to cormorant as if they had at that point picked up the scent of the cormorant in the N bound currents. The first two otter dragged the cormorant onto rocks and then all 8 otter worked on the carcass. There was constant pulling but at no time any fighting. The

body of the cormorant was reduced to scraps. The wing and leg and neck were disarticulated and cleaned. In 15 minutes the otter^{all} left and moved N. Photo 880215-1 of these otter. At 1:30 an adult bald eagle flew low and straight flight without interrupting speed and ^{with} perfect precision picking the strap of esophagus, circled and flew directly to Dissection Point Tree (3/4 way to top). A immature bald eagle gave chase part way. The same immature then searched area of cormorant, then in and out of Spring Cove and finally to lower Douglas fir tree on Lichen Point.

^{SKULL ONLY}
880215-2 *Peromyscus m. hallisteri* 164-77-22-18-17gms. ♂
From Bee House.

3:30 P.M. 18 Common merganser fed in Spring Cove, one of which was a ♂. These merganser hunt for food by travelling great distance in the water and a greater speed than other diving birds that hunt in groups. 13 sightings of bald eagles today.

Feb. 16, 1988

To Lopez Village at 11:00 A.M. Enroute 6 surf scoters Swift Bay, 200' out from Low Beach. 8 mallards, 4 pintail, 2 green-winged teal in Swift Lagoon. ^{above Baker View Rd toward Spencer Spit.} 1 adult bald eagle flying east across valley of Port Stanley Rd at about 150' high. At Hummel Lake, 3 coot, 8 mallards, 5 pintail, 3 baldpate. At Causeway SW end Fisherman Bay, 1 horned grebe, 5 surf scoters W side. In Fisherman's Bay, E side Causeway, 14 mallards, 12 bufflehead, 3 baldpate, 4 pintail, 2 great blue heron and 21 black-bellied plover. The black-bellied plovers were in one group among grasses of meadows that have form on natural fill-in E of Causeway.

5:15 P.M. ^{River} otter swimming and diving travelling 5 out approx 150' and by-passing Spring Cove. Forward movement and not hunting along way.

15 sightings of bald eagles today.

Feb. 17, 1988.

880217-1 *Peromyscus m. hallisteri*. 166-76-23-18-20gms. ♂
From Bee House.

9:30 A.M. 2 male purple finch at feeder for 20 minutes.

The purple finch have been at feeder this winter in singles or 2 and 3 birds, nothing like last winter. notes in journal will indicated numbers recorded and just off hand these numbers in total will be less than 10.

Oregon juncos race of dark-eyed juncos have been the common birds at feeder, at feeding at least 40% of the day in average groups of 12 (8-20). Rufous-sided lo have been seen almost every day in numbers of 1 to 5, average 3. The song sparrow is represented by 1 every other day or so. The latter 2 species depend on brush piles near feeder for security and when not feeding are found at the brush site. Eastern gray squirrel average 3 (1-5) at least 30% of day.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa.
Feb. 18, 1988

6:50 A.M. 2 imm. bald eagles flew S past Bee House with straight and forceful flight. They turned SW into Upper Scurf Bay.

7:20 A.M. Imm. bald eagle S into Dissection Point Tree at 1/2 way up tree. 5 minutes later an adult arrived and alighted in same tree in uppermost branches.

9:05 A.M. 8 river otter put-out on N side Lichen Point, spent 4 minutes on grassy flat just beyond 2 prominent rock knolls. They spent 60% of time rolling over in grass, 30% playing with each other and 10% investigating area. They all left, not the usual ridge up slope, but directly S from flats. 2 bald eagles flew S over the otter at approx 80' above but the otter did not react to the eagles.

9:12 A.M. first chipmunk (Townsend) at Bee House since hibernation. A second one or could have been the first one observed 15 min. later. They passed thru area without stopping to feed at feeder. As far as I can tell the chipmunks are totally inactive from the time they hole-up in late fall to their emergence in spring.

12:00 P.M. 26 glaucous-winged gulls on Flower Island, half of them in areas where they nested last year. This A.M. at 7:00 A.M. 62 glaucous-winged gulls on the island (Flower).

12:05 P.M. 13 harbor seal on Leo Reef, 8 glaucous-winged gulls but no cormorants.

2:20 P.M. 4 river otter S past Bee House, fishing and travelling.

Feb. 19, 1988

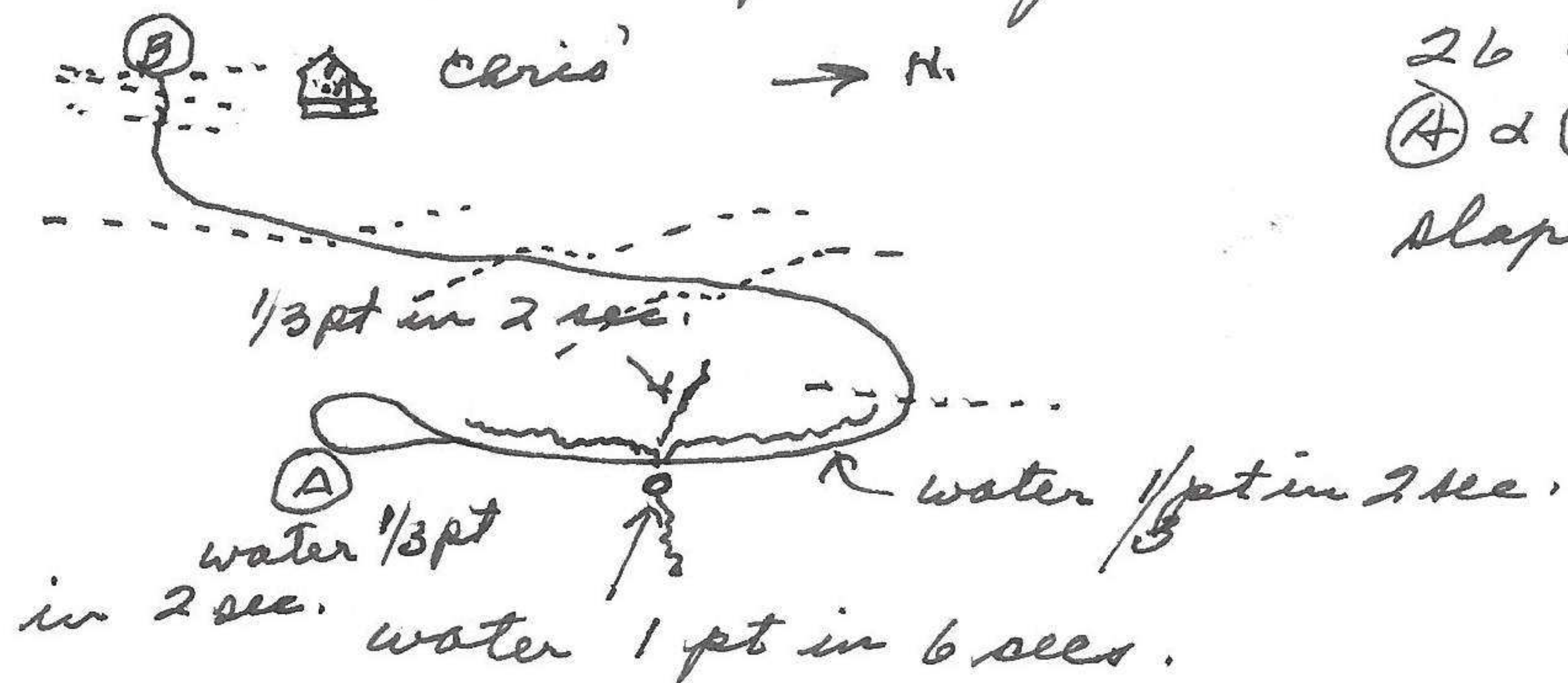
2:00 P.M. To Village. Surf Lagoon 18 mallards, all in pairs, 5 pintails, 2 green-winged teal, 2 crows, 2 baldpate Surf Bay, 8 surf scoters, 4 baldpate, 8 mallards, 3 pintail, 8 glaucous-winged gulls, 3 mew gulls.

Feb. 20, 1988

To Chris' at Lost Lake.

Feb. 21, 1988

Chris & Steves on Lost Lake, Snohomish Co. Checked deer (mule) on slope E of their home on E Lost Lake Rd, (last 7 days)



26 deer tracks, mostly near upper slope. water from drainage as diagrammed.

Feb 22, 1988

Left Chris and to Burlington and Mt. Vernon and then to Mt. Vernon Thousand Trails. Feb. 23, 1988 in Mt. Vernon.

La Conner Thousand Trails, Skagit Co., Washington.

Feb. 24, 1988.

made bird list of Lone Tree Lagoon and environs of Lone Tree Point, between 7:30 A.M. and 8:30 A.M.:

American Crow 4

glaucous-winged gull 8

bufflehead, 13 ♂, 8 ♀ in lagoon. males in local flight ski on feet from 3 to 8 feet when alighting near ♀. One ♂ displaced 6 competing males for the one female.

black oystercatcher 9 remain in all entire time.

sanderling 24, resting.

black turnstone 42 resting and feeding.

surf-bird 4, mixed in with black turnstones, larger and grayer and larger legs & feet (yellow)

common goldeneye 2

great blue heron 2
 surf scater 2
 western grebe 14, in middle bay to N.
 chestnut-backed chickadee 3
 American widgeon 6
 starling 4
 american robin 28, generally distributed on lawn in front
 of lodge.
 white-winged scater 12, under water for 27 seconds.
 song sparrow 2
 double-crested cormorant 6
 kingfisher 1
 red-breasted merganser
 northern pintail 2

As currents started to move w from slack, the shorebirds started to feed.

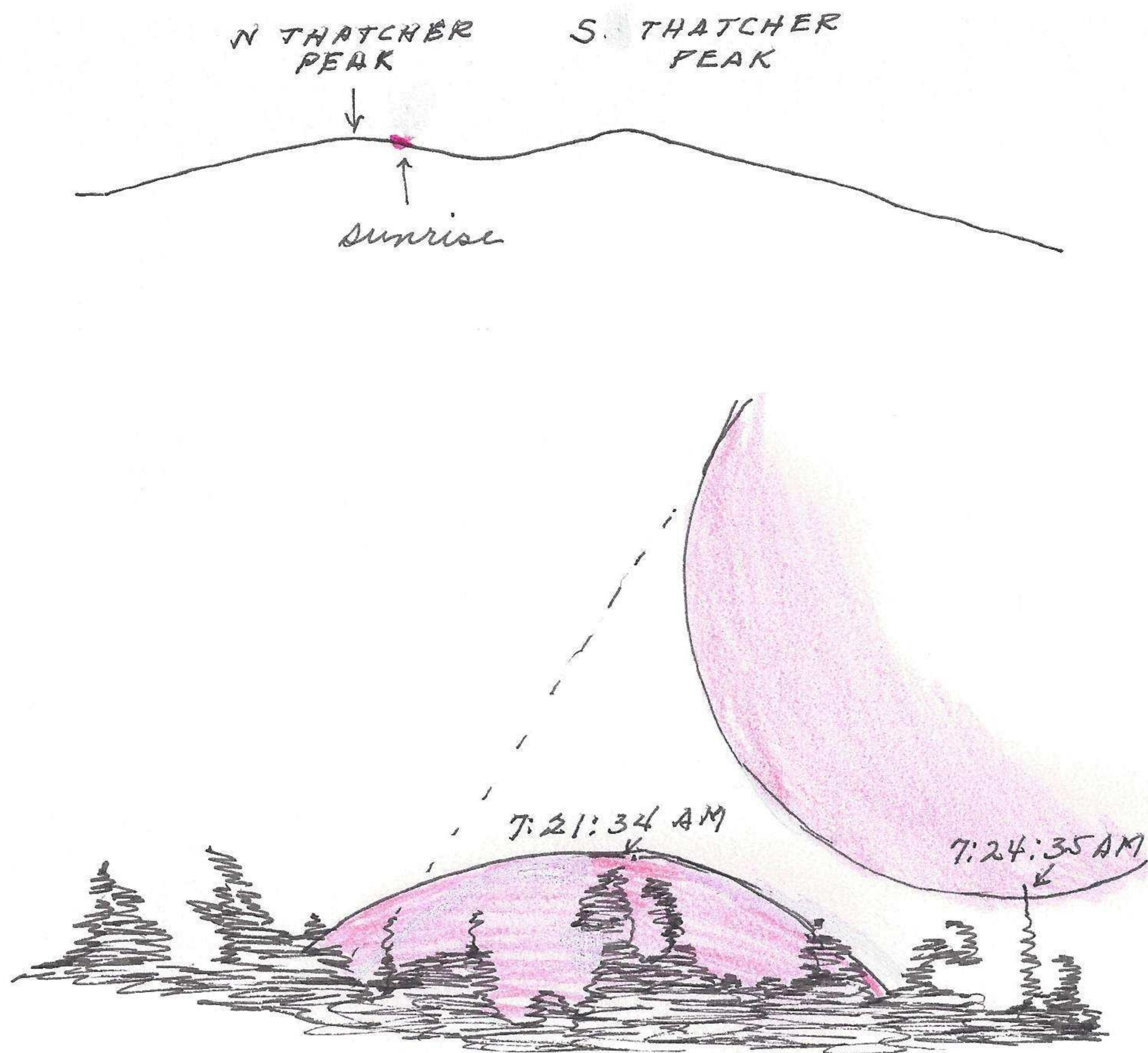
Left T.T. and checked peninsula (Tepas + Shell plants) at 1:30 P.M. at NE end peninsula counted 2,020 brant out 1/10 mi from shore and 2/10 mi. long raft. Other ducks were associated. Between 2 pipelines at N end were 240 bufflehead in one general group. On W side peninsula dominant duck the bufflehead.

Arrived Anacortes ferry terminal + left at 3:54 P.M. will keep list of birds on ferry. water calm. Double-crested cormorant, glaucous-winged gull, red-necked grebe, double-crested cormorant, glaucous-winged gull, glaucous-winged gull, Alcid, glaucous-winged gull, glaucous-winged gull, double-crested cormorant, 2 Alcids (marbled murrelets?). Passing light beam W end Thatcher Pass (N side), double-crested cormorant, glaucous-winged gull, 2 double-crested cormorants, glaucous-winged gull.

Arrived Lopez, thence to Bee House. at 5:10 P.M. single otter swam N past Bee House but not fishing enroute, swam on surface alternating with under water swimming.
no deer to feeder this evening

Bee Estate, Humphrey Head, Lopez Island, San Juan Co, Washington
Feb. 25, 1988

Recorded position and time of sunrise (next page)



2:30 P.M. 13 harbor seal on Leo Reef. also 1 adult bald eagle on beacon and no other birds. Also one adult bald eagle on highest prominent bare rock ^{of Flower Island} and 10 glaucous-winged gulls on S end and N end of same island.


Feb. 26, 1988

6:15 A.M. first bald eagle (imm) flew S at 50' above water in front of Bee House, turned and trended W at Lichen Point.

6:18 A.M. second imm bald eagle to S. in front Bee House.

6:23 A.M. 2 adult bald eagles flying S in front Bee House none beyond up to 7:15 A.M.

7:19:55 Sun up (top sun even with top of lone tree).

880226-1 *Peromyscus m. hallisteri* 185-86-23-19-25gms 
I have noticed that the length of hind foot is relatively constant in mice I have examined from Lopez.

10:00 adult bald eagle on beacon of Leo Reef. no birds otherwise.

4:20 P.M. 2 harbor seal swimming together 200' SE Bee House. Usually one sees only one.

5:20 P.M. Song sparrow in dark cellar of Bee House. The floor is partially open to outside. When door was open it flew out of door.

5:30 P.M. a double-crested cormorant made 13 consecutive dives 5'-10' from shore in front Bee House. Out of these dives, which lasted underwater from 3"-6", 12 sandfish were captured. It remained above water only long enough to swallow fish.

5:35 P.M. Single harbor seal 10' from shore in front of Bee House. It dove 3 consecutive times.

5:35 P.M. Pacific loon (1) in front Bee House

6:10 P.M. Bald eagle (ad) flew 5' in front Bee House. It is late twilight. Flew 60' above water.

Feb. 27, 1988

Don, Chris, Shelley and Tracy arrived from El Toro, Calif for 3 day visit.

Feb. 28, 1988

First bald eagle flew 5' in front Bee House at daybreak. Sun up at 7:16:22 A.M. at highest point of N Thatcher Peak.

To Friday Harbor with Donnie's family. Birds observed enroute by ferry:

1 double-crested cormorant

5 tufted heads

1 pelagic cormorant

1 red-necked grebe.

1 glaucous-winged gull

1 mew gull.

Return to Lopez 2:00 P.M.

1 common murre

1 marbled murrelet

At Bee House river otter swam S. also 2 harbor seal in area. All afternoon group averaging 45 mew gulls hunted in sounds out 200' and S to NE of Bee House.

Feb. 29, 1988

Donnie & family, Annette & I to Shark Reef at 2:00 P.M. at reef in front (N) of Deadmans Island were 4 black oyster-catchers and 1 red-necked grebe. No glaucous-winged gulls on island. At junction Dorris Bay & Fishermans Bay road, approx. 200 robins, generally distributed in grass field. These birds are increasing in numbers. Return to Agate Beach and thence to Bee House.

4:45 an adult bald eagle rested in perching tree in front of John Saul Jr. for at least 1/2 hour and then flew E to Blakely Island at approx 150' high.

Large bumblebee in house. (orange abdomen).

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa
 march 1, 1988

at 1/2 mi. n junction Center and Shell roads observed an imm.,
 bald eagle with 3 primary feathers missing.

Left Lopez at 2:40 P.M. for Anacortes and ^{La Conner} Thousand Trails
 at Lopez Ferry landing the Keateh. broom had 120 yellow flowers
 on one bush. First ones noticed one week ago. One immat-
 ure bald eagle left a tree E of ^{upper} ferry parking lot.

(Don and his family left this A.M.) We left 2:40 as stated
 above. Fog 5 mi visibility. Birds observed. 6 double-
 crested cormorant at terminal. no eagle of nest at n end
 Humphrey Head.

1 Glaucous-winged gull

Ad. bald eagle on beam of Leo Reef. (beam refuses to guard-
 rail below the light).

8 harbor seal on reef,

1 glaucous-winged gull.

Common murre, paddles out of way from ferry instead of
 flying away.

glaucous-winged gull.

W end Thatcher Pass.

glaucous-winged gull

4 glaucous-winged gulls

1 marbled murrelet.

glaucous-winged gull (just one in water, all others in air)

E end Thatcher Pass:

1 glaucous-winged gull

n of E side James Island:

glaucous-winged gull

" " "

pigeon guillemot

Anacortes. Continued to Thousand Trails (LaConner)
 and observed the following birds in Lone Tree Lagoon
 and shorelines of Lone Tree Point:

5 black oystercatchers

5 glaucous-winged gulls

2 double-crested cormorant

24 baldpate (Am widgen)

1 European widgen

1 Common Loon

4 white-winged scoters.

- 1 belted kingfisher
- 6 common goldeneyes
- 1 Barrow's goldeneye
- 4 American crows

La Conner Thousand Trails, Washington

March 2, 1988

ad. bald eagle flew 50' high S across Lone Tree Lagoon, 13 ♀, 9 ♂ buffleheads in Lone Tree Lagoon. They maintain close order group. (22 in area 6'x6'.)

5 black oyster catchers on S beach.

42 american widgeon feeding in return surf waters on beach. S of Lone Tree Pt.

Left La Conner Thousand Trails and drove to Burlington. At junction (NE) of Anacortes Street & Peace (or E across road in field of 1309 S Anacortes St. noted ^{one group of} 49 ad. and 12 imm. trumpeter swans. All swans in field numbered 92 birds. This is a grass field, cut seasonally. The canning company on property grinds debris from canning of vegetables etc and spreads over field. The field in places is damp and some open water. Informants say they arrive in middle of January and, except this year for 2 weeks, remain day and night in the field. At the time I observed them they were all resting. In the 8 years that Joe's Trailer Repair Company has been in business there, this is the first year the swans have used the field.

On return to T.T. at La Conner noted 850 trumpeter swans in field SE of junction McLean and Best roads. There was an equivalent number of Canadian geese mixed among them.

Mar 3, 1988

at La Conner Thousand Trails observed the following birds from shoreline S side of camp:

7:36 AM:
1 black scoter, ♀, with right injured leg, paddled up out of water.

1 white-winged scoter

1 ♂ Barrow goldeneye

1 common loon

1 ♀, 2 ♂ common goldeneye.

1 horned grebe

1 glaucous-winged gull

1 ♀ bufflehead

10:20 A.M. 46 black turnstones

4 black oystercatchers

1 shorebird with black turnstones but lighter and slightly smaller.

4 ♀, 3 ♂ Barrow goldeneyes

4 dark-eyed juncos (Oregon race)

Left T.T. and drove to 1309 S Anacortes St in Burlington. Across street to east 152 trumpeter swans, 256 american widgeons, 24 American crows and 1 marsh hawk. I approached swam from main road for 200 feet before the swans all stood upright and started to walk away from me. They were at that time 200 feet away. As I watched they settled down and half of them again came to rest on the grass. I left and they did not react.

Left Burlington and drove back to Anacortes. at junctions 536 and 20 noted a redtail.

Arrived Anacortes ferry terminal. noted a boat seining for fish and it left but 45 glaucous-winged gulls remained in area for the next 1/2 hour.

Birds in area:

5 ♀, 2 ♂ greater scaup. They remained in some area near terminal along beach (20' out) for 1 1/2 hrs.

4 glaucous-winged gulls, mainly on piling at terminal, 70 on piling in W end of bay.

1 red-necked grebe

2 bufflehead.

1 common loon

2 double-crested cormorant.

2 American crows.

Left on ferry 5:20 P.M. Will keep list of birds along way. (on side boat) and out to 1/10 mile.)

1 great blue heron flew S

11 " " " " " "

1 glaucous-winged gull

1 pigeon guillemot.

1 black scoter

1 glaucous-winged gull

1 pelagic cormorant

3 pelagic cormorants

1 glaucous-winged gull

4 glaucous-winged gulls, first ones on water.

- 1 pelagic cormorant
 2 Cassin's auklet
 1 glaucous-winged gull
 E end James Island:

18 seeters.

- 4 glaucous-winged gull
 2 common murre
 W end Thatcher Pass
 5 glaucous-winged gulls
 8 mew gulls
 1 glaucous-winged gulls
 1 " " " "
 1 " " " "

marbled murrelet.

Leo Reef completely covered with double-crested cormorants
 glaucous-winged gull
 4 western grebes.

- 1 pigeon guillemot
 no bald eagles on nest at N end Humphrey Head
 2 pigeon guillemots
 1 glaucous-winged gull } both to E.
 1 " " " " }

- 1 pelagic cormorant
 7 glaucous-winged cormorants on piling Lopez Terminal.
 1 great blue heron.

Returned to Bee House.

Bee Estate, Humphrey Head, Lopez Island, S.W. Co., Wa
 March 4, 1988

2:00 P.M. 3 hooded mergansers and 1 ♀ red-breasted merganser in one group that remained together for at least 3/4 hour in front Bee House.

Informed that sea cucumbers, in area of sunken oil barge at Anaortes Ferry Terminal, had oil in digestive tract but not beyond that organ system. The sea urchin had drops of oil throughout its systems.

3:00 P.M. 2 adult bald eagles on separate bare rocks on top of Flower Island. E side. No glaucous-winged gulls on island. Fifteen minutes later, no change. 3:35 P.M. Both eagles left original perches and alighted together on ^{top of} middle section of ridge. No gulls on island. 3:15 P.M. 2 bald eagles back in original position (of 3:00 P.M.) 2 gulls on island

6:00 P.M. sunray gone from area and bald eagle that was in middle of Flower Island still there. 48 glaucous-winged gulls on island in usual distribution except 50' either side of eagle. Occasionally a gull will glide over eagle and then sail upwards as if harassing the eagle.

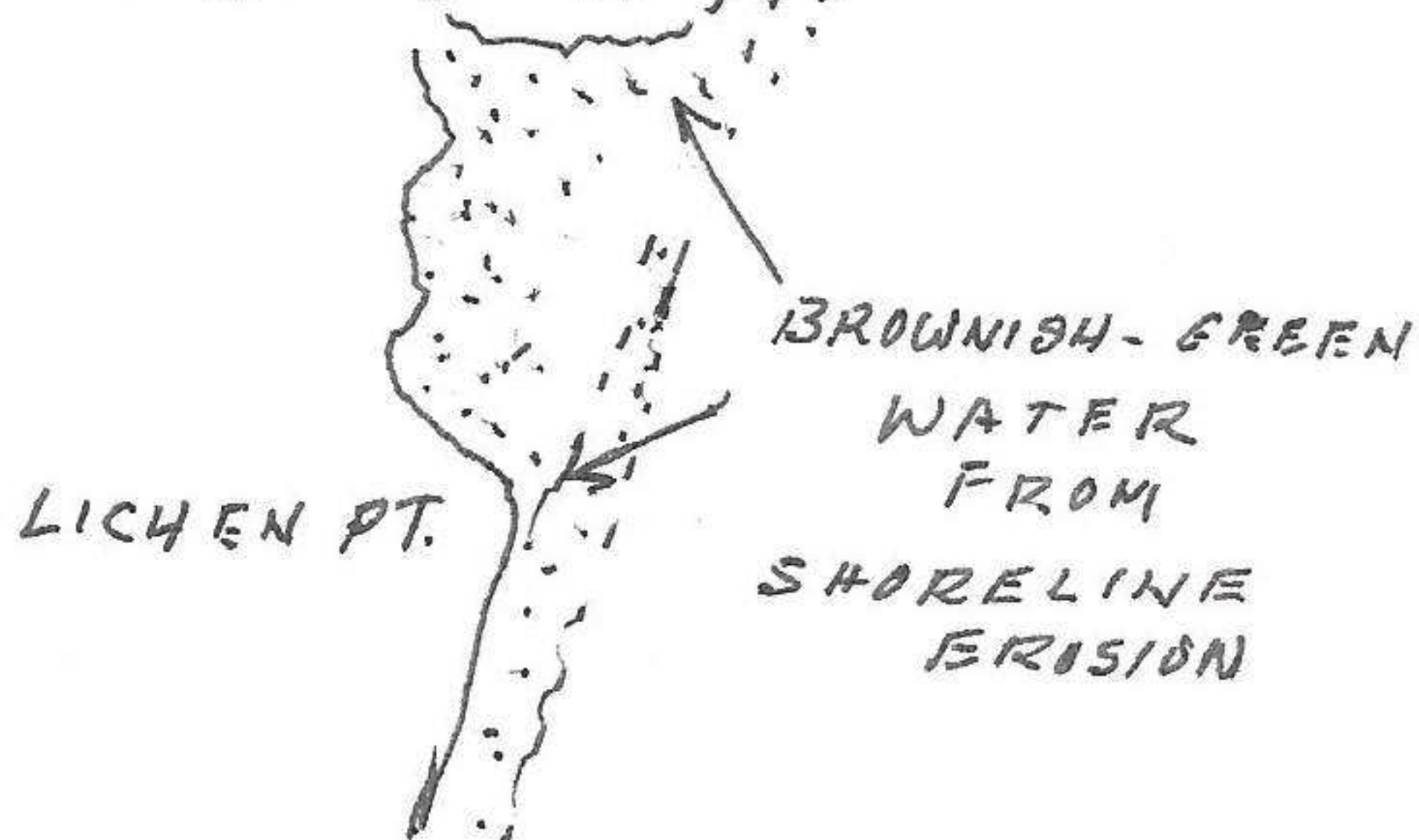
6:05 P.M. Single Tyne Buck at feeder. Height (shoulders) 34 1/4 inches. Ram, a mule deer, at feeder and measured 33+ inch at shoulder height.

March 5, 1988

at 11:20 A.M. approx 12 sail boats and ferry at W end Thatcher Pass. Ferry at point directly E of Bee House, first sailboat E of Bee House 11:50 A.M.

12:00 P.M. wind from S and creating continuous white-caps. Breaking over Leo Reef at low tide covering 18 pelagic and double-crested cormorant who remain to receive drenching. Glaucous-winged gulls moved away from spray action.

11:00 P.M. 6 river otter 8' off Flat Point. waves as large as 15' across and 3 1/2' deep. all white-capped and foam streaks parallel wind (from SSE.) wave splashing full extent of splash zone. Otter continued fishing 5 and from 8' to 12' and sometimes closer. at Lichen Point all six otter, 2 adults and 4 young put out approx 30' N of point proper. They went to edge of grass to roll and play but, although curious, would not go toward new rock walls made by over yesterday. The rocks deterred the otter of playing and rolling in the very spot the rock are placed (wind breaks N & S of pass) and trespassing beyond to water or up ridge to enter water beyond. They remained on land 4 minutes then slid into water without selecting the proper cycle of the crashing waves. The otter continued S, moving out, from wave action at point and fishing all the way. They do not evade cresting waves but float thru them. It took 1/2 hr. to round the point, sound to N.



Brownish-green water along shore and out into sound to N. Cove bayment also brownish-green.

1:40 P.M. otter cleared Lichen Point going S. Temp. 45°F no gulls (glaucous-winged) on Flower Island at least at 5:00 P.M. no gulls or diving ducks active in front Bee House.

waves 22 per minute. Larger waves in middle of sound, whirlwind travelled 2/3 mi 1/2 way between Bee House and Leo Reef and travelled N.S.

5:25 P.M. as heavy rain approached, high winds 30-40-50 knots and heavy waves and whitecaps suddenly lost waves and whitecaps as rain struck the water. High winds also subsided to 5 knots or so. High wave activity along shoreline now hardly noticeable and waters almost calm. Douglas fir branches barely moving.

60 glaucous-winged gulls on Leo Reef at 10:30 P.M. (moonlight across reef)
Full

March 6, 1988

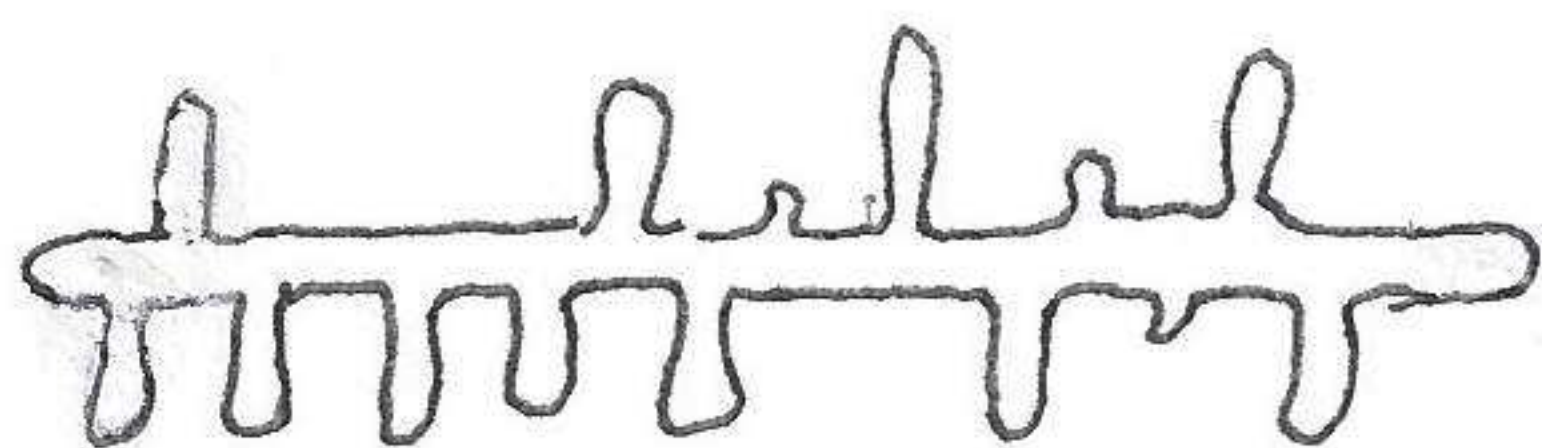
8:30 A.M. water calm with wind ripples moving to N. Approx. 18 mew gulls flying & feeding in from Bee House and Spring Cove where yesterday in high wind there were none.

To logs in Spring Cove left beach but high wind kept them in cave and this A.M. they are back on beach.

2 sightings of bald eagles flying S in front Bee House and both adults.

10:40 A.M. 61 double-crested cormorants on Leo Reef. no harbor seal. all cormorant facing to S.

10:50 A.M. Pattern of beetle excavation between annulae of Douglas Fir tree



natural size, now filled with sponge-like material from insect.

3:15 P.M. 18 ♀ and 30 ♂ Common mergansers in front of Bee House, out 100'.

March 7, 1988

6:15 A.M. 2 bald eagles flying within 6 or so feet at approx 500 ft high from E to W.

6:21 A.M. ad bald eagle to S past Bee House

6:25 A.M. " " " " " " " " " " " "

1:00 P.M. 18 harbor seal on Leo Reef, 2 of them nearly ^{all} white. also 27 double-crested cormorant. 5 harbor seal on Little Flower Rock. 1 imm bald eagle on top ridge Flower Island, 3 glaucous-winged gulls on S end island.

One marsh hawk 2 mi. N of Richardson on Richardson Road
 one marsh hawk 1 1/2 mi. S ^{Lopez} High School.

March 8, 1988

8:30 A.M. first band-tailed pigeon this year.

Left Lopez 10:00 A.M. for mt. Vernon. Dr. Johnson removed stitches and then to La Conner Thousand Trails Preserve. Some field with daffodils 50 per cent flowering.

March 9, 1988

At Thousand Trails Preserve (La Conner) observed the following birds at Lone Tree Lagoon and point:


51 American wigeon. 4 northern pintails
 6 American Crows
 14 buffleheads
 2 glaucous-winged gulls.

Left Thousand Trails Preserve and at route 536-20 (1 1/10 mi. S E, noted marsh hawks, one on top telephone pole and one flying 40' over field and one 2 mi. S 20- and La Conner road.

Continued Anacortes and thence by ferry to Lopez. At Anacortes ferry terminal noted 3 greater scaup and 3 buffleheads in same area of shore noted previously (see notes) also 1 red-necked grebe.

2:00 P.M. 3 river otter swam N past Bee House, fishing along way. When I went onto deck they called (or at least one of them called) 4 or 7 times.

2:10 P.M. ad. bald eagle flew N past Bee House at 3' above water. One also left Bisectioned Point Tree (1/2 way up) and flew S.

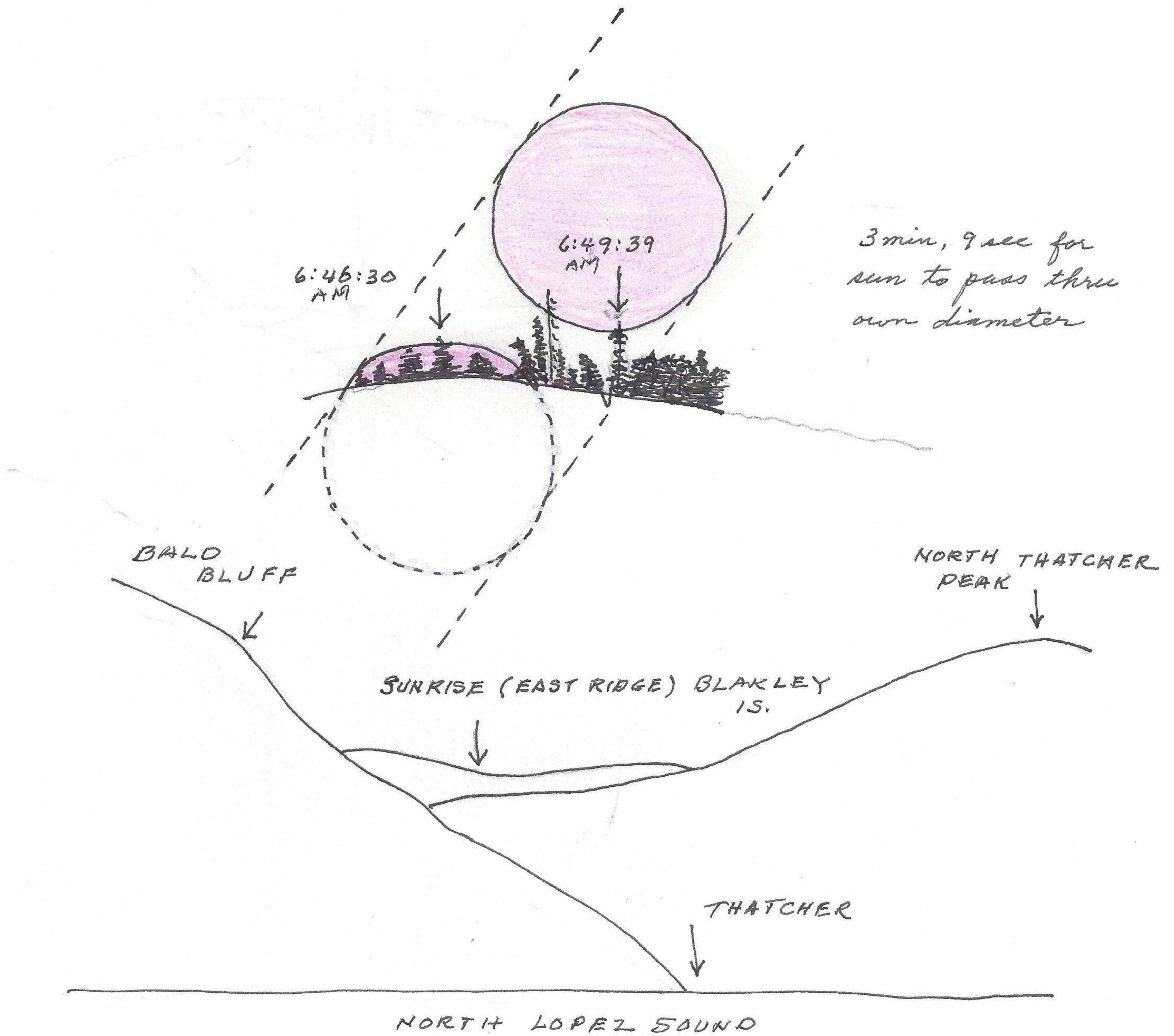
3:20 P.M. ♀ doe mule deer, her fawns, one 26" ^{and the smaller,} at shoulders, 25+'' high at shoulders, fed at corn feeder in rain. Doe shook body vigorously for 3 secs and water left hair in blurred streams. Small one ears low and hind quarters arched 

4:10 to 5:30 P.M. Two bald eagles (ad.) perched on 5 different rock promontories & on ridge of Flower Island, moving from one to the other about every 20 min. Glaucous-winged gulls remained at least 50' from eagles but inhabited the rest of the island not controlled by the eagles. 56 gulls on island at this time. Gulls reacted to eagles each time they (the eagles) changed position on island.

5:30 P.M. 22 glaucous-winged gulls fished in localized area E. of Flower Island. In the next 15 minutes 11 double-crested cormorants flew from Leo Reef to the fishing spot, generally ^{as} singles or pairs. Other cormorants may have joined them ^(the gulls) from elsewhere.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington,
 march 10, 1988

Sunrise from Bee House as follows:



7:45 A.M. adult ♀ mule deer (light pelage) at 29 inches high at shoulder, and her twins of last year, 25 and 26 inches respectively, at feeder. Both young with light pelage at rear. The smallest, a male, is not as in good health as twin. ad. pregnant.

9:10 A.M. adult bald eagle alighted on indentation (drainage between Round Point and Flat Point. In the 2 minutes it was there 12 American crows arrived and remained in immediate area, one within 8 feet of eagle. The eagle then flew up to Flat Point and onto drift logs between Flat Point and Dissected Point. One glaucous-winged gull, imm. viewed the eagle from Dissected Point only 20' away. As the eagle would leave one spat for another, 2 crows immediately check exact spot where eagle had placed its feet and would pick up particles left from the feet of the eagle. The eagle left and flew 5 around Lichen Point.

11:30 A.M. 7 ♀ and 5 ♂ Common mergansers in front Bee House.

11:45 A.M. above mergansers all left to E to join a group of 17 double-crested cormorants and 6 glaucous-winged gulls in fishing activity. At that same moment an imm. bald eagle flew 10' over them but did not remain in area.

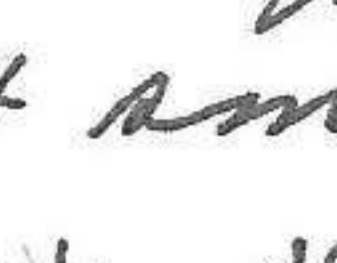

12:40 P.M. T. photos from Bee House.

880310-1 Shoreline S of Bee House toward Lichen Point.

880310-2 Shoreline directly below Bee House.

880310-3 Shoreline toward Lichen Point. Common merganser in water.

880310-4 Starfish at low tide at Boundary Point.

6:15 P.M. 3 ^{male} deer fed at feeder. Single Tyne (34 1/4") with top of antler bud level + smooth, Ram with upper surface of antler base concave , and an unknown buck, 33" high at shoulders with top of antler base concave in center . Raven at 6:00 P.M. calling from W end Bee Estate.

8:30 A.M. River after swimming to ^{March 11, 1988} past Bee House

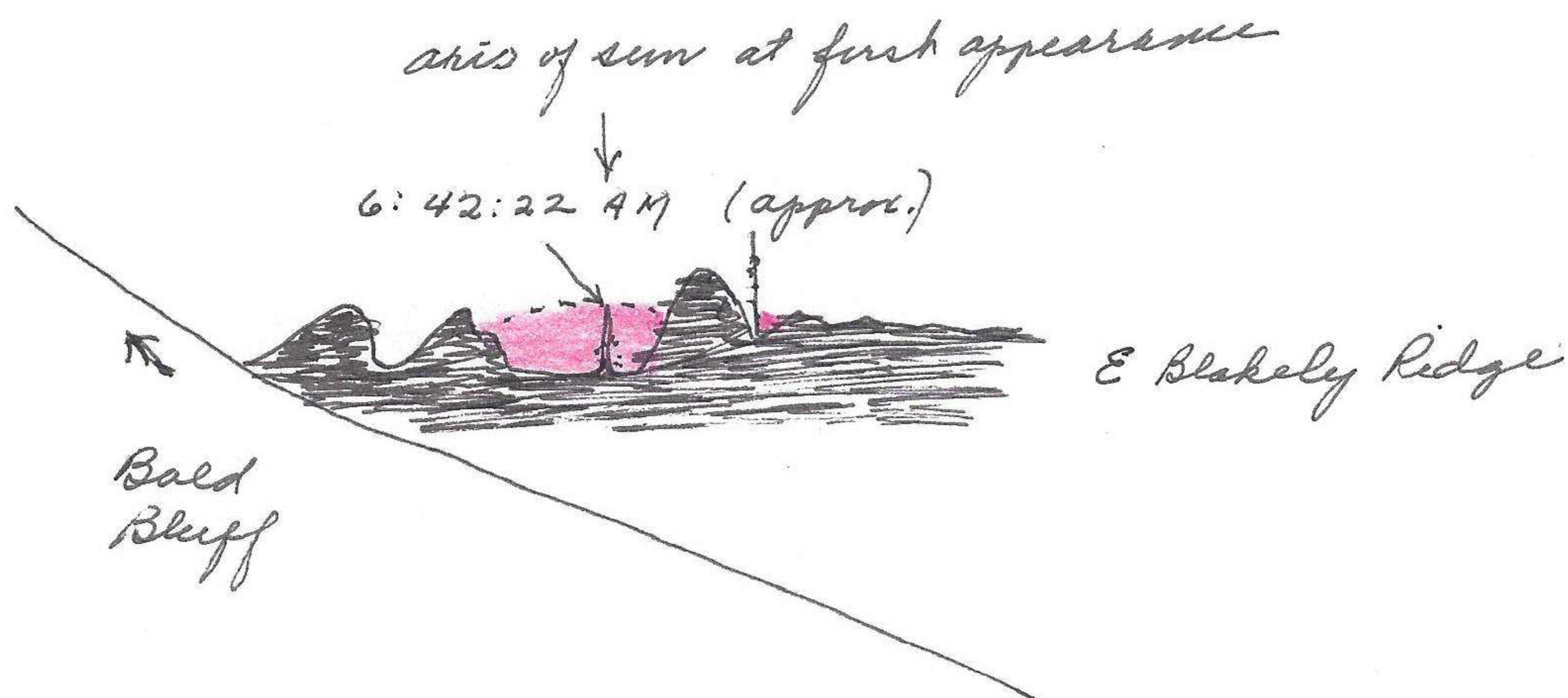
To Lopez Village and Richardson in afternoon: at Humphrey Logans 6 bufflehead, 4 glaucous-winged gulls and 3 ^{american} crows, along beach at Swift Bay 18 glaucous-winged gulls, 32 mew gulls, 4 greater yellowlegs, 21 American widgeon, 2 great-blue herons, 13 American crows, 4 bufflehead and 2 surf scoters.

At 1 mi. N Richardson Road, one common raven in field.

at Shark Reef on reef N of Deadmans Island: 8 harbor seal on rocks of reef, 5 black oystercatchers, 6 glaucous-winged gull. Along trail thru forest only 1 bird, a dark-eyed junco (Oregon race).

March 12, 1988

Recorded approx. time of sunrise as arrangement of clouds hindered exact moment sun reach top of trees. As intense golden-white light on trees just before sun appeared.



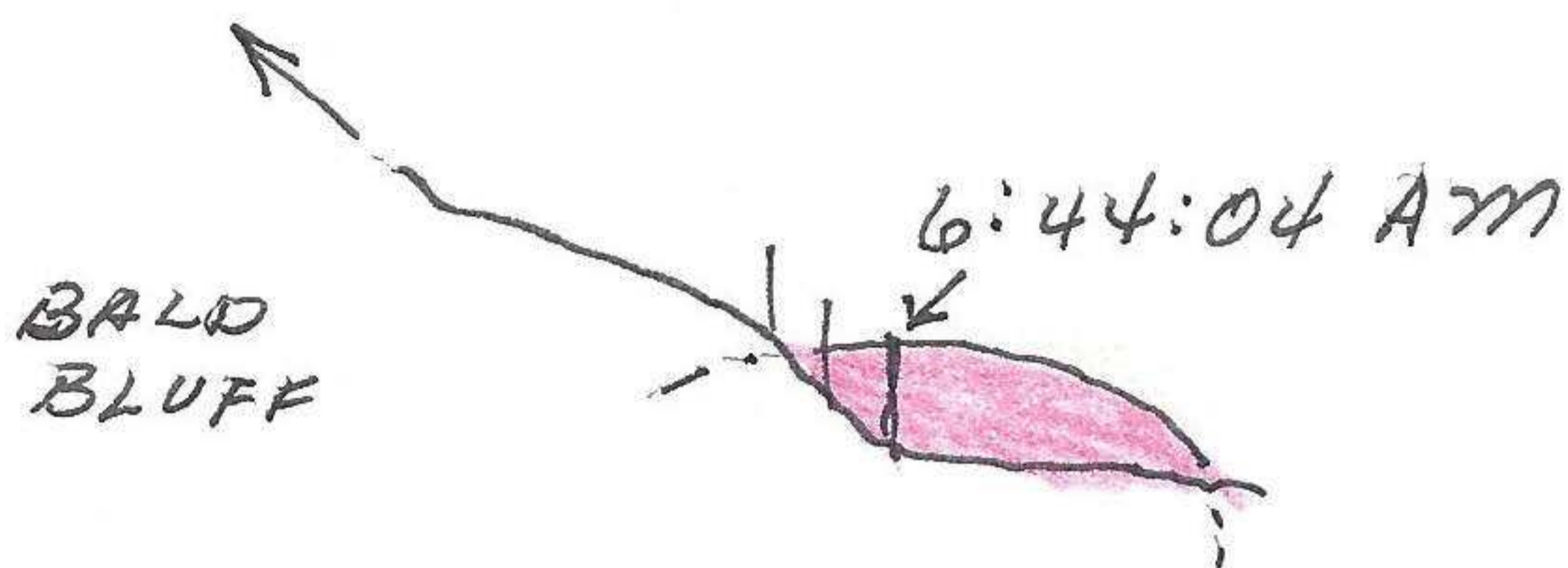
To Friday Harbor via Wasp Passage. Left Lopez 9:56 AM at docks 5 adults and 11 imm. glaucous-winged gulls; also 5 pelagic cormorant. Enroute 1 double-crested cormorant, glaucous-winged gull, 3 glaucous-winged gulls, 2 glaucous-winged gulls, cormorant. Shaw Island, 1 red-necked grebe, 4 pelagic cormorant and 7 glaucous-winged gulls. Enroute to Orcas Island, 4 pelagic cormorant, 1 common loon, 1 common murre, 1 Heermann's gull, 11 glaucous-winged gulls (8 imm, 3 adult), 2 American crows, 1 kingfisher. Left Orcas to Wasp Channel, double-crested cormorant. Bell Island 18 mew gulls on shell kelp, 2 pelagic cormorant, 2 pelagic cormorant. Crane Island, 1 pelagic cormorant, 2 glaucous-winged gulls, 1 pelagic cormorant, 1 glaucous-winged gull. Went Crane Island, ♀ and young mule deer at edge of trees above shoreline, 12 common murrelets, 1 double-crested cormorant. Cliff Island (light 3), glaucous-winged gull, pigeon guillemot, 5 great blue heron in trees on S side island. Yellow Island (light no. 1) 2 pelagic cormorants, 2 glaucous-winged gulls, 1 double-crested cormorant, 1 red-necked grebe, 1 glaucous-winged gull, 2 mew gulls, 1 glaucous-winged gull, 1 Cassin's

auklet, 2 red-breasted mergansers, 5 glaucous-winged gulls, 1 double-crested cormorant. Friday Harbor. At park on grass were 11 immatures and no adults.

Returned Lopez. Heard common flicker calling (red-shafted race).

March 13, 1988

Sunrise from Bee House at 6:44:04 AM.



Sun (upper edge recurred as it intercepted top tree at notch.

1 River otter swimming S past Bee House. 30' from shore
Second band-tailed pigeon (Two of them) of this season at feeders.

at 12:00 P.M. a sailboat no 365 KC displaced 24 double-crested cormorant and 9 harbor seal from Leo Reef. It then went to Little Flower Rock & E Flower Rock and N. Flower Rock and displaced wildlife there. They returned via same route.

March 15, 1988

This A.M. (8:40 AM) larger light colored ♀ (29" at shoulder) and two fawns, 25" and 26" respectively. Young show increase whitish in pelage at posterior body.

880315-1 *Peromyscus m. holisteri* 156; 74-22-18-19gms ♀

To Mt. Vernon. Left Lopez 10:00 A.M. by ferry, will keep complete record of birds enroute. Side ferry:

1 glaucous-winged gull, 1 glaucous winged gull.
west Thatcher Pass.

1 glaucous-winged gull, 10 glaucous-winged gulls in Armetage Cove, localized on water.

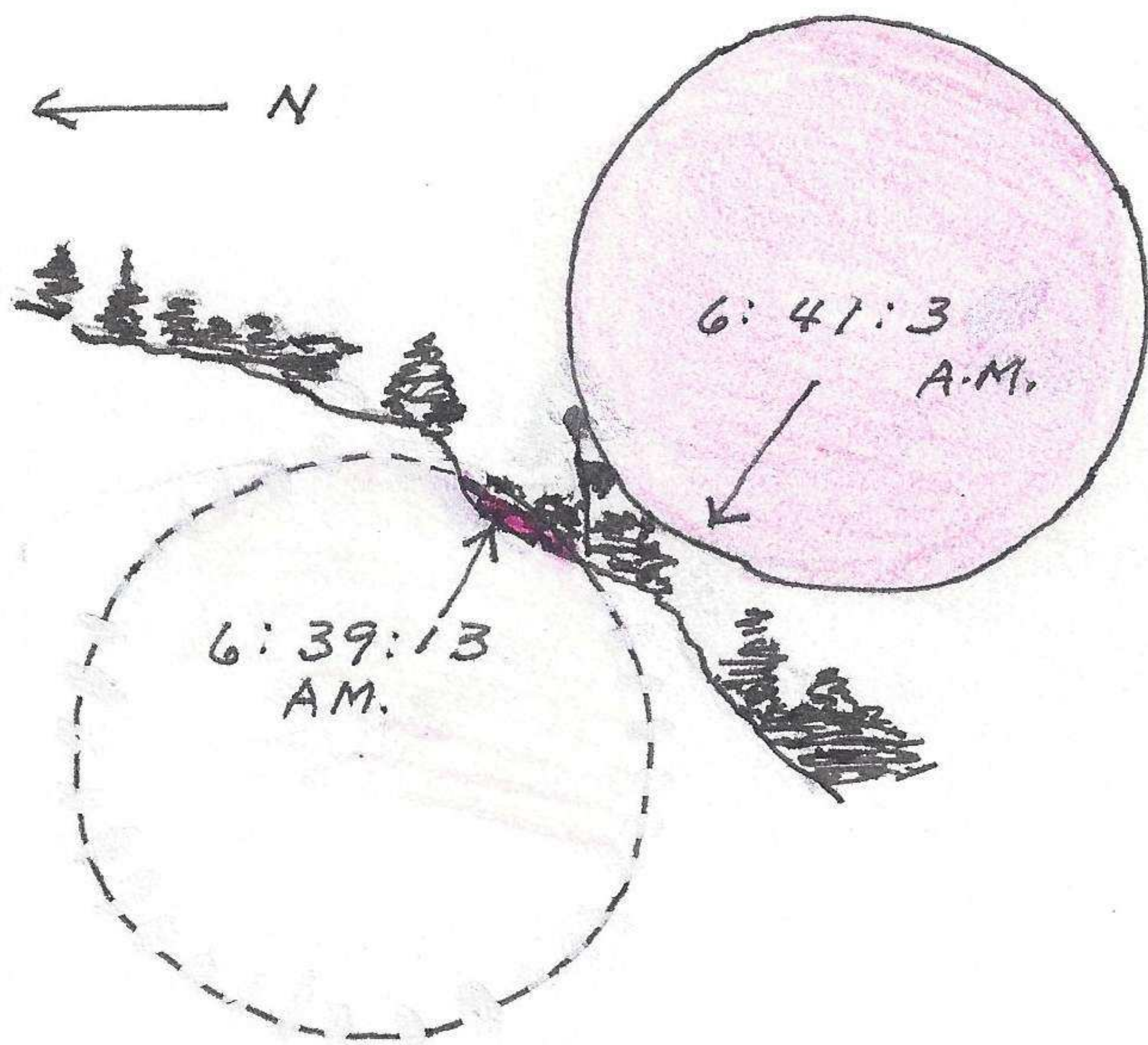
Painter Island. Approx 120 glaucous-winged gulls and equally spaced on island as if on territories.

Middle Rosario Straights. An adult bald eagle flew N 6 feet above water approx. 300 ft east of ferry. The eagle continued N as far as I was able to see.

After day at Mt. Vernon, returned to Lopez

March 16, 1988

Sunrise at Bald Bluff, Blakely Island.



880316-1 *Peromyscus m. hollisteri* 180-81-23-20-28gms ♂
From Bee House.

880316-2 green beetle from Bee House.

880316-3 ant from Bee House.

880316-4 Diptera from Bee House.

1:15 P.M. single rook otter swimming and fishing in front Bee House. Diving N and from shore to 30' out into water. First 1/2 dive with air bubble path, then no bubbles, then concentrated bubbles and then finally bubbles. It resurfaced at the edge of the shore to feed on the small fish it had captured.

1:30 P.M. a dark butterfly flew S past Bee House.

2:40 P.M. 2 northern sea lion *Eumetopias jubatus* captured salmon approx 200' SE of Bee House in area where fishermen had been successful catching salmon. There was considerable splashing in area with fish being torn apart by the thrashing of seal heads back and forth. The activity lasted 5 minutes with shallow surface diving and commotion in general. They left by diving and as far as I could tell did not resurface for at least 10 minutes. The following birds were attracted to the site; 13 common mergansers, 16 glaucous-winged gull

that fed on scraps of tissue, some as near as 2 feet away from the seal, 22 mew gulls, 1 common murre, + 2 cormorants. The seal were as large as I have seen (♂'s) and light yellowish brown. The largest had a dark 8" dia. spot on body at top of scapular area. At the same time there were 51 cormorants and 8 harbor seal on Leo Reef.

March 17, 1988

8:40 A.M. a dark ad. ♀ mule deer measuring 30 1/4" at shoulders and her young (28" at shoulders) accompanied the ♀. Both dark pelage.

3:25 P.M. 1 river otter swam & fished as it moved N in front of Bee House.

4:20 P.M. 56 glaucous-winged gulls on Flower Island and generally distributed. No copulating noticed.

4:30 P.M. Two separate pairs of common raven but in same field SE of junction Baker View and Port Stanley roads. The pairs were performing the same aerial chasing, with the 2 birds of each group always within 1 to 2 feet apart. They flew around the fields at an average of 75' high for at least 3 minutes.

5:35 P.M. 1 river otter swam S past Bee House at 30' from shore.

5:40 P.M. Swift Lagoon:

38 pintails

4 mallards

8 green-winged teal

2 shovellers

March 18, 1988

bottom of sun at top of trees 6:40:10 A.M.



Baed Bluff
Beakely Island.

Left for Chris' at Lost Lake, Snohomish Co., Wa at 10:00 A.M. observed birds on N side ferry: (water smooth). foggy obscuring glaucous-winged gull. Beakely Island. (unusual)

glaucous-winged gull.
N end Willow Island; currents beginning.

glaucous-winged gull,
Pointed Island. Some number of glaucous-winged gulls
as previously reported in journal. No glaucous-winged
gulls on Black Island.

Mt. Baker 9/10 less hazy than N Rosario Straits. Below
Mt Baker valley with dense white haze or pollution.
Haze obscures Olympic Range.

2 pelagic Cormorants

E side Rosario Straits. no birds to Anacortes ferry terminal
except 1 mew gull. This trip produced the fewest
numbers of birds so far.

Arrive Chris and thence to University of Washington, at
W end bridge (across Washington Lake 350 east. (Univ. Bay
or shiplane.

March 20, 1988

At Lost Lake, Snohomish Co., Washington collected 2
salamanders under a log in coniferous forest;

880320-1 Salamander, adult, 175 mm total length, 10 gms wt,
880320-2 " " , imm, 71 mm total length, 2 gms wt,

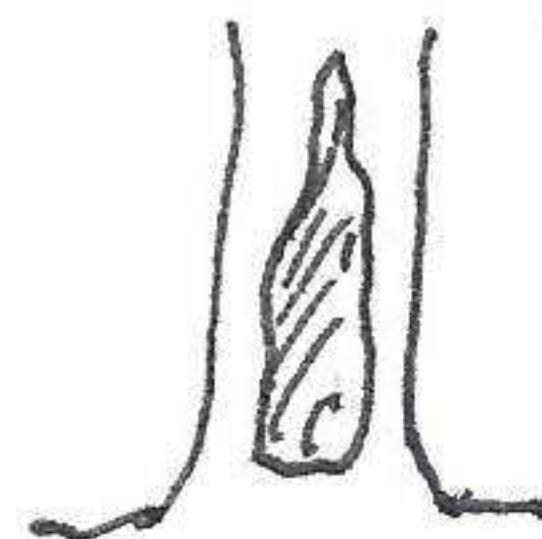
March 22, 1988

Left Chris' on Lost Lake and returned to Anacortes ferry terminal
via river road, Everett, Mukilteo, Widby Island etc. at
pond along river road approx 3 mi NW underpass of 522 rd.
observed 9 Canada geese, 2 American widgeon, 30 mallards.

Lost Lake, Snohomish Co., Washington captured a Sorex
in deciduous-evergreen forest:

880322-1 Sorex 128-54-13-6-6 gms, ♂
Skull only.

Pileated woodpecker excavated dead red alder from 8 inches
about ground to 3 feet and 9 inches deep



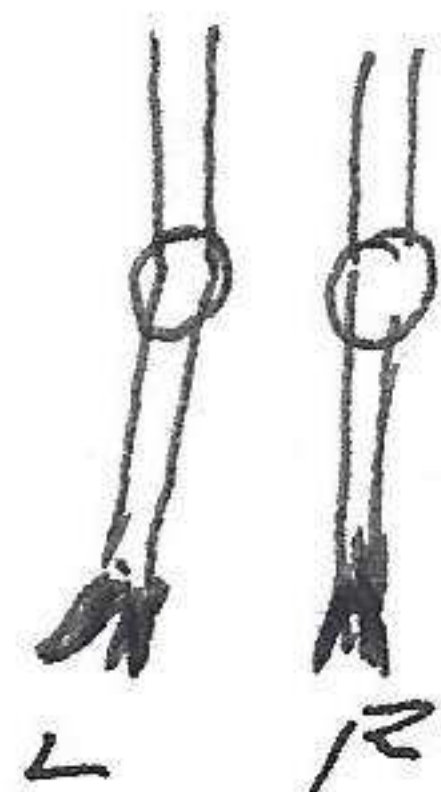
Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wa.

March 23, 1988

880323-1 Peromyscus m. hallisteri 178-81-22-19-26 gms ♂
from Bee House.

8:05 AM. 5 Townsend chipmunks feed at feeder at Bee House, spending most of the time chasing each other. This is the greatest number of chipmunks observed at one place at one time this year.

The light colored doe mule deer and her two twins at feeder on a regular daily basis. The doe has a slight deformity of left front leg in which the foot from ankle turns out thus:



At daybreak to 1/2 hour later 4 bald eagles flew S.

March 24, 1988

880324-1 *Peromyscus m. hollisteri*. 166-82-23-19-21 gms ♀

8:20 A.M. 2 bald eagles S just Bee House.

1:15 P.M. 2 young harbor seals (approx 3') swimming just under surface of water from 20' to 3' from shore below Bee House, sometimes swimming on their backs. They have been observed on several different days and they seem to perform this way when waters are rough with waves.

March 25, 1988

880324-1 *Peromyscus m. hollisteri* 170-79-23-18-23 gms ♂
From Bee House.

8:10 AM 2 bald eagles sailing about 400' high, one following closely the other.

2:20 P.M. 1 ♀ Barrow goldeneye duck in front Bee House.

Have not observed the river otter in last few days. See journal for last occurrence.

Each morning from 8 to 20 mew gulls search the area 150'-200' from shore, then after an hour or so leave area.

March 26, 1988

Rain last night and this A.M.

7:35 A.M. Three river otter feeding 20' out from shore at Bee House. They were feeding on fish (approx 6" long and flattened laterally with long spiny pectoral and dorsal fins, cucumbers, arms of starfish?, and annelids). The spiny fish requires a longer time to adjust in mouth before swallowing the fish because

of the spina. They leisurely moved S along shore (average 20' out) and arrived at Lichen Point at 8:05 A.M. The put out there and spent 5 minutes on shore up to base of Lichen growth where they urinated several times and rolled over in vegetation 2 of them together, not playing but independently rolling. at 8:10 entered water and swam back to in front of Bee House arriving at 8:15 A.M. They fed and swam more directly on return. They then turned and moved into Spring Cove (outer area near our shoreline and fed for 10 minutes. At the same time 19 common mergansers (17♀, 2♂) swam into cove but as they arrived they all instantaneously left by flight and alighted 200' to SE. The otter caused them to leave cove. at 8:25 the river otter left Spring Cove, passed Bee House and continued N.

8:30 A.M. 43 cormorants flew toward Swift Bay. all in one group (line) at this same time one adult bald eagle circled Lichen Point and then flew S,

8:32 A.M. 22 cormorants on Leo Reef. 1 purple finch on feeder, 8 American crows and 1 band-tailed pigeon.

1:20 P.M. Double crested cormorant with upper 1/2 of neck dark and lower 1/2 neck and breast almost pure white. I have seen this bird or one like it on 2 other occasions in front of Bee House.

4:15 P.M. hail storm 4 minutes, covered ground, ^{85%} largest stone 7mm diameter. A ♀ common goldeneye did not react to hail. Temp. 42°F, preceded by streamers and later, circular and then complete ripple or gusty surface. Complete rainbow intense and brighter on N leg. no birds or mammals of Leo Reef, at least when observed 15 minutes after hail storm.

5:45 P.M. Ad. bald eagle on rocks of Leo Reef. No birds or mammals otherwise.

It takes 5 min. 52 sec for waves from ferry when directly E of Bee House.

March 27, 1988

5:30 A.M. first bald eagle to S.

7:45 A.M. 3 river otter to N out 20' from Bee House.

7:55 A.M. 1 " " " S " " " " " "

8:00 A.M. single hooded merganser been in Cove last hour. The ♀ Barrow goldeneye is in same area as it has been the last 3 days. It is less active than other birds.

March 27, 1988 (cont.)

10:10 A.M. Lopez for Sidney and then return. 50% brood
cumulus from N, wind from W. Enroute to ferry terminal noted
last years young at Odlin Park. Will keep complete census en-
route. 9 glaucous-winged gulls at terminal. Double-crested
cormorant flying at 17 MPR, common merganser, mew gull,
glaucous-winged gull, 6 pelagic cormorants and 8 glaucous-
winged gulls at How Island ferry terminal, 14 followed ferry
to Orcas. At Orcas, Kingfisher, 12 American crows, 4
glaucous-winged gulls. In Upright Head Channel: 4 single
glaucous-winged gulls. 5 end Conac Island: 4 Cassin's auk-
lets, pelagic cormorant, 3 pelagic cormorant on floating log,
mew gull, pelagic cormorant, glaucous-winged gull, 2
glaucous-winged gulls, 12 glaucous-winged gulls overhead.
Entering along Brown Island. At Friday Harbor 1 pelagic
cormorant, 8 glaucous-winged gulls, 3 American crows.
Left 11:23 A.M., red-necked grebe. 11:35 porpoise, glaucous-
winged gull, mew gull. 11:51 E end Spieden Island, more
green than brown on slopes. Glaucous-winged gull, mew gull,
2 glaucous-winged gulls, 2 glaucous-winged gulls. 12:08 P.M. 8
porpoise, some spouting water & air (dark with some white spots,
mew gull, glaucous-winged gull, 2 glaucous-winged gulls,
2 glaucous-winged gulls. Mandarte Island (Canada) entirely
covered with nesting or at least territorial glaucous-winged
gulls every 6' apart (4'-15'). Brandt cormorant?, 12:23 P.M.
6 pigeon guillemots (other groups of 2-8-1), pelagic cormorant.
12:26 N end sand spit (Sidney Spit), glaucous-winged gull;
double-crested cormorant. Approaching Sydney (4/10 mi.), red-
necked grebe, 2 pigeon guillemots, 1 pigeon guillemot, 1 pigeon
guillemot, 1 pelagic cormorant, 1 pelagic cormorant, 18 surf
scoters, 4 pelagic cormorants, 3 pigeon guillemots. Arrived
Sidney 12:40 P.M. Returned same boat. Selected recording
only. 6 pigeon guillemots 3/10 mi SE of E end Spieden Island.
5 pigeon guillemots at Friday Harbor. Continued E to Lopez.

march 28, 1988

(4-20)

7:33 A.M. 4 river otter noted in front of Bee House averaging 18' from shore. Will trace movement and time of these animals as the fish and swim to S along shore.

7:37 A.M. Passing Dissected Point

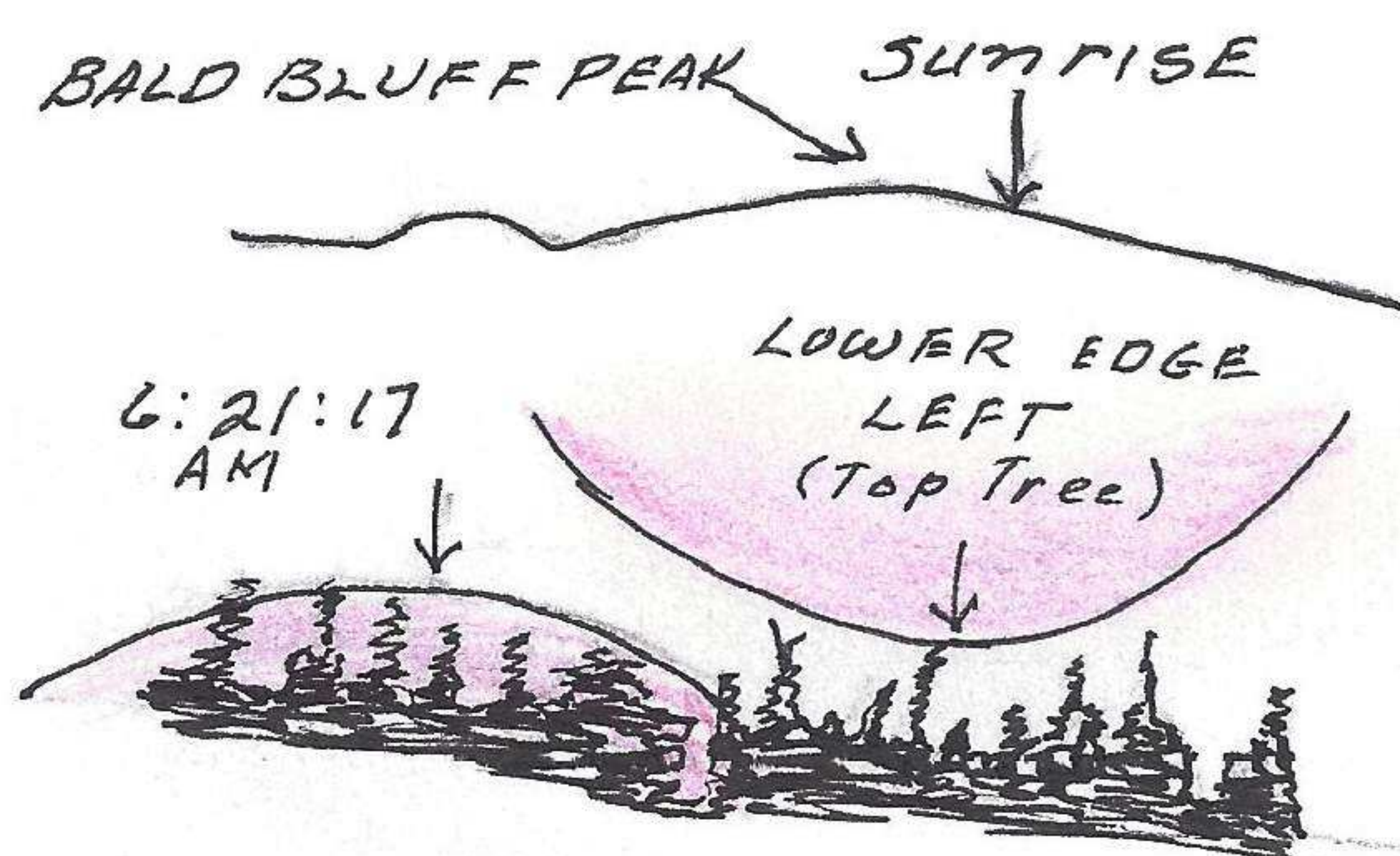
7:38 A.M. Passing Flat Point

7:39:30 A.M. Put-out Flat Point (just beyond in small cove between Round Point and Flat Point). They inspected flat section above bare rocks some 30' beyond water.

7:43 A.M. Put in same spot as put-out.

7:44 A.M. Passing Round Point. One of the otter left water at 7:46 A.M., spent 30 seconds 3' away from water and then returned and joined the other 3 otter.

7:49 A.M. To Lichen Point thence E toward Leo Reef. At this point a single harbor seal surfaced 30' away twice but did not approach the otter. I was able to follow the otter 2/3 way to Leo Reef but lost track of them at this point. I then trained scope 80X on Leo Reef for 10 minutes but otter never arrived on Leo Reef.



Check Swift's Lagoon at 2:00 P.M.: 33 pintails, 5 horned grebes (2 in summer plumage), 8 green-winged teal, 2 shovellers.

At Swift Low Beach: 48 American widelon, 18 glaucous-winged gulls, 6 mew gulls, 8 black turnstones, 12 American crow and 9 horned grebes.

grebes.

At Agate Beach: 5 black oystercatchers.

at Barlow Bay: 4 black oystercatchers, 6 glaucous-winged gulls, 7 American crows, 3 buffleheads.

At Mackaye Harbor (N side) an imm. bald eagle flew S across the bay with a glaucous-winged gull diving repeatedly for at least 200 feet. 6 buffleheads also in bay.

Hummel Lake. 8 American eost.

at Bee House noted that at least today there are more birds in the sound (to Leo Reef) in the A.M. than there are birds in the P.M.

march 29, 1988

Left Lopez 10:05 A.M. for Anacortes + Mt. Vernon. Sky overcast, cool, no white caps but small waves. Birds observed are:

8 double-crested cormorants, 2 pelagic cormorants, 1 pelagic cormorant, 5 pigeon guillemots, 2 glaucous-winged gulls, 1 pigeon guillemot, 1 glaucous-winged gull, 2 common mergansers, 1 glaucous-winged gull, 43 glaucous-winged gulls on E side Flower Island all on territories and generally distributed, glaucous-winged gull, glaucous-winged gull, 2 cormorants.

W end Thatcher Pass at 10:16 A.M.: mew gull, 2 mew gulls, 2 glaucous-winged gulls.

E end Thatcher Pass: 3 common mergansers, 2 rhinoceros auklets, glaucous-winged gulls, glaucous-winged gulls, 2 rhinoceros auklets, glaucous-winged gull, marbled murrelet, glaucous-winged gull, glaucous-winged gull, pigeon guillemot, 2 pigeon guillemots.

At Anacortes ferry terminal: 4 pelagic cormorant, 2 glaucous-winged gulls, 5 western grebes, 4 buffleheads.

Continued to Mt. Vernon then returned to Anacortes ferry terminal.

Left at 5:28 P.M. on ferry. Observed the following birds: mew gull, mew gull, glaucous-winged gull, 3 mew gulls, 1 pelagic cormorant, 1 pelagic cormorant, mew gull, mew gull, (all mew gulls flying E), 2 pigeon guillemots, mew gull, common loon, 1 pelagic cormorant, 3 mew gulls, 5 pigeon guillemots, 10 glaucous-winged gulls, 2 cormorants, 2 red-necked grebes, mew gull, 2 pigeon guillemots, 2 pigeon guillemots, 3 pigeon guillemots, common loon, 2 pigeon guillemots, 2 mew gulls, 1 glaucous-winged gull, 2 pigeon guillemots, 7 pigeon guillemots, 2 pigeon guillemots, 2 pigeon guillemots, now E Thatcher Pass. 3 western grebes, 2 glaucous-winged gulls, W end Thatcher Pass, 2 pigeon guillemots, mew gull, cormorant, pigeon guillemot, 28 glaucous-winged gulls, 8 mew gulls, 19 cormorant. (last 3 species in concentrated fishing area.) 1 pigeon guillemot. As we past N end Humphrey Head, the ad. bald eagle was standing on nest. It left, circled once and then returned to nest. 1 double-crested cormorant, at 3/10 mi NE of ferry terminal on Lopez Island were 25 cormorants and no other kind of bird associated with them. Arrive Lopez 6:04 P.M. Sun approx. 40 min from setting. Cloudy.

march 30, 1988

Observed a single ♂ rufous hummingbird on six different occasions at feeder (which have been in place for 1 week), the last one at 6:35 P.M. This is the first hummingbird observed this spring.

6:00 P.M. A small harbor seal (approx. 5'1/2' long) approached rocks below Bee House, stood on one a raised upper body out of water then slid back into water. It did not investigate 6 8" herring fish placed on bank to attract river otter.

6:30 P.M. 8 glaucous-winged gulls arrived and immediately cleaned up herring from bank.

mar 31, 1988

880331-1 *Peromyscus m. hallisteri* 191-85-23-19 - 23gms ♂
From Bee House.

9:05 A.M. a large Steller sea lion moved N past Bee House at approx 150' from shore. It averaged 10 seconds under water and 4 seconds on surface of water. It moved straight forward and did not appear to be fishing. The day is overcast and no white-caps.

10:05 Left Lopez for Anacortes. Will keep list of birds: 1 glaucous-winged gull, 1 glaucous-winged gull, 1 mew gull, Rarely see birds perching on white wall of W side Willaw Island. W end Thatcher Pass, 1 double-crested cormorant, 4 pelagic cormorant. E end Thatch Pass, 2 glaucous-winged gulls, 3 pigeon gullmots, 1 glaucous-winged gull, 1 double-crested cormorant, 2 pelagic cormorant, 1 glaucous-winged cormorant. Arrived Anacortes ferry terminal. Observed a ^{american} crow chase a common roven and dove 6 times.

Left Anacortes ferry terminal. In bay to S of ferry terminal observed 142 mew gulls, 8 glaucous-winged gulls and 8 double-crested cormorant on ^{poles} at W end of bay. Also in area were 8 buffleheads, 2 common mergansers, 5 pelagic cormorant, 3 horned grebes and 2 double-crested cormorant. Begin ferry trip. 2 western grebes, 1 mew gull, 2 pelagic cormorant, 3 pigeon gullmots, 3 pelagic cormorants, 1 glaucous-winged gull, mew gull, glaucous-winged gull, mew gull. E end Thatcher Pass, 2 glaucous-winged gulls, 2 glaucous-winged gulls, mew gull. W end Thatcher Pass, 2 glaucous-winged gulls, 2 glaucous-winged gulls, double-crested cormorant, 3 pigeon gullmots,

glaucous-winged gull, glaucous-winged gull, glaucous-winged gull, double-crested cormorant, Arrived Lopez Island.

This evening (10:00 P.M.) at front Bee House, a bat flew back and forth 6 times in rapid straight flight in contrast to slow devious flight of usual bat observed later in season.

April 1, 1988

9:12 A.M. 3 ♂ rufous hummingbirds at feeder at Bee House.

10:10 A.M. an immature bald eagle (lighter brown on back than on wings, flew S along shoreline at approx. 40' high. As it flew over 2 glaucous-winged gulls resting on Flat Point, the gulls left but returned 10-15 seconds later.

In last week I have observed at least 3 bald eagles fly past S of Bee House, along shoreline and around and beyond Licken Point toward Swift Bay. This occurs between 1/2 hour before sunrise to and hour after sunrise. Fewer are observed during other times of the day.

First female hummingbird (rufous) of season at feeding and competing with males.

April 2, 1988

Sunup at 7:13:12 A.M. (lower edge of sun at top of tree)



and her twins

April 3, 1988

FIRST DAY OF DAYLIGHT SAVING TIME

mule deer at feed 8:20 A.M.:

| | | |
|------------------------|----------------------------|---|
| adult ♀ (light pelage) | 29 inches at shoulders | } Pelage white top & side rump } (from abrasion ?) |
| young ♂(?) (" ") | 26 " " " " " " " " " " " " | |
| young ♀ (" ") | 27 " " " " " " " " " " " " | |
| a dark adult female | 29 1/2 " " " " | (mother of single dark young) |
| single dark ♀ adult | 28 " " " " | |

8:30 A.M. 4 river otter travelling N in front Bee House. 12'-18' from shore.

April 4, 1988

1:40 P.M. 2 river otter swimming S in front Bee House. One with

an anemone in mouth.  yellow (light). It held it in mouth for 3 consecutive dishes but did not try to consume it.

April 6, 1988

Between 6:45 P.M. and 9:00 A.M. I made 10 sightings of bald eagles. At one time 5 of the eagles were in sight. These 5 could have been and most likely were duplicated. The early morning time is the period of greatest eagle activity.

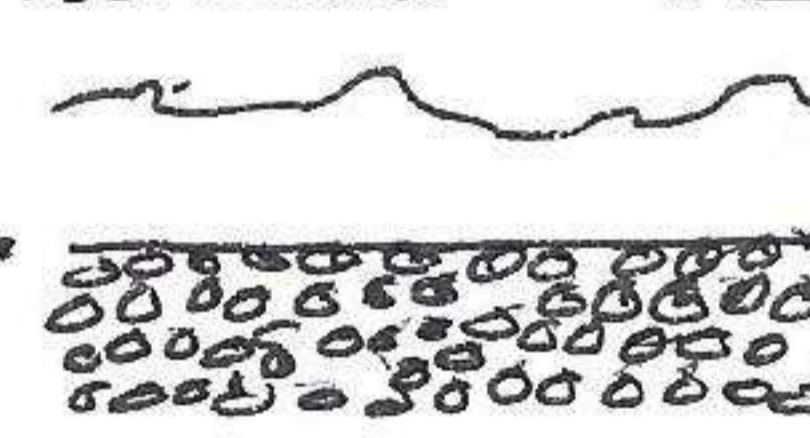
Mary P. Bee and I checked shoreline and beaches from Spencer Spit to Bee House, leaving beach at Humphrey Lagoon. James Robert Bee accompanied us to E end Spencer Spit and back to mainland. 2 1/2 miles trip all told.

The following observed enroute:

An adult bald eagle flew n along W side of Frost Island about 1/2 way up slope. In the Spencer Spit Lagoon observed 9 glaucous-winged gulls, 3 mew gulls, 1 black oystercatcher, 8 shovellers, 5 buffleheads, 3 American crows, 1 great blue heron, 4 hooded mergansers (2 ♀, 2 ♂). From lagoon to punt to n along shoreland 2 tracks of otter in sands, at one point they filled fragments of seaweed and scratched sand over it. With binoculars watch two immature bald eagles circling the island at levels from 10' above water to 20' above ridge. They alternated flying and perching on dead limbs of a madrona? This continued for 20 minutes and they then left. While on the island 3 gulls (^{glaucous-winged}) harassed the eagles by diving at them but the eagles for all tense and purposes ignored them. At no time did the gulls come closer than 5' of the eagle. Only 7 gulls of the above species were in the air but did not harass the eagles. While I was on the beach an immature bald eagle approached land from the sound with a crab (8" ^{spread} wide, leg dimensions) alighted awkwardly on a limb of a Douglas fir (half way up) but could not stabilize himself and in 15 seconds left and flew nw along the shore and around the corner. I believe the crab was holding on to the eagles claws rather than the reversed order. From the point looking SW I could see 3 crows harassing the eagle in a tree bordering the shore. Continued to Swift Bay Low Bank and observed the follow:

43 american widgeon, 1 great blue heron, 2 greater yellowlegs, 4 pintails, 3 black oystercatchers, 46 glaucous-winged gulls & generally distributed over the tidal lands.

April 7, 1988

To Friday Harbor, direct route, at 11:42 A.M. Enroute observed the following from the ferry: 9 pigeon guillemots, 1 glaucous-winged gull, 4 pigeon guillemots, 3 pelagic cormorants, 6 glaucous-winged gulls on Flat Point, 3 pigeon guillemots, 1 mew gull, 1 rhinoceros auklet, 1 pigeon guillemot, 2 glaucous-winged gulls. Arrived Friday Harbor. On return to Lopez Island at 6:07 P.M. observed no birds across San Juan Channel. In Upright Channel 6 pigeon guillemots, 4 pigeon guillemots, 1 pigeon guillemot, 2 pigeon guillemot, 3 glaucous-winged gulls, 5 double-crested cormorant, 5 red-breasted mergansers, 3 pigeon guillemots. In Harney Channel 2 glaucous-winged gulls, 1 glaucous-winged gull, 2 pelagic cormorants, 8 double-crested cormorant, 1 pelagic cormorant, 8 glaucous-winged gull, Orcas ferry ^{terminus} 3 common loon, 1 belted kingfisher, 1 double-crested cormorant, 8 glaucous-winged gulls, all juveniles (on piling) At Shaw ferry terminal 8 glaucous-winged gulls. There is a section of rock cliff to SE of Shaw ferry terminal that shows a sharp demarcation of the barnacle zone and the black zone above.  Most contacts are more irregular.

April 8, 1988

8:00 A.M. Mary and I to Flat Point SW of Odlin Park on Lopez Island. Followed along beach. Mary continued to village along beach. Observed: 3 barn swallows, 2 malleards, 4 surf scoters, 21 bufflehead (10♀, 11♂), 1 great blue heron, 6 pelagic cormorants, 4 double-crested cormorants, 1 imm. bald eagle, 1 kingfisher, 13 glaucous-winged gulls, 1 mew gull. One section 1/2 way with high number cackle shells.

River Otter tracks entire beach except bordering Odlin Park to first point W. Dog & Cat tracks associated with Odlin Park beaches and probably these odors exclude otter. The tracks included mostly 2 sets, some place 3 and some places only 1 set. No set with opposing directions of travel.

measurement of river otter tracks every 50 feet (many from same animal) of front and hind feet, not necessarily paired.

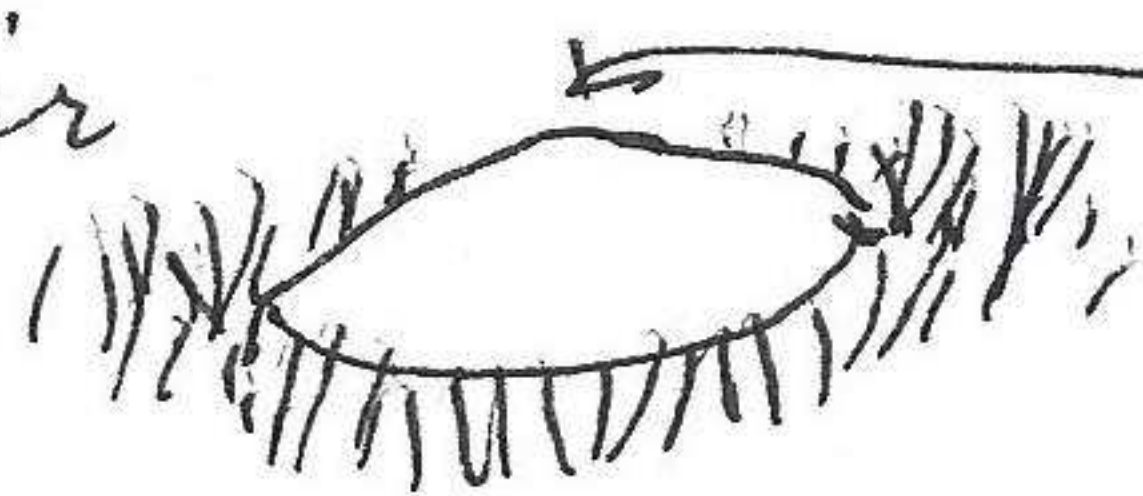
Hind foot (mm) 106, 103, 99, 95, 95, 94, 93, 93, 91, 89, 88, 86

Front foot (mm) 79, 72, 65, 60, 58, 54

Tracks that are underlined together could be same individual. Otter travel as much as 1/2 mi. on beaches without returning to water. When 2 otter meet on beach, tail marks are permanent, otherwise tails do not touch sand except when going under ^{low} limbs. 3 areas of rolling in sands occurred.

James, Mary and I to Auacortes. They continued to Lost Lake in Snohomish Co. to visit Chris. Birds observed ^{on}: In Bay S of ferry terminal at Auacortes: 28 western grebes, most of them resting, 1 common goldeneye, 14 hufflehead, 44 glaucous-winged gulls, 9 American crows, 5 red-breasted mergansers, 2 mallards, 1 kingfisher, 1 horned grebe, 5 pelagic cormorant. Left at 5:50 PM. Common loon, pelagic cormorant, 2 glaucous-winged gulls, 3 glaucous-winged gulls, 1 double-crested cormorant, 2 glaucous-winged gulls, 1 mew, 2 double-crested cormorant, 3 western grebes. W. end Thatcher Pass, 1 ad. bald eagle in top Douglas fir above sand slip on N side, no birds or mammals on Leo Reef, 1 glaucous-winged gull, 1 double-crested cormorant, bald eagle standing and moving on nest on N end Humphrey Head on Lopez Island, 1 glaucous-winged gull, 1 pelagic cormorant, 4 pelagic cormorant. Arrived Lopez ferry terminal.

This evening, ^{7:30 P.M.} an adult ♂ mule deer, ^{33" high at shoulder} fed at feeder at Bee House. The knob of antler is 1/2 inch above bordering hair. Knob slightly pointed. This buck is single Tyre.

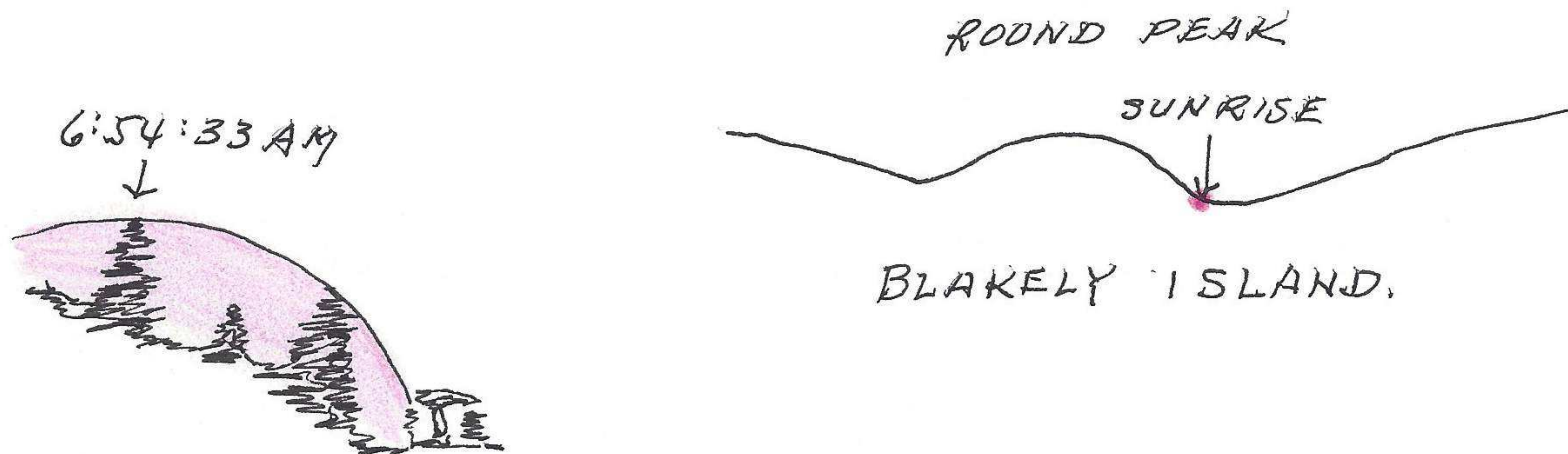


an immature bald eagle past Bee House and alighted in a ^{assected Point} Douglas fir tree.

This afternoon at 5:30 P.M. there were 14 rufous hummingbirds at feeder at Bee House, both ♂'s + ♀'s.

April 9, 1988

Sun up at 6:54:33 AM at base of W end of Round Peak on Blakely Island.



7:26 A.M. 2 northern violet green swallows inspected nesting box (SW corner Bee House). At 9:00 A.M. one alighted at entrance of box and then left in 10 seconds.

10: A.M. 13 rufous hummingbirds at Bee House feeders.

1:00 P.M. 3 river otters to S past Bee House.

2:30 P.M. Swift's Lagoon: 8 green-winged teal, 17 pintails, 6 mallards, 11 shovellers. Along Low Bank of Swift's Bay: 27 American widgeon, 4 mallards, 14 glaucous-winged gulls generally feeding on tidal lands, 3 mew gulls, 9 American crows, 8 buffleheads. At Spencer Spit Lagoon: 4 black-bellied plover, 4 hooded mergansers (2♂, 2♀), 8 bufflehead, 4 green-winged teal.

7:50 P.M. 11 rufous hummingbirds at feeder at Bee House. Greatest number at one time earlier this evening, 13.

April 10, 1988

To Anacortes, Lost Lake, and Seattle (UW med. center for monoclonal antibody imaging program) until next Friday.

Left home on Humphrey Head. At Humphrey Lagoon observed: 6 buffleheads. Left Lopez ferry terminal. Water calm. Observed the following birds: 3 glaucous-winged gulls, 4 pelagic cormorant, 1 western grebe, bald eagle standing on nest in Douglas fir tree on N end Lopez Island (Humphrey Head), 2 glaucous-winged gulls, 1 western grebe. Approx 175 glaucous-winged gulls on Flower Island. E end Thatcher Pass. 1 double-crested cormorant middle Rosario Straits. Glaucous-winged gull, Anacortes ferry terminal. Continued to Chris' at Lost Lake, Snohomish Co. In the evening 2 deer, ♀'s, rested, grazed, in open slope E of the house. They arrived from [unclear] and chewed their cud.

the N and finally left to the S. Both fed on new 2-4' red alder, starting on leaves at the base and working up to the top, consuming approx. 80 per cent of the leaves on the tree. At least 8 trees were so eaten. They also fed on other herbs and shrubs. One of the two deer gradually grazed across the open slope, then continued W at one step at a time as if "feeling" its way. It never increased its speed, even crossing the road. The second deer covered the same area by alternating a slow pace with a running movement, especially as it crossed the road.

April 14, 1988

University of Washington medical Hospital and preparatory work for tomorrow's scanning with neo-Rx.

April 15, 1988

Injection of protein antibody and marker and scanning. 3 times in 10 hours. 12 hrs total.

April 16, 1988

Final examination with Neo-Rx on the radiolabelled TC-99m antimelanoma antibody scan study. A new method of attaching the radiate label to the protein was a first and resulted in a more specific attachment to melanoma. The alimentary canal was clear instead of defused with the labelled protein background. Individuals in group were: Wil B Nelp, Robert Jones, Byrd, Terry Lesley, Collins, Hunt, and others. The study showed no melanoma. Examination of blood for 6 months will show degree of allergic reaction to the protein

April 17, 1988

Returned to Chris'. Collected a Sorex from her property: no. 880417-1, Lost Lake, Snohomish Co., Wash. Collected a black bumble-bee on Chris property (Lost Lake, Snohomish Co., Washington) no 880417-2

April 18, 1988

32' Grand Banks ea trial, James Robert Bee, Francine Hall (broker), Mr. Snow and son sellers. To docks, thence return to base (1/2 mi. W Fremont Bridge, thence E to middle

Washington Lake then return, at 2300 RPM (maximum) some smoke from gasket, outlet on top motor and other things that can be corrected. Along route observed: western grebes, double-crested cormorants, glaucous-winged gulls, macklards, coots, Canada geese. Return to Chris home on Lost Lake.

April 19, 1988

motor inspection 9:10 AM by Don of Galley marine, N end Union Lake. 1 and 5 piston slightly weaker than others but do not need repair. 4 or 5 minor problems easily corrected including leaks from hose connections. Motor good in general and he would not be willing to take boat to Mexico and return. \$500 for replacement of motor.

Left marina and returned to Lopez, enroute checked tulips fields in Shagit Valley and they are in full blossom. Redtailed hawk at McDeon and LaConner roads. Continued to Anacortes ferry terminal. In bay to S noted: 8 bufflehead, 10 surf scoters, 80 mew gulls, 85 glaucous-winged gulls, 4 double-crested cormorant, 2 pelagic cormorant, 10 western grebes. Left ferry terminal on ferry at 5:23 PM. Tidal currents. Enroute: 18 pigeon guillemots, 4 horned grebes, 5 surf scoters, 4 surf scoters. Across Rosario Straits: 3 pelagic cormorants, 1 glaucous-winged gull, 2 pigeon guillemots, James Island, 2 pigeon guillemots, 1 harbor seal, Pointe Island glaucous-winged gull on territories approx. 3 1/2 ft apart. E. Thatcher Pass, 3 pigeon guillemots, 2 pigeon guillemots, 3 rhinoceros auklets, 3 pigeon guillemots, 2 rhinoceros auklets, 2 rhinoceros auklets, 2 pigeon guillemots (all mainly E end Thatcher Pass). W Thatcher Pass 2 glaucous-winged gulls, no birds on white washed cliffs of Willow Island, glaucous-winged gulls, pelagic cormorant, horned grebe. At Lopez dock 8 glaucous-winged gulls, 4 pelagic cormorants. our replenished
at Bee house, deer returned to feeder after 2 1/2 hrs of our arrival.

April 20, 1988

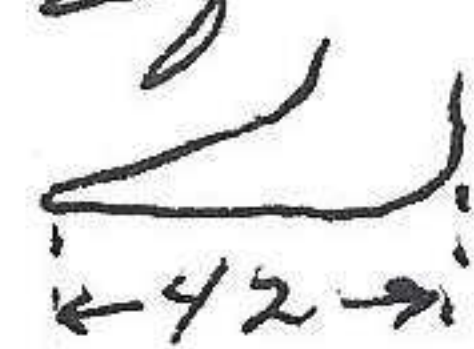

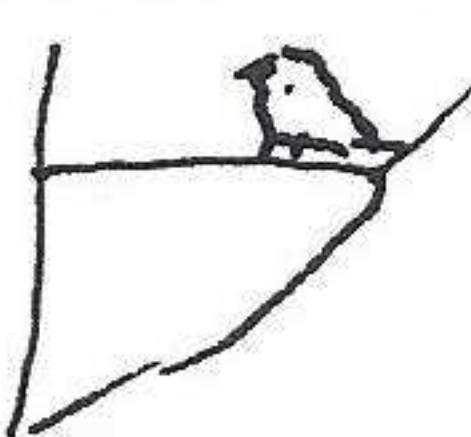

7:30 AM 2 bald eagles flew by to S,

- 4:02 P.M. mummified deer, a mule deer (matriarch) at ♂ of last years young of feeder and measured 28 1/2" high at shoulders.
- 6:00 P.M. while cutting (sawing (hand)) wood at Bee House a black shrew past directly beneath log while cutting was in operation. As it passed pipe of subduct on a slope, it had difficulty navigating.
- 6:20 P.M. a ♂ mule deer of last years feed at feeder. It measured 27 1/2" at shoulders. The antlers were just exposed above the hair.
- 6:30 P.M. 140 glaucous-winged gulls on territories on Flower Island.
- 6:30 P.M. to 7:00 P.M. A Common loon in summer plumaged fed in front of Bee House in localized area.
- 6:34. Belted Kingfisher in Spring Cave bordering Bee Estate.
- 6:35 1 rufous hummingbird at feeder (Bee House). On April 10, 1988 there were 9-13 individuals at the same feeder and same time of day.
- 8:25 Two rufous hummingbirds of Bee House feeder. They both left at 8:28 P.M. at late twilight.

April 21, 1988

- 1:10 A.M. ♀ mule deer measuring 28 1/4" at shoulder at Bee feeder.
- 1:15 small ♀ mule deer of last year measured 25" at shoulders
- 1:20 A.M. with more sunshine, ^{brown linear} aquatic vegetation is growing from 1' to 3' in height deciduous trees on W side Blahely, directly E of us, now yellowish-green but more green than yellow. mad-rona on Bee Estate from beginning to full blossom thus:
- Inflorescence
 ↓
 ○○○○○ green buds
 ○○○○○ } white bells.
 ○○○○○ } bells dropped from tree and covering ground below
- To rufous hummingbirds today. The hummingbirds may be feeding on natural inflorescence of trees etc, instead of at feeder, where the average number is 2.

First small blue butterfly of season. Another one dark (small),
Common flicker (red-shafted race) call 3 times this A.M. and
has called for a least a week ago. Only 2 gulls have passed
Bee House in last 3 hours.

This A.M. To Chris' and Steves at Lost Lake for hull check on
Grand Banks scheduled for tomorrow morning. First to
Lopez Village and at road just before low beach area of
Swift Bay measured hind foot ^(hoof) of mule deer at 42 mm 
deer of this season. Continued on and finally to  Lopez
ferry landing. while waiting an immature eagle (last
year at least) with 2 missing primary feathers. also 2
band-tailed pigeons flew by. Boarded ferry. no whitecaps
but small waves. at eagle nest on N end Humphrey Head
observed one adult on W side nest facing E and working on some
type of prey.  and  no birds or harbor seal on
Leo Reef. 1/2 usual
number of glaucous-winged gulls on Flower Island. W
end Thatcher Pass to E end Thatcher Pass 9 pieces of wood from
3" long pieces to limbs 3" diameter and 9 feet long. Beyond
E end Thatcher 1 double-crested cormorant, 2 double-crest-
ed cormorant. Recent hull slippage to water approx 3/10 mi
N of SW corner of Cypress Island. 1 glaucous-winged gull.
Clouds top Cypress and Mt. Constitution.

April 22, 1988

9:00 A.M. Mr. Anderson came over to Gallery Marine Services
and spent 3 hrs checking hull of Grand Banks. 3 small areas
need replacement, otherwise entire boat O.K. Broker and Seller
to finance repairs. Returned to Lopez Island. no bird census
enroute. Atmospheric haze in San Juans.

April 23, 1988

7:12 A.M. Two adult bald eagles flew 5 past Bee House. to
Lichen Point and beyond.

8:20 A.M. liner otter passed N around Flat Point and pulled
out at Spring Cove for 7 min. covering slope of spring area &
then returned to Cove, past Bee House at 8:29 A.M. It swam
alternately over and under water without stopping to feed.

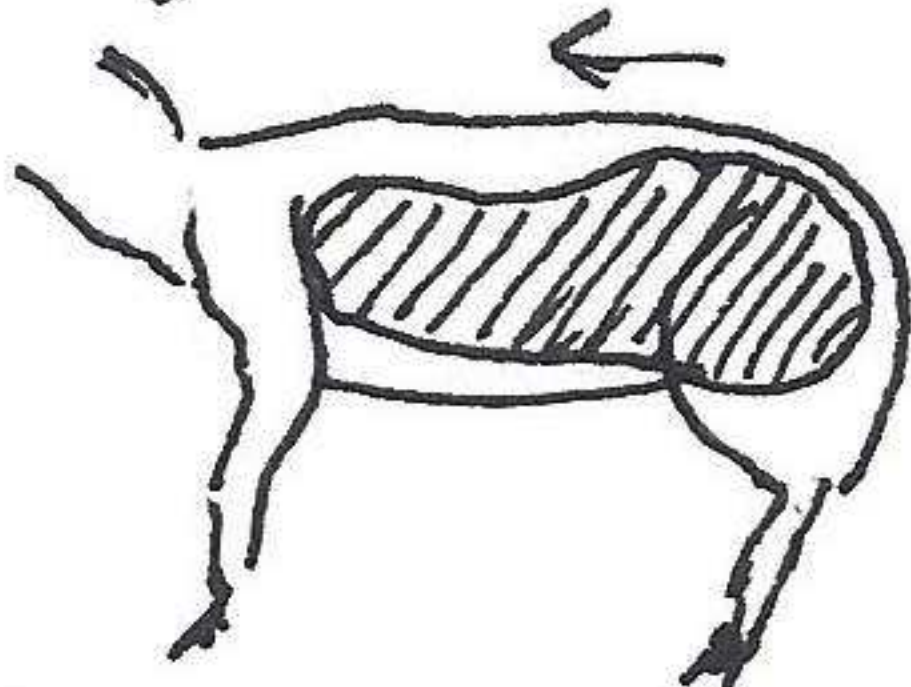
4 western grebes, one ♀ Pacific loon? and 2 Common loon
(in summer plumage) in area between ^{Spring} Cove & Leo Reef.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wash.

April 24, 1988

9:04 A.M. Light adult ♀ measured 29 1/4" at shoulders. Pelage starting to appear on rear lower rump. Her ears show edges of old and new hair ^{old} and look ragged or serrated ^{new}


The largest of her last year young measured 27" at shoulder. Her pelage is more advanced and has been changing from start at rear, especially near middle of upper rump to front legs thus:



This change started at least 3 weeks ago.

9:10 A.M. 3 bald eagles flew past Bee House and at

9:21 A.M. 3 imm. and one ad. bald eagle flew N past Bee House and approx 50' above water.

Buster, a mule deer, ♀, 31 1/4" high at shoulders. It has 2 suspicious warts approx 1" x 3/4" each and outline thus . One is at upper anterior-dorsal margin of left scapula and the other at top radius-ulna on anterior edge. I have only observed these warts since last recorded in journal.

A Townsend chipmunk fed 3" from hind foot of one of the mule deer.

Buster struck a young ♀ mule deer (28" at shoulder, ♀), seven times before the young ♀ retracted and then the ♀ shook its head for at least 8 times afterwards returning to feeder for continued abuse. It left but remained 26' away. In 3 minutes returned for the 3rd time and was again rebuffed.

Trip to Lopez Village. at Humphrey Lagoon 2 pelagic cormorant, 2 hooded mergansers, 1 great blue heron in lagoon. At shore of Swift Bay, 27 mew gulls, 9 glaucous-winged gulls and 5 American crow. In Swift Lagoon: 19 gadwall ducks, 14 northern pintails, 9 mallards, 8 green-winged teal, 2 cinnamon teal, 2 shovellers.

At Fishermans Bay Peninsula (causeway) on W side: 13 brant (western subspecies), 4 bufflehead, 29 red-breasted mergansers (males incorporating bathing and courtship ritual by lowering head, neck and anterior body under water, then up and rear down and splashing of wings on one side)

on E side of causeway
 1 black-bellied plover, 23 mew gulls, 7 glaucous-winged gulls,
 6 greater scaup, 1 kingfisher, 9 violet-green swallows, 2
 common loon, 5 american crows. The mew gulls were
 dropping molluscs on to macadamized road. Several mollusc
 shells patterned on road. Also 12 surf scoters.

at Bee House at 5:05 P.M. 2 common loon, 3 harbor
 seal on Leo Reef and 1 on Little Flower Rock. In the last 3
 weeks, harbor seal have been rare in this area. More have
 been seen in water than on the Leo Reef.

April 25, 1988

880425-1 *Peromyscus m. holisteri* 184-83-22-18 -23gms ♀. From
 Bee House.

9:25 A.M. one large ♀ mule deer, 31" at shoulders, dominant
 of ♀ and young,

Photo 880425-2 (Annettes Camera) of the smaller of the
 light ♀ twins of the light color doe mule deer.

11:21^{AM} a red-tailed hawk flew past Bee House with 2
 crows in close pursuit.

11:24^{AM} 1 golden-crowned sparrow at feeder at Bee House
 and only one I have seen since last 2 years.

6:30 P.M. 1 river otter to N past Bee House.

7:10 P.M. 2 river otter to N past Bee House

Earlier today (approx 7:30 A.M.) a ♀ mule deer (30 1/4" at shoulder
 and 12 other deer in feeder area at one time.

This afternoon at 4:05 P.M. noted 6 turkey vultures in one
 group above 1917 School House about 100' above ground.

Also at Swifts Logom noted: 4 pintails, 11 green-winged
 teal, 4 mallards, 2 greater yellowlegs.

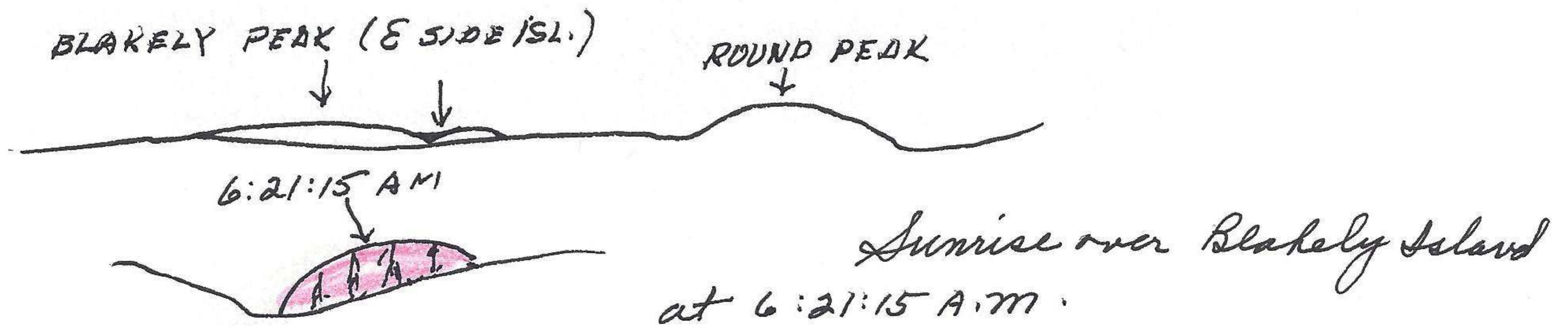
At Bee House noted a Bonaparte gull for first time this
 season.

This evening at dusk single Tyme, a mule deer 33" at
 shoulders fed at deer feeder. Its antlers
 were slightly curved to rear



April 26, 1988

6:02 A.M. adult bald eagle arrive at Lichen Point
 from Blakely Island. At this time water in sound calm
 and observed birds on water in groups of 3-2-8-6-2-4^{total 24} between
 point E of Bee House to Point S Bee House in area from Bee
 House to Leo Reef. All but 2 swimming north.



at sunrise fog developed on ridge of Blakely and below Round Peak in seven minutes

6:30 a single rufous hummingbird flew straight up from porch level of Bee House to 35 feet & return. Later two rufous hummingbirds performed the same action together.

6:42 ad. bald eagle flew S past Bee House.

April 27, 1988

To Anacortes and mt Vernon for ^{inspection of} last 2 melanoma nodules in forehead. Left Lopez ferry terminal 10:10 A.M. overcast, water calm. As we passed N end Lopez Island two eagles on nest. Leo Reef 2 glaucous winged gulls, no harbor seal. W Thatcher Pass, 2 Bonaparte gulls, 3 Bonaparte gulls, 1 Bonaparte gull, E Thatcher Pass, 9 Bonaparte gulls one group on water, 2 pigeon gull nests, 1 Bonaparte gull, 1 glaucous-winged gull, 2 pigeon gull nests, 8 Bonaparte gulls, 2 glaucous-winged gulls. Arrived Anacortes ferry terminal. Spent night at La Conner Thousand Trails Preserve.

April 28, 1988.

In lagoon at Lone Tree Point at T.T. noted: 5 ♀ bufflehead, 1 double-crested cormorant, 3 glaucous-wing gulls, 8 American crows, 2 belted kingfishers.

at reefs S of Lone Tree Point noted: 8 greater scaups, 32 greater scaups, 8 common goldeneye, 4 and 12 double crested cormorants, 7 glaucous-winged gulls, 8 american crows. American robin and pileated woodpecker in camp (at drainage entering lagoon).

Left for Bellingham from T.T. at 11:08 A.M. Spent day there (Bellingham) and returned in evening at mt. Vernon Thousand Trails Preserve. at Bow Hill N of Burlington.

April 29, 1988

From Mt. Vernon Thousand Trails Preserve to Dr. Johnson at Mt. Vernon for removal of last 2 nodules (melanoma) on forehead, thence back to Lopez Island.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington
April 30, 1988

7:48 A.M. mamma deer's surviving twin a ♂ at feeder and measured 27 1/2" at shoulder

3:10 A.M. 1 river otter passed Bee House swimming north and 1 at some time rounded Flat Point going south. The latter put-out at Lichen Point and ascended intertidal zone to high tide level where it turned around, faced the water and discharged urine at an object in 5 ridged and stiff pumping action of the hind quarters (up & down) and then returned to the water and continued S around Lichen Point.

6:30 P.M. 1 river otter swam N past Bee House at 20' from shore.

Only 2 rufous hummingbirds observed at feeders today.

May 1, 1988

7:30 A.M. two bald eagles ^{one} chasing the other in undulating flight from S to N past Bee House.

7:35 A.M. harbor seal in front of Bee House, 40' from shore.

9:00 A.M. no harbor seal on Leo Reef but 7 on Little Flower Rocks.

A trawler fished in front of Bee House no ^{"Andante")} UN 4526 GB. Get kind of boat as it had exceptional good features about it.

May 2, 1988

When mule deer, in this case an adult female, observe a moving object they turn their head in degrees, ^{rather} than in one continuous sweep. Noted one deer, after observing a moving object, approached feeding area at Bee House accentuated high steps and tail perpendicular.

Trip to Lopez Village. at E side Fishermans Bay S of Island-er docks and approx. 150' from shore were 72 ♀ and 4 ♂ buffleheads in one group. On W side peninsula (causeway) noted 34 ♀ and 2 ♂ buffleheads (in sound), 8 horned grebe in summer plumage, 2 surf scoters, 1 great blue heron. 18 ♀, 2 ♂

buffleheads, 13 red-breasted mergansers, 18 surf scoters, 2 black scoters, 4 white-winged scoters,

Along causeway in a 4/10 mi stretch counted 54 shells or fragments of shells (runover by car) dropped by mew and glaucous-winged gulls and perhaps American Crow. Along edge of road were shells at least every 3 feet apart and fragments continuously along edge. Will identify kinds of shells at a later date.

At Swifts Lagoon, 8 mallards, 2 gadwalls, 1 ring-billed duck.

Swifts Bay along beach: 12 ♀, 2 ♂ buffleheads; black scoters, 8 glaucous-winged gulls, 16 American Crows, 1 black oystercatcher.

8:13 P.M. Rufous hummingbird still active at Bee House. with dusk well advanced.

8:19 River otter to N past Bee House. One dive lasted 1 minute. John Saul reported a river otter running down road on E side Humphrey Lagoon.

May 3, 1988

at 7:30 A.M. 7 American Crows started to fly E across N Lopez Sound to Blakely Island, 3 returned to Bee House area and 4 continued to Blakely Island. They flew approx. 150 feet above water.

9:10 A.M. Eastern gray squirrel (ears cut off) at Bee House.

At Fisherman's Bay in same area as May 2, 1988 (E side) counted 162 ♀ and 26 ♂ buffleheads. Also 16 surf scoters, 14 red-breasted mergansers, 5 pelagic cormorants, 12 greater scaups, all at 1:30 P.M.

2:18 P.M. 21 harbor seal on Leo Reef, 15 on Little Flower Rocks. I have not observed seal in area since last recorded, 30 glaucous-winged gulls on Flower Island.

May 4, 1988

To Anacortes via ferry. Water calm. Left Lopez 7:40 A.M. 92 glaucous-winged gulls on territories on E face of Flower Island. no harbor seal on Leo Reef but 2 glaucous-winged gulls there. more logs and trash on water than usual (last 2 months comparison). 2 mew gulls, glaucous-winged gull. E Thatcher Pass. Bonaparte gull,

In middle of Rosario Straits along ferry route observed one Orca approx. 9 feet long at 8:10 A.M. It surfaced to S of ferry approx 300 feet, again at a point 200 W of ferry and a third time about 1/10 mi. NW of ferry. Actually the whale was travelling N and distances varied because of ferry travelling east. No spout observed. Whale had dorsal fin in middle of body thus:
 It is unusual for an ^{young} Orca to travel alone without its mother so most logical condition would be a young male travelling in new territory beyond the pod. There was no visible white marking. An employee of the ferry informed me that he sees an Orca approx. once a month in the Rosario Strait. Continued to Anacortes and observed only one glaucous-winged gull. Checked (final) with Dr. Johnson in Mt Vernon and then returned to Anacortes ferry terminal. Left for Lopez Island at 3:47 P.M. In the bay S of terminal noted 8 glaucous-winged gulls, 7 mallards, 12 American Crow, 1 pelagic cormorant. Enroute observed: 1 glaucous-winged gull, groups of 1-2-2 pigeon guillemots, 3 common murre (middle Rosario Straits), glaucous-winged gull, 8 glaucous-winged gulls in one group on water (not fishing). Gulls on territories on Pointer Island. 1/10 mi. S Pointer Island 62 glaucous-winged gulls, 32 pigeon guillemots, 6 double-crested cormorants in one fishing group. no birds between here and Lopez ferry terminal.

6:30 P.M. mule deer at feeder. The light color young of last year are in parts a light buffy white from exposure of white bases of hair. These areas have been developing for several week (3) and are in areas that can be reached by mouth of deer. In fact, the hair appears as if chewed down to the white bases of the hair. no darker hair observed coming through.

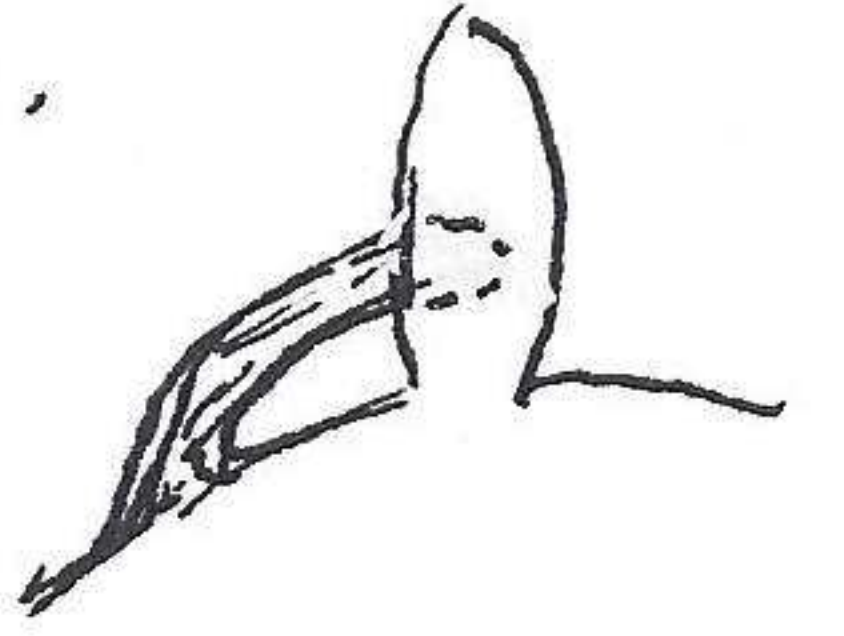
7:05 P.M. An adult bald eagle flew S past Bee House at approx. 100' high.

7:45 P.M. mule deer grazed on exposed area of Bald Bluff of Blakely Island. 8 brown cowbirds fed at feeder at Bee House

May 5, 1988

6:00 P.M. 17 brown cowbirds fed at feeder at Bee House

6:35 single Tyne mule deer at feeder at Bee House
antlers 4" long and extend to middle of ear base.
3" dark mark of window at 9:20 P.M.



James R. and I May 6, 1988
Left Lopez Island for Union Lake to finalize
purchases 32 Grand Banks. "The Bee". Left ferry terminal 10:10 A.M.
2 pelagic cormorants. 5 side Cypress Island, glaucous-
winged gull. Arrived Anacortes 10:50 P.M. This crossing
from Lopez to Anacortes had fewer birds than I have seen on
same route. water only slightly agitated.

May 7, 1988
Back to Union Lake from Chris' home at Last Lake,
more administration and work on motor & hull, by James R. and I

May 8, 1988
Union Lake. In afternoon Chris, Jay & I met mother at
Anacortes ferry docks and then drove to La Conner where
we had Mother's Day dinner, then back to Anacortes where
mother returned to Lopez & we returned to Last Lake.
Adult bald eagle 1/10 mi. W of Swinomish Bridge (route 20)
On return to Last Lake and at Conway turnoff from Interstate 5.

May 9, 1988
Continued working on the Grand Banks. Changed oil at
hours 2576.0. James R. did nearly all the work in the bilge area.

May 10, 1988
Returned from Union Lake to Lopez. James R. continued working on
the boat.

May 11, 1988
To Mt. Vernon for removal of 7th melanoma nodule. Left 7:40 A.M. on
ferry. Enroute groups of 6, 2, 2, 1 marbled murrelets in Rosario
Straights. 11 groups of glaucous-winged gulls as singles or pairs,
all in air, and generally distributed. Oil on water N of
Anacortes ferry terminal and Coast Guard cleaning beaches to
W of terminal from tanker oil spill a few weeks ago. The
oil originally sank to bottom but is now surfacing. Arrived
8:21 A.M. Continued to Mt Vernon for surgery and then
return to Anacortes ferry terminal. Left for Lopez 3:45 P.M.
Enroute observed 3 Bonaparte gulls, 1 marbled murrelet, 1 Bonaparte

gull, 12 glaucous-winged gulls, generally distributed. at W end Thatcher Pass 13 glaucous-winged gulls, 1 pigeon guillemot, 5 glaucous-winged gulls. at S end of Willow Island 1 glaucous-winged gull. Arrived Lopez Island ferry terminal.

May 12, 1988

Yacht Sates

Left Lopez at 9:00 AM for Union Lake, thence to Western on Union Lake to organize boat for return to Lopez Island. This is a 1968, 32' Grand Banks Sedan, Hull no. WA 25934A 1968, Registration no. WN 5786 M, 120 h.p. Ford Lehman engine. Purchase from Donald B. Snow of Mercer Island, Washington. James R and I left WY Sales Marine at 1:30 P.M. for Lopez. Between Union Lake and Ballard locks noted 14 mallards, 8 Canada geese, 3 double-crested cormorant, all semi-tame. Passed thru locks at 2:25 P.M. at outer light buoy at mouth of channel just S of Shilshole marina a dark colored sea lion (Calif sea lion) was resting on a basal platform. It remained as we passed by at approx. 35'. Head 2 other Calif. sea lions toward Shilshole marina. From here N in Puget Sound keeping mid-channel past Edmonds, Everett, Sedney Island to Sandy Point thence Langley arriving 7:15 P.M. for night. All afternoon has been high waves, rough water, black skies, especially to S and wind & rain. Only a few birds observed and 3 Calif sea lions. Birds included 9 western grebes, 16 black nesters,

May 13, 1988

Left 5:36 AM just in front of black storm cloud at hour meter reading of 2583.0. 12 western grebes along way, Rock Point 7:30 A.M. Taking most direct route up Saratoga Passage. 8:36 W entrance Swinomish Channel at end jetty at 2586 hr meter. Ranch La Conner. Swinomish Bridge (highway 20) at 2588^{hr} meter at 1:10 P.M. Dil 60°, temp 160°. 8 western grebes just N of RR swinging bridge, approx 1/2 way N along channel were low tide exposures bay to E noted 2,035 black brant (estimated by hundreds). Continued W past Anacortes and thence across Rosario Straits to Thatcher Pass, thence to Bee House on Humphrey Head, thence to Spencer Spit where we anchored arriving at 3:00 P.M. Left The Bee and called Annette for transportation back to Bee House. Rosario Straits surprisingly calm compared to windy weather all along prior route.

At Bee House, at 7:30 P.M. 3 river otter swam 5 and 30' from shore.

7:35 P.M. Sister, a mule deer measured 28" at shoulders.

May 14, 1988

Floria and Bob Williams arrived for week end.

May 15, 1988

10:10 A.M. 3 Orea approx 300' E Leo Reef moving N.

2:00 P.M. 32 band-tailed pigeons at front porch feeder at Bee House.

3:20 P.M. Harbor seal returning to Leo Reef and rocks of Flower Island. On Leo Reef 12 harbor seal, 6 on Little Flower Rock, 7 on north Flower Rock, Annette took photos of The Bee (a boat)

May 16, 1988

8:20 A.M. 2 adult bald eagles on Big Flower Rock. Glaucous-winged gulls remained on Flower Island. One half hour later they moved to lower rocks on Flower Island.

11:30 A.M. 18 mallards, 4 godwits, 3 pintails, 1 shoveller in Swifts Lagoon.

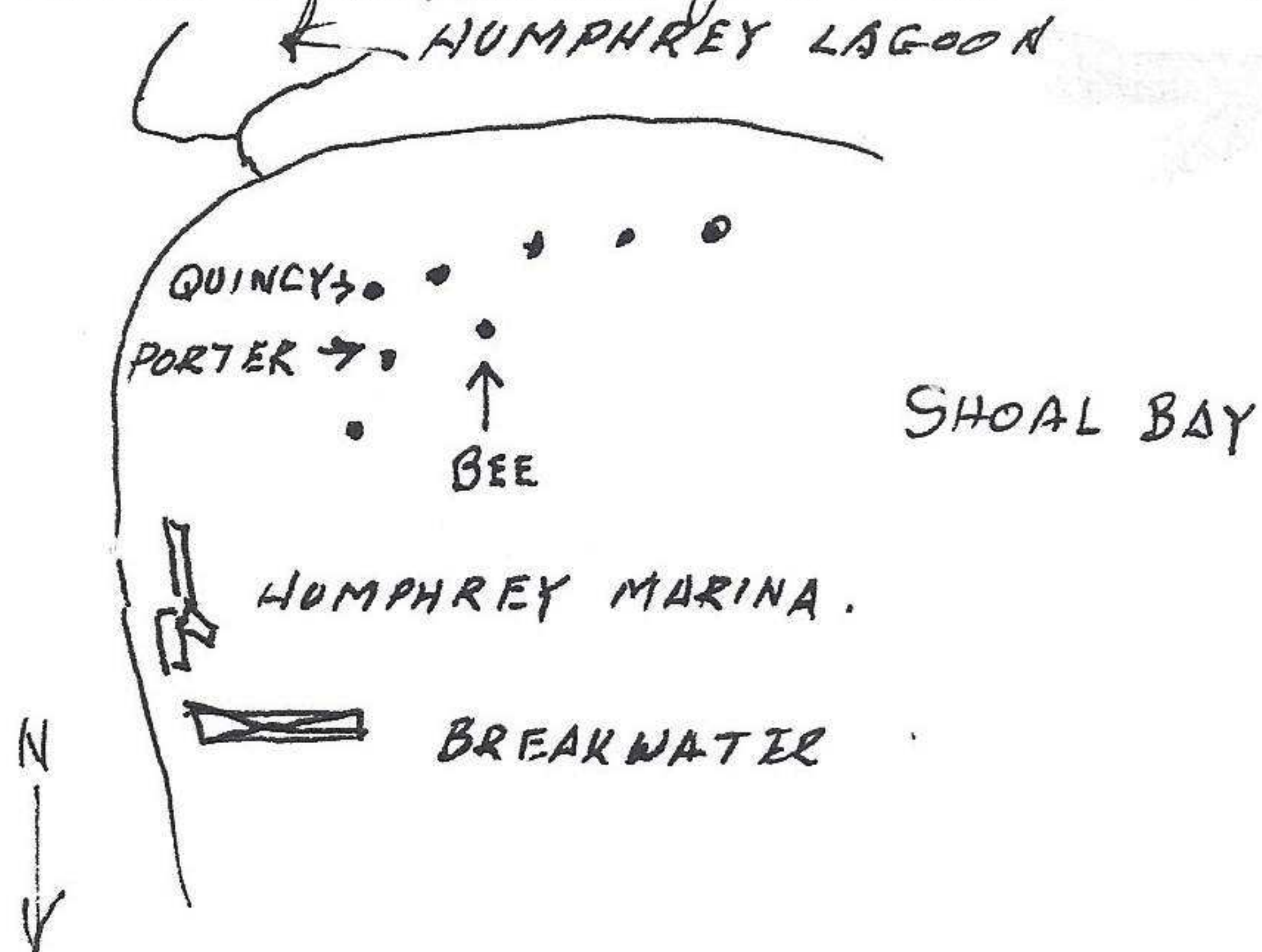
12:45 P.M. 17 harbor seal on Leo Reef, three of which were dark and large and the others grayish with spots; 15 harbor seal on Little Flower Rock, 8 whitish gray + 7 dark; 2 on 70 10 Rock of Leo Reef.

4:00 P.M. 2 river otter resting on aft platform of The Bee (Grand Banks boat)

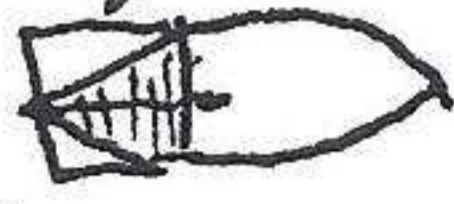
4:35 captured a *Peromyscus m. hallisteri* from Bee House:

880516-1 *Peromyscus m. hallisteri* 184-77-22-19-31 gms, ♀.

This afternoon placed anchor buoy in Shoal Bay



Revamping of "The Bee"

1. Connect all thru hull fittings to zinc plate
2. determine best type dingy & motor.
3. activate fresh water system
4. activate toilet
5. check refriger. (hum in A/C line)
6. check hum when batteries are off.
7. get drier.
8. install chain in limber holes and cleaw bilge. section
9. remove pan beneath motor and install removable pane
10. check syn of heat exchanger?
11. install spring on lever of stop motor
12. install 3 windshield wipers with single switcher.
13. attach pendant directly to chain of anchor and add strength to both pendant and cleat rope on deck (to anchor)
14. secure shackle bolts with thread punch, wire or monofilament line.
15. replace anchor chain from $3/8$ " to $1/2$ ".
16. install photovoltaic panels for batteries and other needs.
17. add extra set copper washers ^{"0" rings} for injectors of motor
18. check flashing light when 110 shore power connected.
19. Check both oil gauges for fluctuation of pressure.
20. Replace depth sounder on bridge or replace both sounders with new computerized and more efficient units; alarm.
21. install 2 rear view mirrors, bridge & cabin.
22. check generator
23. install oil changing system (pases, motor etc)
24. Acquire odometer (speed, trip miles etc)
25. Install venetian blinds
26. acquire 1,000,000 candle-power spot light
27. acquire reefing sail. (automatic) or best type.
28. extend canvas roof or thick plastic roof over aft cockpit or wedge shape along boom 
29. install diesel cabin heater, or wood fireplace
30. acquire up-to-date charts
31. acquire hand compass
32. acquire drough
33. automatic spray fire extinguishers
34. quarters clock (6") dial with hr, min, second hands
35. dividers for chart navigation.

46. Overboard emergency kit.
47. acquire modern complete channel V.H.F.
48. large ice box for opt cockpit.
- 49 tools
- 50 4 battery cases (large) and straps to secure them to floor of bilge.
- 51 first aid kit
- 52 hole plugs (wooden)
- 53 dome lights GE 1076
- 54 lamp oil
- 55 wicks for lamps
- 56 Toilet deodorant
- 57 gas sensor
- 58 wiring equipment.
- 59 fishing gear and license
- 60 current tables 1988
- 61 tide table
- 62 pelat book
- 63 flares (12 gauge)
- 64 navigation aids
- 65 bell
- 66 whistle
- 67 sleeping bags
- 68 butane
- 69 gasoline for generator
- 70 Chapman's navigation book
- 71 solar vent for fore cabin
- 72 parallel ruler
- 73 fog horn.
- 74 water filter AC T553 as a spare.
- 75 oil filter as a spare.
- 76 impeller for water pump. no 5850-0001
77. alternator belt, extra.
78. antifreeze. use 50-50 mixture
79. 2 feet water line 1 1/4" dia.
- 80 fuel filter
- 81 water extractor filter
- 82 fuel shutoff
- 83 range finder

May 17, 1988

11:21 AM 17 harbor seal Les Reef, 4 on Les Reef Rock no 10; 12 on Little Flower Rock and 3 on Big Flower Rock.

2:15 P.M. 25 band-tailed pigeons on front porch feeding station,

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington.

May 18, 1988

8:05 A.M. Townsend chipmunk jumped from side of Douglas Fir onto neck of a mule deer which was feeding at the feeder. Both animals reacted with surprise. Also this morning an Eastern gray squirrel jumped to rim of feeder when a mule deer was in the act of feeding out of the same feeder (8" from head of deer). The squirrel remained, the deer left.

11:01 red-tailed hawk circle S past Bee House at 70' above water.

In last 2 days at least there are times when there are no aquatic birds in area between Bee House & Les Reef.

2:33 P.M. 37 harbor seal (22 light, 15 dark) on Les Reef. Only seal in area.

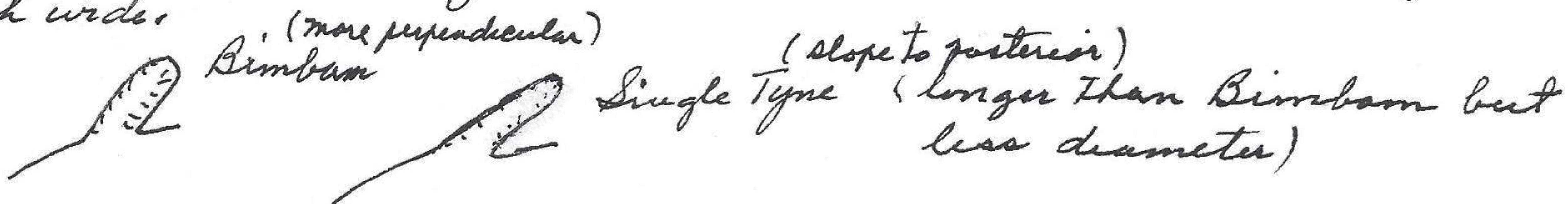
violet-green swallows enters nesting box on an overage of once per hour.

Band-tailed pigeons at feeder, at intervals both morning and afternoon, averaging 28 in flock. Crows feed compatibly with pigeons.

May 19, 1988

Birds absent from sound before sunrise, then mainly 5-6 glaucous-winged gulls and an occasional double-crested cormorant.

13:10 P.M. Bimbam, a [♂] mule deer, at feeder. Larger bucks generally feed at feeder in evenings. 33" at shoulders. Antlers 3" long and 1 inch wide.



Band-tailed pigeons feed at Bee House feeder on the overage of three times a day, morning, noon and early evening. 33 today in one flock.

9:30 P.M. a bat (medium size myotis) flew back and forth in front of Bee House (2nd floor, SE exposure and facing water) for 25 min. and then only once every half hour or so to at least 10:45 P.M.

May 20, 1988

6:45 A.M. Imm. bald eagle circled Spring Cove then alighted in largest tree just above Flat Point $\frac{3}{4}$ up tree (Douglas fir).
 no aquatic birds in ^{in Lopez} Sound at sunrise.

10:10 8 Townsend chipmunk in feeding area n.w. Bee House. at one time 7 young chased the single adult in a single line. at other times young would chase ^{other} young if adult was not present. The young were concerned with head of adult as if soliciting food from the adult. There were many bodily contacts. This continuous motion continued for 10 minutes. The chasing shifted to the woodpile area 30' beyond for 4 minutes and then they returned to the feeding area and continued their frenzy of motion.

12:45 P.M. Single river otter swam n. past Bee House out 15' from shore. It swam ^{alternately} under water for approx 35' then on surface of water for 8' (3 seconds) and then underwater. I concluded that this otter travelled faster and more directly than I had ever witnessed.

4:05 46 band-tailed pigeons at feeder on porch of Bee House. Half of these birds were in Douglas fir supporting the feeder.

4:30 P.M. 16 boats anchored at Spencer Spit.

8:58 P.M. A violet-green swallow entered nesting box at 8:58 P.M. and did not leave this evening at least.

May 22, 1988

Mary and Don arrived on afternoon ferry.

7:50 P.M. first noticed a rainbow extending from E of Bee House (middle ^{n.} Lopez Sound) to 150' W of Flower Island.

8:50 P.M. Rainbow faded & ended at the setting of sun in W. Annette recorded several photos. During the hour of rainbow shine and its secondary rainbow of reverse reflection, the rainbow maintained a brilliant display and continuity. The bases moved from (n base) middle of sound to Blakely ^{slopes} and the S base from 150' W Flower Island to S side Spencer Spit ($\frac{2}{3}$ way out spit).

May 23, 1988

10:30 A.M. Swift's Lagoon: 2 baldpates, 14 mallards, 2 cinnamon teal, 5 pintails.

Swamp areas on island now show basal green as new growth pushes upward. It has been brown since draught of last summer.

at Hummel Lake, ^{green} contains just reaching top of old growth.

May 24, 1988

10:10 A.M. Left Lopez Island for Anacortes. Bald eagle on nest, low profile. no harbor seal on Leo Reef. Glaucous-



winged gulls on territories of Flower Island. no birds up to W end Thatcher Pass. Glaucous-winged gull. E end Thatcher Pass. double-crested cormorant, glaucous-winged gull, glaucous-winged gull, glaucous-winged gull, all flying W. At Middle Rosario Straits 180 glaucous-winged gulls, 12 common murrelets, 2 rhinoceros auklets, and 25 other alcids in close-ordered pod to S, fishing.

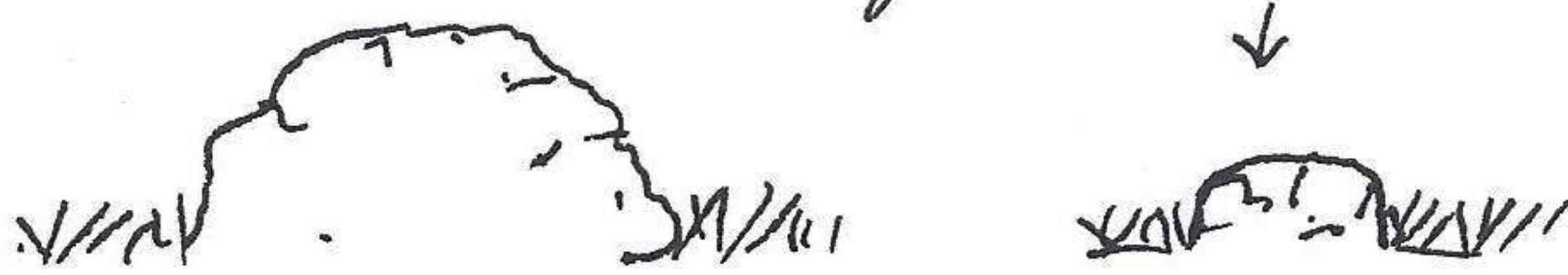
5:20 P.M. Anacortes ferry terminal on return trip to Lopez Island. In the ship harbor to S of Anacortes ferry terminal, noted 51 glaucous-winged gulls, 1 great blue heron, 3 pigeon guillemots. Left 5:21 P.M. 2 glaucous-winged gulls, 2 pigeon guillemots, 2 pigeon guillemots, 1 glaucous-winged gull, 1 pigeon guillemot, 2 glaucous-winged gulls flying SW, 1 glaucous-winged gull flying NE, 1 glaucous-winged gull on water. Middle Rosario Straits. 1 pigeon guillemot flying NE, 2 glaucous-winged gulls, 3 marbled murrelets, 1 common murre. E Thatcher Pass, 9 pigeon guillemots flying on group NE. W end Thatcher Pass. 1 glaucous-winged gull to S, 8 glaucous-winged gulls on piling at Lopez Island ferry terminal. Arrived Lopez Island 5:56 P.M.

6:01. 1 river otter S past Bee House making a broad short cut to Lichen Point.

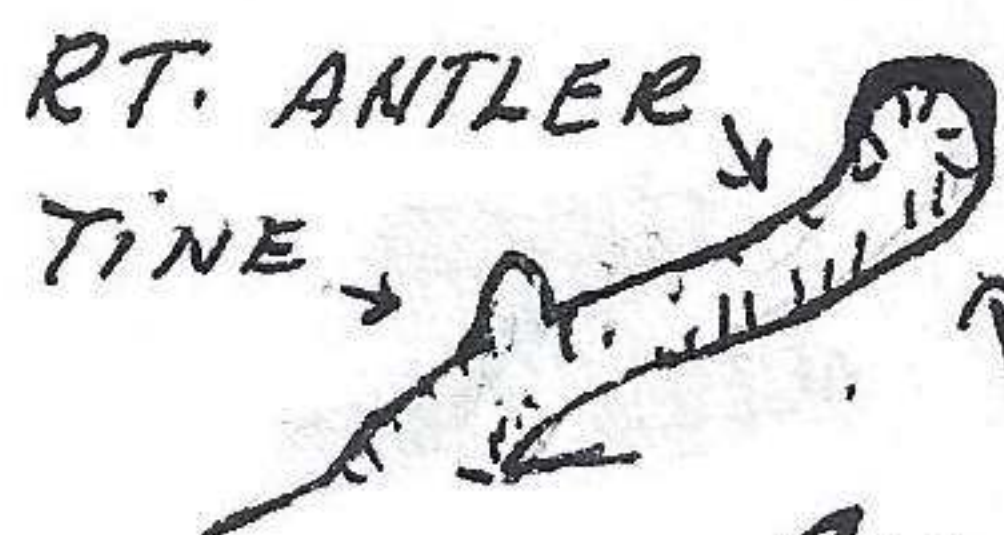
May 25, 1988

11:30 A.M. Annette observed the first fawn of the season. It was crossing the Port Stanley Road SW of Swift's Lagoon. with its mother.

1:20 P.M. Buster, a mule deer at Bee House feeder. The larger wartlike knobs on shoulder blade area and upper right leg were now approx. 8 mm wide. They had either been broken off or reduced.



7:01 P.M. Bimbam, a mule deer at feeder at Bee House. The antlers are approx 1 inch less than length of ear when ear parallels antler. Right antler with nub for tine point.



Height of forelimb at scapula is 33".

Antler approx. 5" long. Left antler 1" longer.

Curves up and laterally
Dark-eyed junco (Oregon race) feeding 2 young at feeder.

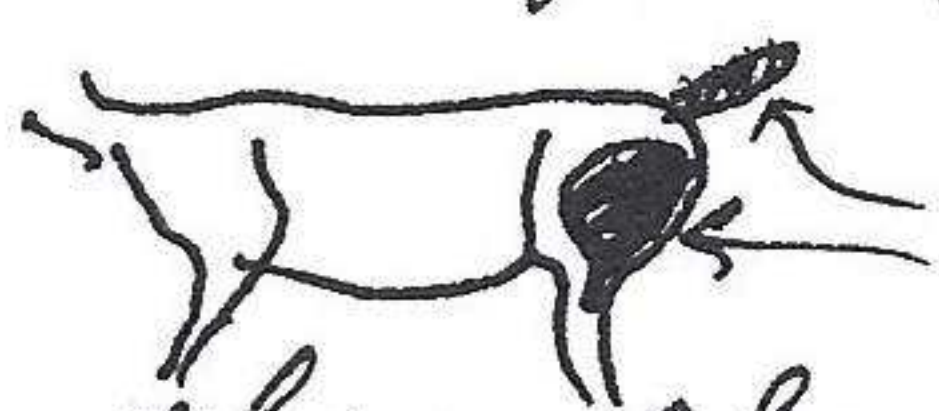
This afternoon observed an American Crow fly from Bee House to Leo Reef.

An average of 32 band-tailed pigeons at feeder, on and off from 2:00 P.M. to 4:00 P.M. When all birds leave feeder at once there are 4-6 small feathers displaced and in the air above the feeder. When 32 birds are on feeder, (approx. 7 sq. feet) the birds are so closely packed that when another bird lands it rests and then slides off side or back + tail of the bird already on the feeder. Many instances of upstretched necks and pecking of challenging birds. Wing slapping common. Both defensive mannerisms given approx 1 per every 2 seconds. Otherwise the pigeons are compatible.

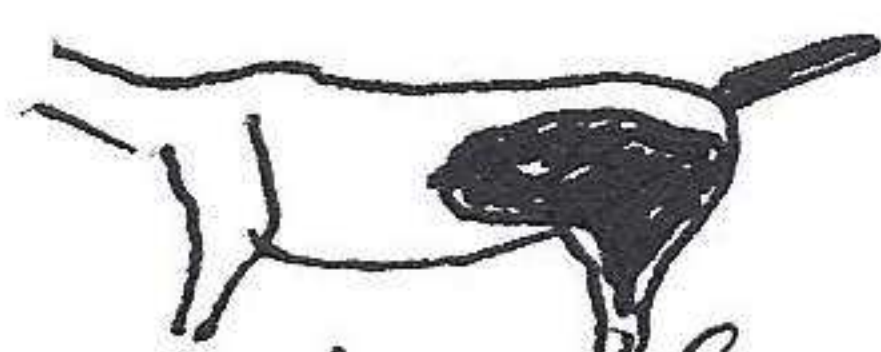
43 mallards in Swift Lagoon. They left for pond 1/10 mi. to S.
and 2 blue-winged teal

May 28, 1988.

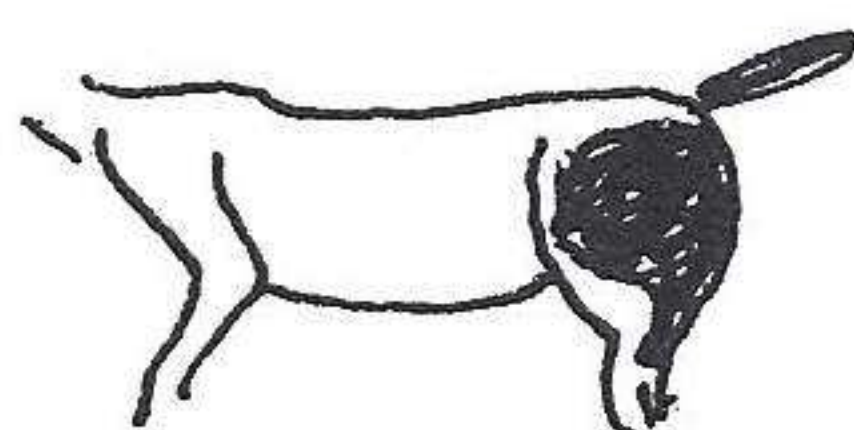
11:05 A.M. 2 ♂ and 1 ♀ of last years ^{mule deer} young. One ♂, 30" high at shoulders, blond and ragged faded winter pelage. New golden brown hair long. Antler 3/4 diameter and 1" long.



Another ♂ darker tan than above, new hair; antlers 3/4" x 1" long.



The female darker grayish brown and new pelage a darker golden brown than above.



An eastern gray squirrel approach deer to 16" and white deer responded carelessly they remained at the feeder and the challenger backed away.

11:30 A.M. 28 harbor seal (9 of which are black) on Leo Reef proper (beach rocks). No other seal on Flower rocks or Leo Reef rocks no. 10, 11, rock no 9 not exposed.

72 glaucous-winged gulls on Flower Island, 90% in pairs on territories.

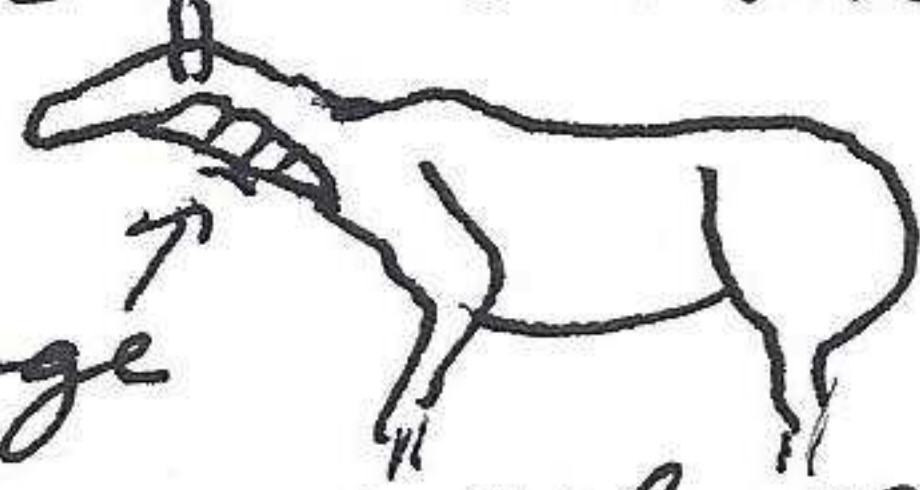
12:30 P.M. 4 ♂ goldfinch, 3 ♂ purple finch on lawn at pharmacy building along Fishermans Bay.

1:00 P.M. bald eagle at Cross and Port Stanley roads, one at 1917 School House.

For last month (see journal notes) rufous hummingbirds have been represented by a ♀ and ♂ except 2 or 3 other instances when another ♂ will be at feeding only temporarily as it passes by.

12:21 P.M. Buster, a mule deer, at feeder with Sister, also a mule deer. Buster almost in complete summer pelage;

winter pelage
all rest body new pelage.



The two deer touched noses without reaction as if members of same family.

12:30 P.M. 28 boats, all going N up N Lopez Sound from Thatcher Pass. 13 of them sail boats and of the 13 only 5 using sails, although wind favorable, maximum traffic of day. Above number for one instant of time.

6:00 P.M. 25 boats at anchor at Spencer Spit, 20 of them sailboats.

6:10 P.M. 5 river otter past Bee House, going N.

May 29, 1988

4:44 A.M. Violet-green swallows active at nesting box on Bee House


6:30 A.M. ♀ ^{mule deer} and 2 new fawns, first observed on Bee Estate this season. Color brighter than adult. The fawns are frisky in contrast to adult. The fawns also more instinctively alert and sounds or people cause them to jump or run. At one time the fawns left ♀ for 150' then returned. They ^{confidently} approached another ad. ♀ that refused to accept them but for mother they ran directly to her and started nursing. I am impressed with how tame and unalert the local ^{adult} deer are.

880529-1 *Peromyscus m. hallowsteri* 178-83-23-19-29 gms ♂
Captured Bee House this afternoon.

This evening at 6:00 P.M. noted 13 motor boats and 16 sail boats = 29 total anchored at Spencer Spit.

At dusk a single band-tailed pigeon at feeder.

May 30, 1988

For 2 1/2 years a tree with roots  has been lodged on Spring Cove beach and has kept other logs and debris on beach that would not have remained if the rooted tree had not anchored them there. The roots dig in as tide pushes tree beachward and then when tide low the roots dig in and secure the tree. If this tree ever goes out I believe the beach will be cleared of logs and debris more frequently.

880530-1 Peromyscus m. hallisteri. 179-79-23-19-28 gms. ♂
From Bee House.

Warts on Buster, a mule deer, and smaller and some blood and veins on surface.

10:25 A.M. 38 harbor seal on Leo Reef Rocks^{nos.} 1-6. There are no seal on rocks nos 7, 10, 11 or any rocks of Flower Island Rocks.

10:30 A.M. ♂ deer, mule, 29" at shoulders and antlers 1" high.

2:35 P.M. 23 harbor seal Leo Reef.

May 31, 1988

2:30 P.M. 15 harbor seal Leo Reef. 19 harbor seal north Flower Rock.

2:35 P.M. 2 turkey vultures circled 100' above water in front of Bee House.

Harbor seal in water in front Bee House.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington
June 1, 1988

7:30 A.M. Harbor seal in water in front Bee House.

10:30 A.M. Buster, a mule deer, ♀, with original wart on area of shoulder blade now almost disappeared. One on right leg 1/3 original size. (see previous notes concerning these warts.)

10:40 21 harbor seal Leo Reef. none on any other rock either Leo Reef or Flower Island rocks.

4:45 P.M. Photo 880601-1 from Bee House SE toward Leo Reef, Thatcher Pass.

Photo 880601-2 from Bee House to S with Lechen Point in foreground and Spencer Spit in far distance.

7:30 P.M. Following four photos (tels) of cumulus clouds over ESE ridge of Blakely Island. These clouds have moved NE from S beyond Lopez Island to present position. Photos no:

880601-5

880601-6

880601-7

880601-8

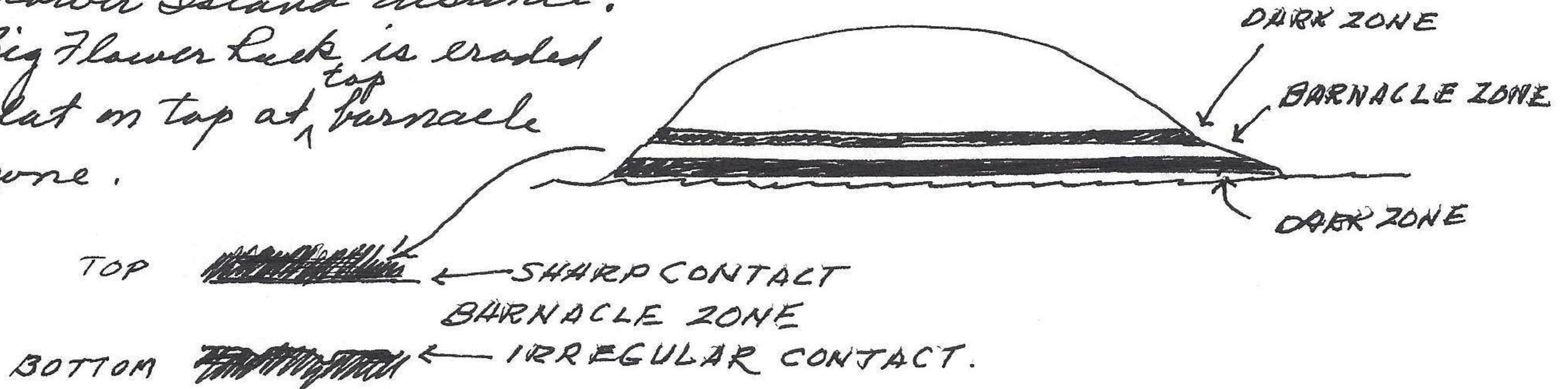
June 2, 1988

Ferry takes 9' 19" 16" from first appearance out of W Thatcher to directly E of Bee House.

8:30 A.M. The top-eared ad. ♀, 31" at shoulders at feeder at Bee House, also ♀, 30" at shoulders at Bee feeder. Her two fawns remained on slope above house and did not come to feeder. They instinctively are shy of man and will run up hill and take to ground cover. An antlered (1" long) ♂ touched nose with above female and was comfortable at feeder with the ad. ♀. The summer pelage (golden brown) completed to neck in front of shoulders. The old winter pelage ^{on neck} still retains spots of a previous juvenal pelage.

Trip to Anacortes & Mt. Vernon. Tidal marks on E side Flower Island distinct.

Big Flower Lick is eroded flat on top at ^{top} barnacle zone.

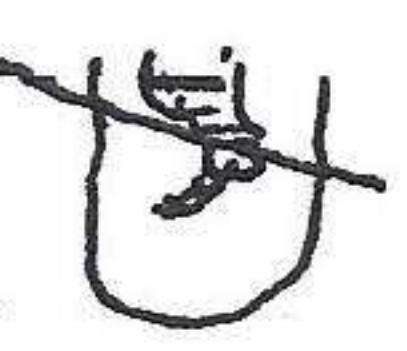



at W end Thatcher Pass, 3 pigeon guillemot.

Pointer Island usual glaucous-winged gulls on territories. (territories 3 times closer than those on Flower Island.) and 11 cormorants resting on top of E end island.

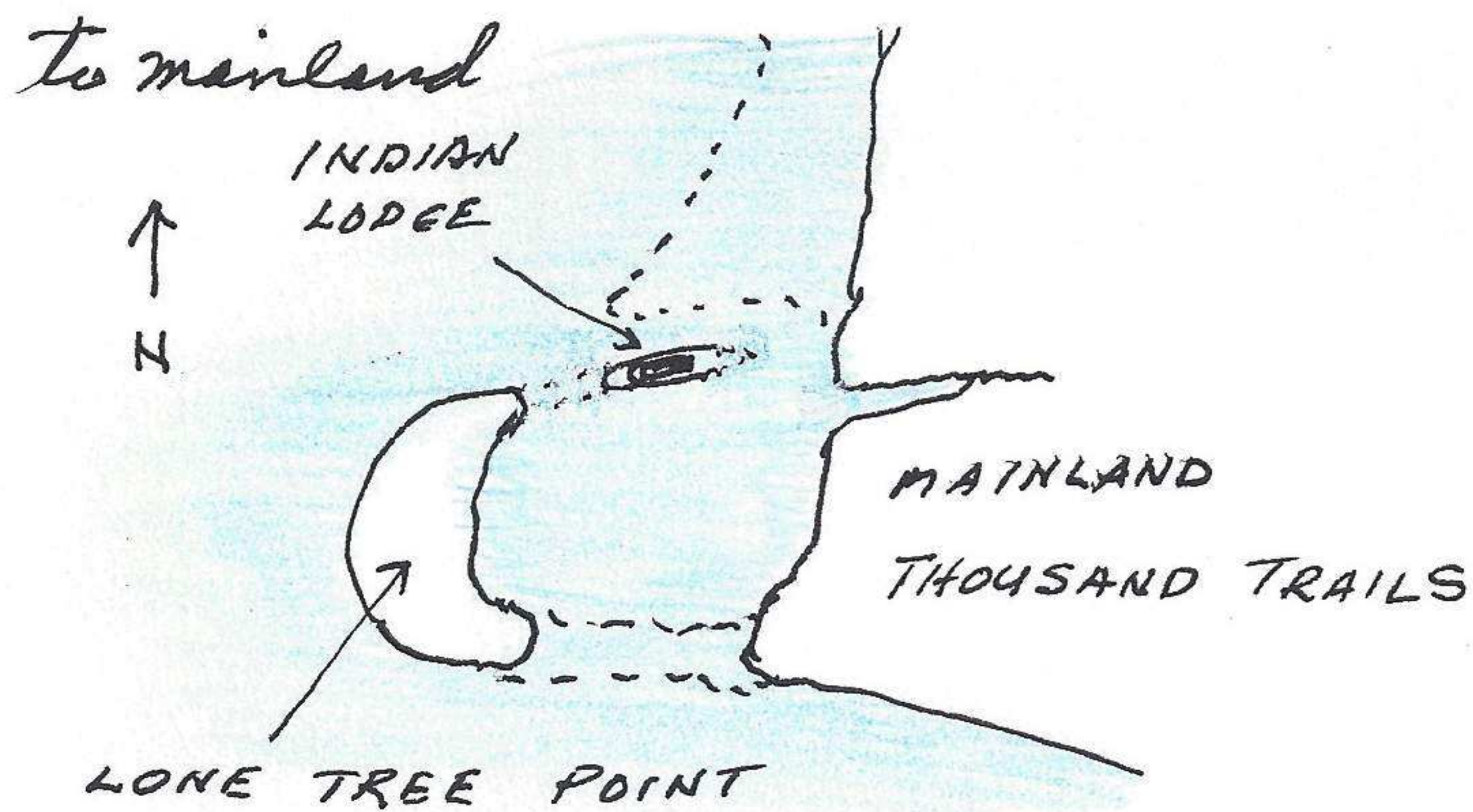
2 glaucous-winged gulls, 2 glaucous-winged gulls, 3 pigeon guillemots. Arrived Anacortes.

Continued thru Anacortes and drove clockwise around March Peninsula. On NE point of March Peninsula for 1 mi. shoreline 42 great blue heron in groups of 6, 6, 5, 14, 4, 7.

On W side March Peninsula water approx 3 acres and 1, 100 drainage 5 of causeway (R, R) . Glaucous-winged gulls average 1 per 200' along outer edge  of tideland. No brant in Padilla Bay.

At La Conner at Chandler marine store, the owner reported a coot arrived 3 days ago and has remained in area. Ordinarily coot are fresh water birds. He also reports that all winter birds have left the area.

Continued to Thousand Trails after checking with Mr. Johnson in Mt. Vernon. At 9:30 P.M. high tide at Lone Tree Point. High water and waves come across ^{entire} connection between Lone Tree Point and mainland carrying large logs ⁽³⁰⁾ and waves. The gravel spit on N side lagoon covered with water from base of peninsula island to W side ^{101 west} Indian Lodge. Outlet channel now water back



June 4, 1988

In area of above map observed:

4 black oystercatchers, these birds were herded along beach for 100' at 25' distance; 4 double-crested cormorants, 1 rufous-sided towhee, 1 song sparrow; 6 American crows; 9 glaucous-winged gulls; 1 kingfisher (belted); 4 barn swallow; 8 violet-green swallow; 1 great blue heron.

Left Thousand Trails Preserve and drove to Anacortes ferry dock. Birds there: 12 glaucous-winged gulls, 1 cedar waxwing, 9 mallards, 8 barn swallows, 4 American crows, 2 white-crowned sparrows. Tide out to last piling in bay SW of terminal.

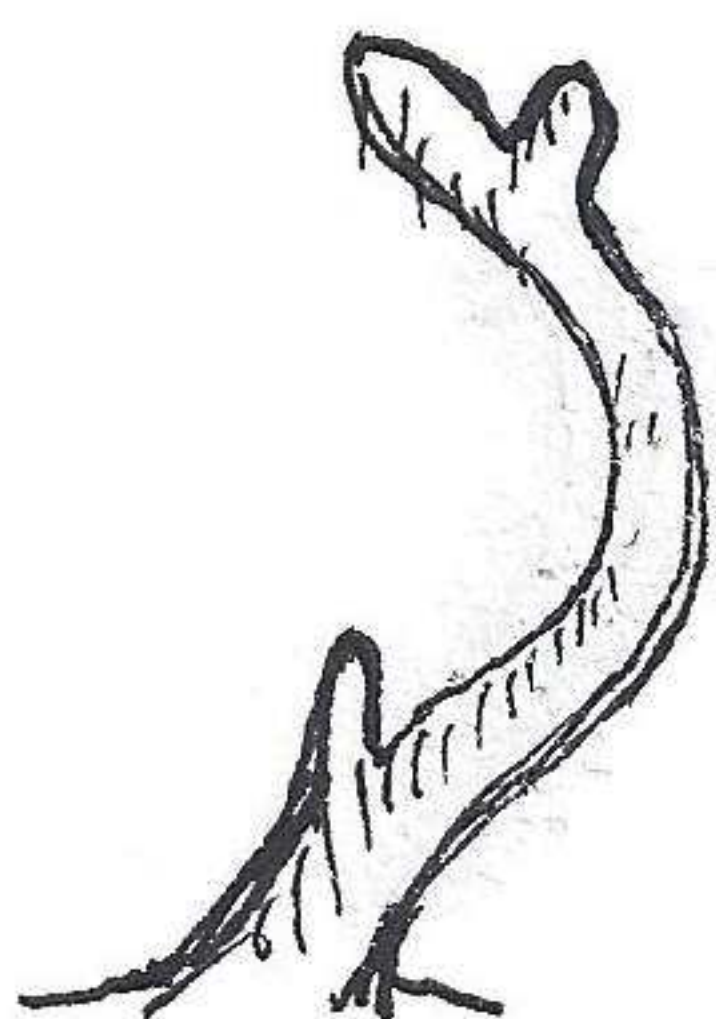
Left on ferry 3:45 P.M. Enroute to Lopez Island only 1 double-crested cormorant and 2 glaucous-winged gulls and these in Rosario Straits. As we passed N end of Humphrey Head noted a bald eagle standing on nest. Arrived Lopez Island.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Wash.

June 5, 1988

880605-1 *Peromyscus m. hallisteri*. 180-81-24-19-23gms ♂

Bimbarn, a mule deer arrived at feeder at Bee House at 8:40 A.M. Its antlers thus:



(see May 25, 1988 for last measurement of this ♂)

height at shoulders 33"

June 6, 1988

Buster, a mule deer measured 31" at shoulders

June 7, 1988

James Robert Bee, James W and Annette, Stewart Brune, Peggy Loomis and Eli Loomis to Rosario Resort by "The Bee" boat. On return at 8:00 P.M. travelled 2.5 MPH.

at Lopez Village on Lopez Island noted 2 bald eagles circling above ridge to E.

5:25 P.M. 1 river otter to N past Bee House.

June 8, 1988

6:55 A.M. 1 river otter to S 18' out from shoreline below Bee House.

In last 4 days mule deer 2-3 have been lying on Boundary Point part of the day. (A.M. or P.M.) for 2-4 hours including 1 year ♂, ♀ and ad. ♀♀'s.

8:10 A.M. ♂, 30" high at shoulders at Bee feeder, new summer pelage except lower neck

Antler a 1" high knob 

old
pelage 

4:25 P.M. medium size harbor seal (spotted) fished successfully for candle fish for 5 minutes in front Bee House from 5' to 30' from shore, keeping on or just under (6" or so) water. Sometimes ^(1/2 time) it would swim on back and capture fish while in that position.

Kingfisher caught 2 candlefish in same area as above.

A male mule deer at Bee feeder. It measured 30 1/2" high at shoulders, one antler (right) 1", left antler 1 1/2".

This morning caught the following in Bee House:

880608-1 *Peromyscus m. tollisteri* 180-85-24-19-28gms. ♂

June 9, 1988

8:30 A.M. Buster, a mule deer, had blood on posterior body.

9:10 after feeding and grooming she (Buster) laid on ramp of feeder approach for 15 minutes.

It is my opinion that mule deer are more tame in summer than ⁱⁿ winter and remain around house more in summer than in ⁱⁿ winter.

9:48 A.M. a harbor seal fished together NE of ^{Bee} house off

Boundary Point, out 20-30' from shore

June 10, 1988

To Anacortes. At Lopez ferry dock 4 glaucous-winged gulls flew by, 2 to W, 2 to E.

Left 9:31 A.M. Recorded all birds and for glaucous-winged gulls the direction of flight. > west, < east.

9:32 A.M. >

9:34 >>

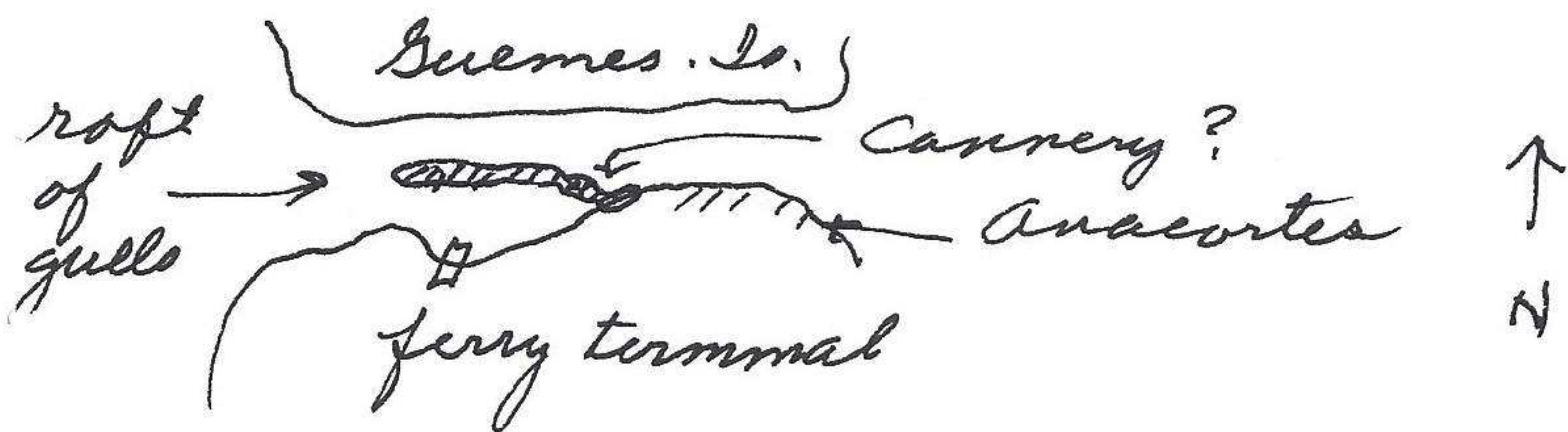
9:36 <

9:37 <

These were the only birds of any species observed on entire trip. Bald eagle standing on nest as we past N end Humphrey Head.

Check mt. Vernon thence return Anacortes ferry terminal.

Left 5:34 P.M. for Lopez Island. At terminal could see approx. 170 (actually counted them) glaucous-winged gulls in long raft from a cannery? in Anacortes W in channel

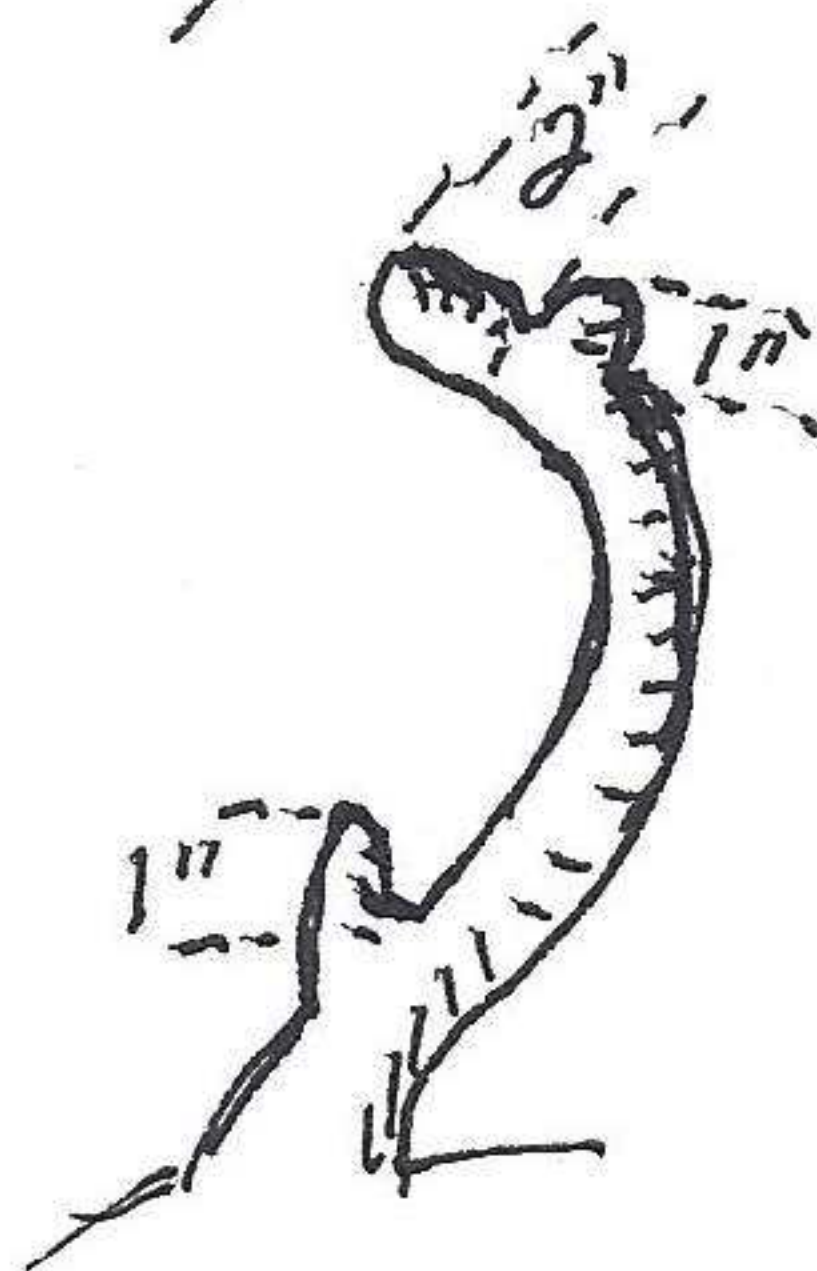
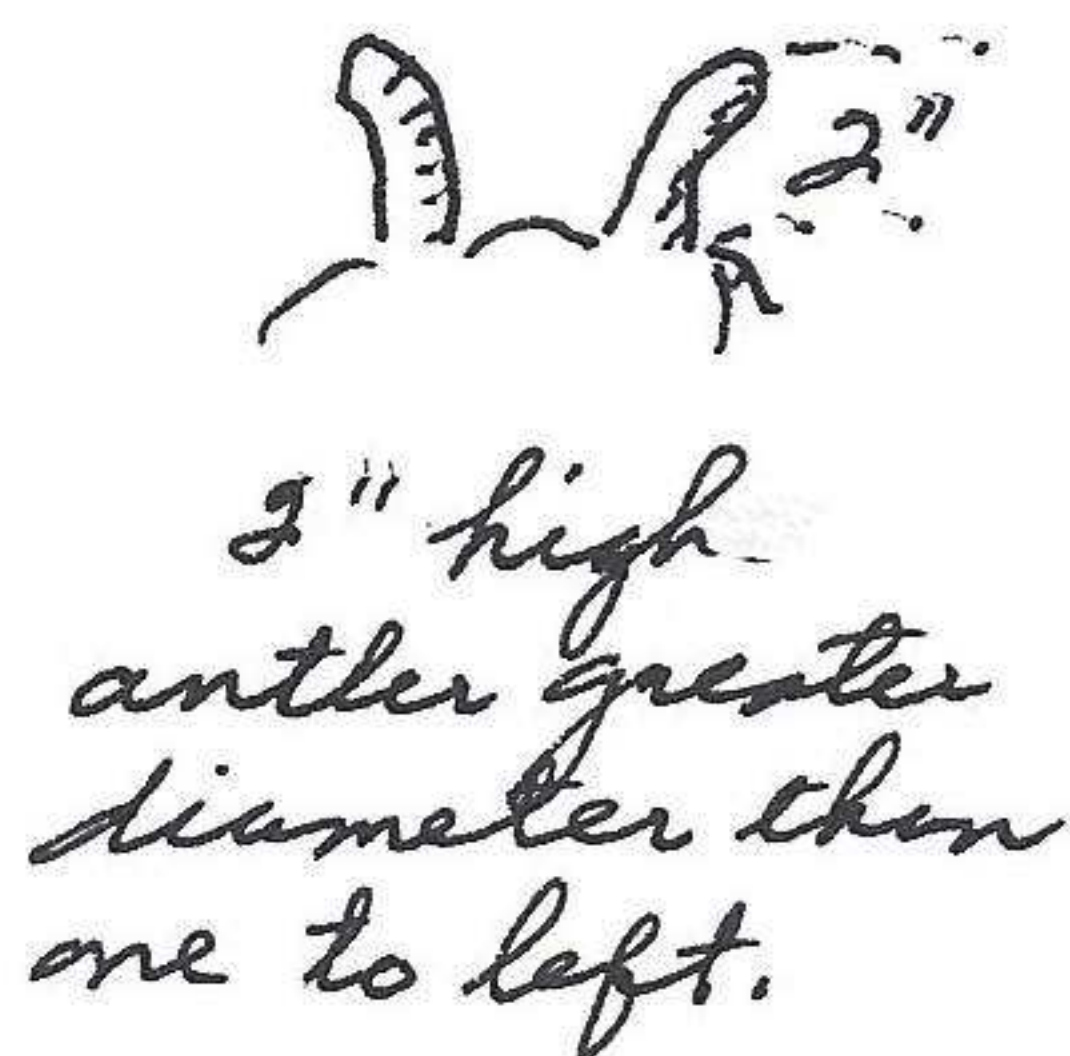
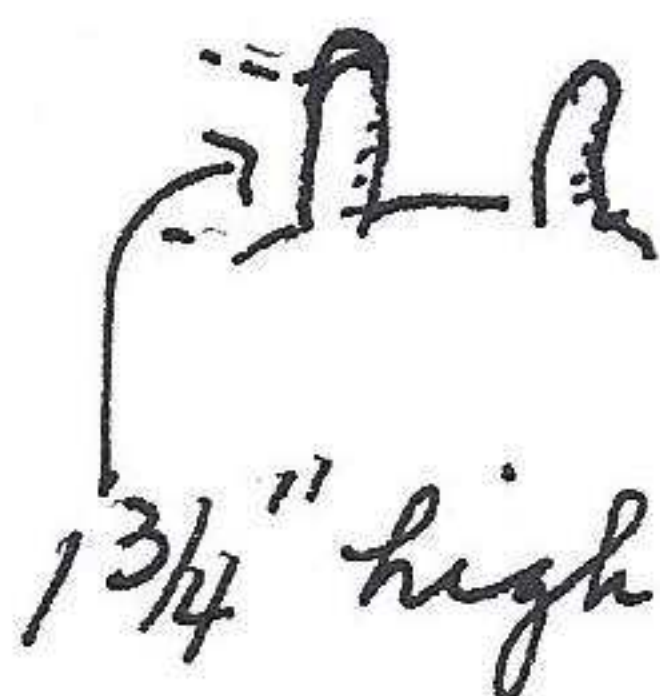


Continued W and in Thatcher Pass (E end): 5 glaucous-winged gulls, 4 double-crested cormorant, 5 glaucous-winged gulls. Continued to Lopez Island.

June 11, 1988

8:30 A.M. 2 common raven feed on cracked corn & wheat at bird feeder at Bee House.

A shy ♀ mule deer, 30 1/2" at shoulders at feeder of Bee House.
 6 Eastern gray squirrels on front porch feeder, at one time.
 Following ♂ mule deer at Bee feeder at one time



This 34" high buck left feeder to trail to NE corner Joyce Fralic home, thence across her yard patio then up drive way. In 20' later it returned, passing 10' below lower parking lot

across head of trail above stairs and down regular trail to feeder. The feeder was empty and it immediately left and followed up trail across the *Fralic patos* etc.

The lop-eared ♀ mule deer, 31" high at shoulders at Bee feeder. She had one of her two fawns at feeder. The fawn measured 17 1/2" high. This fawn is at least 3 weeks old.

June 12, 1988

10:00 A.M. 11 Harbor seal on Leo Reef, 5 on Little Flower Rock and 12 on North Flower Rock.

12:00 A.M. 4 of the renters (O'Leary house) took boat to Leo Reef and displaced the harbor seal and then returned to O'Leary home. While they were there (the renters) the seal all left at the same time and as far as I could see, the seal⁽⁸⁾ did not reappear until 4 minutes later some 150' N of the reef.

June 13, 1988


8:00 A.M. Sister, a mule deer at feeder and measured 28" at shoulders.

Trip to Fishermans Bay. 4 white butterflies (only ones observed) enroute (Port Stanley, Hummel Lake route)


Drove to Causeway, SW side Fishermans Bay. Counted glaucous-winged gulls in 7/10 miles of causeway on low tide edge of beach (groups) 5, 7, 5, 1, 2, 4, 8, 10, 8, 1, 3, 5. Also feeding with gulls and generally distributed were 16 American Crows. On E side causeway in mud flats and small standing pools were 8 great blue herons.

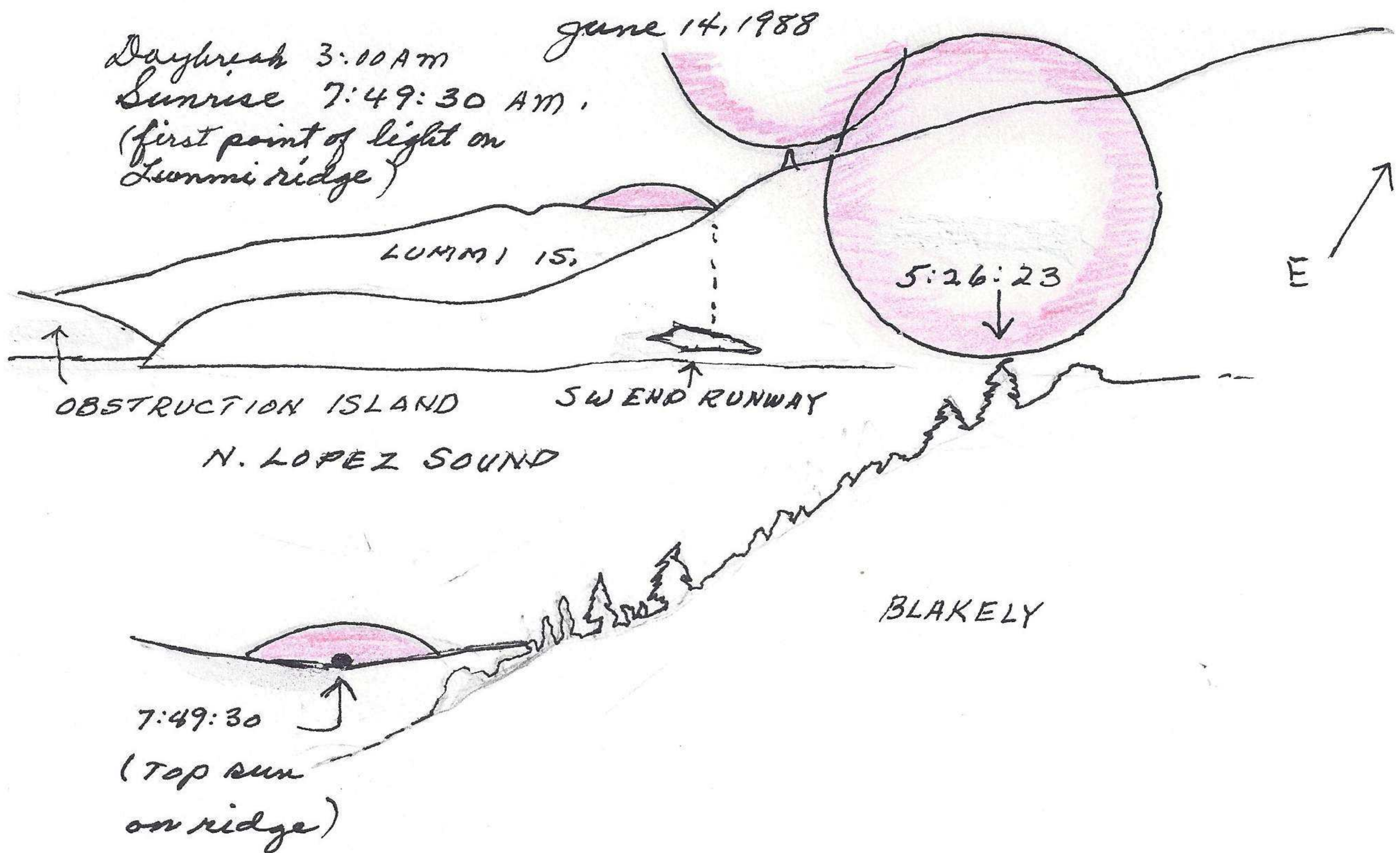
The following deer show change of antler growth since previous recorded:

left antler 1/4" shorter than right

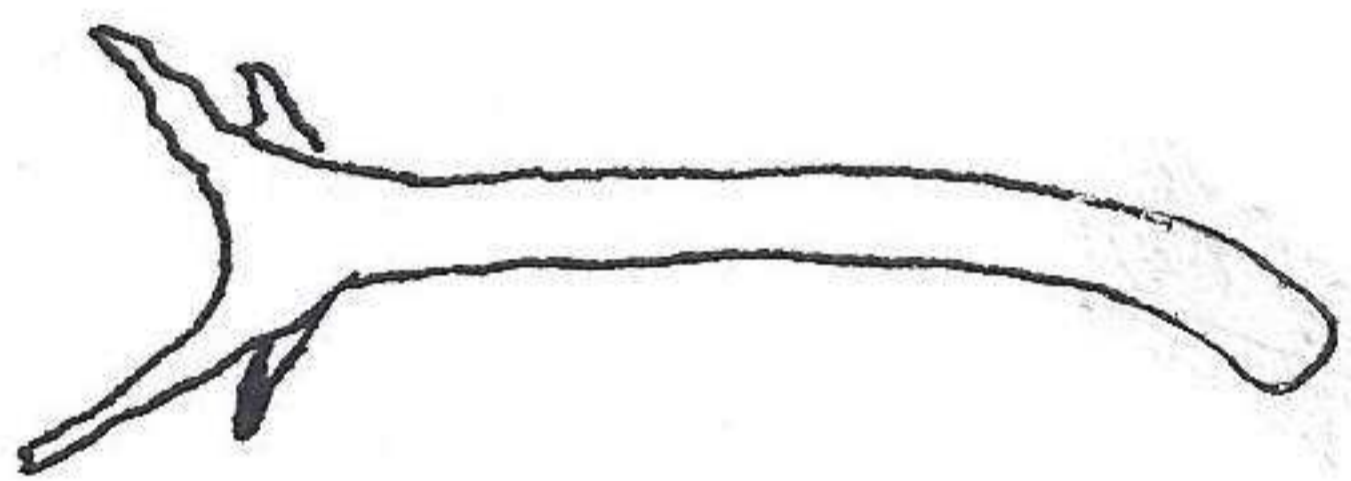
♂  30" high at shoulders.

♂  shoulder height? ♀ 31 1/2" high at shoulders and the aggressive one.

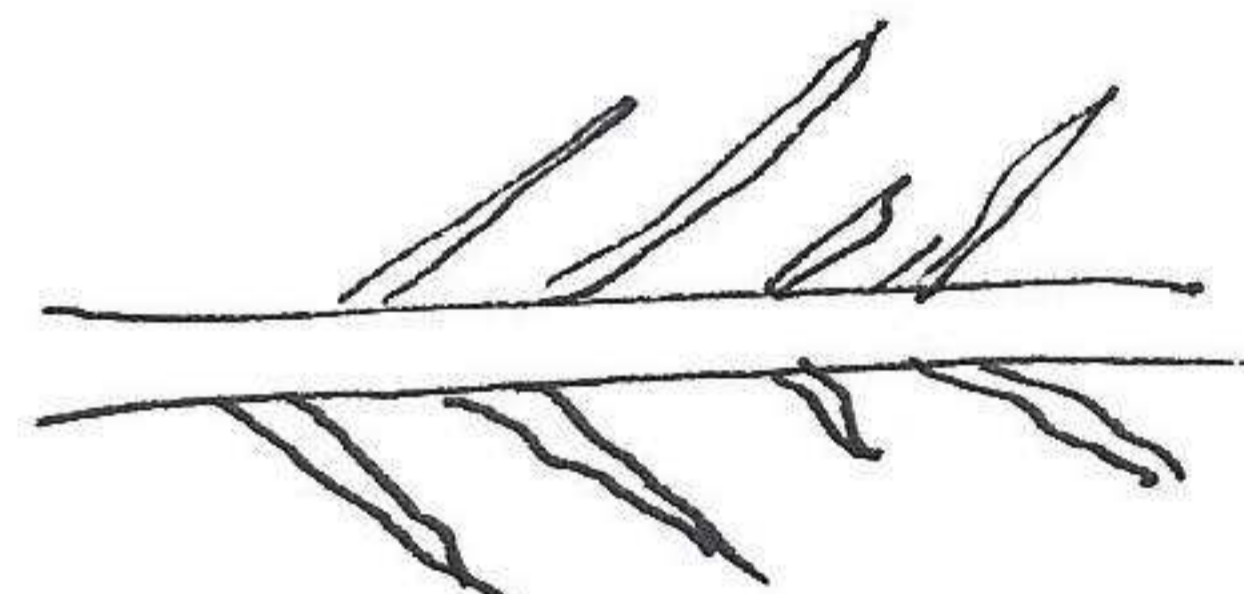
♂  30" high at shoulder
posterior half pelage new.



10:30 A.M. 34 harbor seal on Leo Reef, none elsewhere.
Log in Spring Cove (2) have been there for 2 1/2 years.
Their configuration is as follows:



dig into beach and
hold log from returning
to sound.



Hold fast limbs

These logs keep other logs from leaving cove.


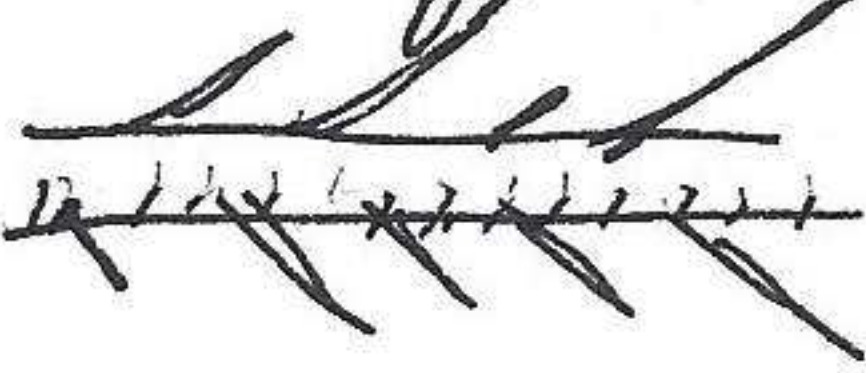

Ocean spray turning from green to tan ^{some white} inflorescence.
6:00 P.M. adult bald eagle flew over Flower Island and
all gulls left for approx. 5 minutes.

June 15, 1988

1:00 P.M. 35 harbor seal on Leo Reef, 13 on North Flower Rock.
Also 1 double-crested cormorant on Leo Reef.

June 16, 1988

♀ mule deer, 29 1/2" high at shoulder and her 2 fawns at
Bee feeder. The fawns left first and gained top of slope
and hid in conifer ground cover.

A log, curved and with projecting roots  has been in Spring Cove for at least 2 1/2 years and roots has anchored the log in gravel of beach on out movement of water. It has also kept other logs hemmed in on beach. Today cut roots from log and next high tide took it out of bay and moved it into sound. Logs with limbs also become attached to beach  . Curved logs also are difficult for tides to remove from beach: .

Ocean spray just turning from light to inflarescenes to white
 Ron Fowler excavated boat pod on Upper Parking Lot. Red alder specimen (cross section) from here. no. 880616-1, 125 years old.
 3' from base. June 17, 1988

ad. ♀ ^{mule} deer 30" high at shoulders with fawn at feeder at Bee House.

Left 10:14 A.M. for Anacortes, thence to Chris' at Last Lake. no bald eagle on nest at n end Humphrey Head. no birds between Lopez ferry terminal & Anacortes except 3 glaucous-winged gulls n of James Island. Mathew birthday.

June 18, 1988

after breakfast at Bothell, visited city park along Sammish River. at one angle of river, along edge for 150', a large swallow-tailed butterfly flew along edge of river and made 3 definite angle turns.

June 20, 1988

Left Chris' at Last Lake and returned to Lopez Island. Left Anacortes ferry terminal at 3:40 P.M. nine glaucous-winged gulls at boat, 28 on piling in bay to SW. Enroute 1 glaucous-winged gull, 1 mottled murrelet, 1 glaucous-winged gull. 3 glaucous-winged gulls n James Island. at w end Thatcher Pass, 1 pigeon guillemot, 1 glaucous-winged gull. Arrived Lopez Island.

In last two weeks there has been more debris (fragments of sea vegetation and logs) than earlier in summer.

June 21, 1988

4:31 A.M. bald eagle flew S in front Bee House. I have not seen as many eagles in last 2 weeks in comparison to earlier

in the spring.

The predominant color of ocean spray is white but many inflorescences of light tan.

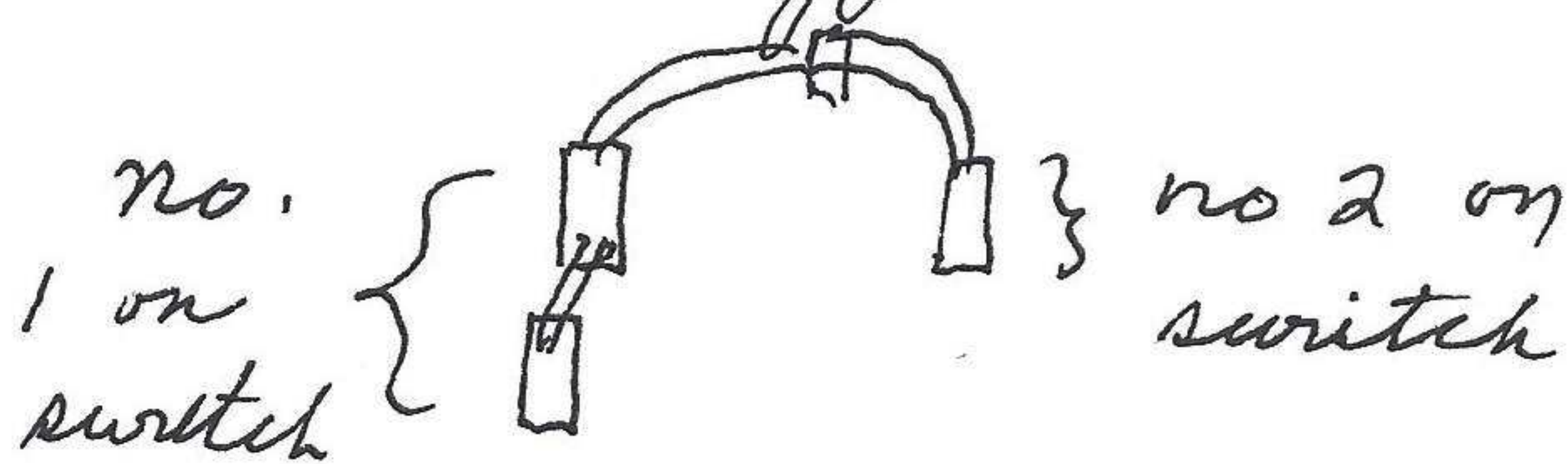
At 10:45 Suster, a mule deer was feeding at Bee House feeder and every other ♀ of its size or younger was challenged by erecting all hair on body to its fullest extent and would maintain this defensive posture as long as the invader remained in the area.

A ♀ mule deer 30" at shoulders fed at Bee House feeder for 12 minutes, then reclined 2 feet from feeder and remained there for 25 minutes. Another ♀ rested for equivalent time at Boundary Point.

Check The Bee, a Grand Banks boat with Stewart Marshall.

1. replaced one battery because of loose stem with equivalent 40 Fisk, 900 cold cranking hours. The old battery had been made in Seattle and this battery had not been manufactured in the last 6 years. all batteries topped with water.

2. Red no 2 was moved to port side and new battery put into 2 battery position.



3. added terminal to ground no 2. motor started on no 2 only.

3. check packing in stuffing box and retightened and joint or packing held water. Extra fiber ring supplied.

4. Tightened water hose on motor (left front)

5. now all battery terminals have been cleaned and refastened.

6. will charge over-night on automatic no 2 on charger (slow charge) and tomorrow will stop charge and then in two days will check to see if charge held.

7. replace plug at base fuel tank with valve when tanks are empty. fuel to motor
drain
water

Then release sediment + water after each fill-up. Also check primary and secondary filter system and replace elements & bleed system. after 200 hrs.

8. Repair oil pressure gauge.

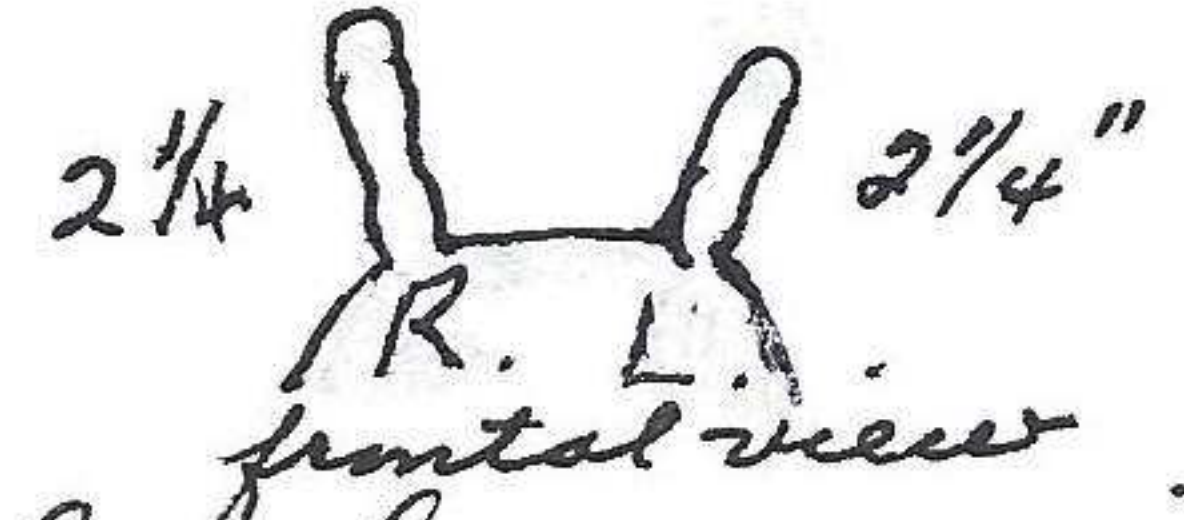
9. check pulsator in fuel pump and for dirt build-up on walls of pump.

10. Bleed fuel injector for air.

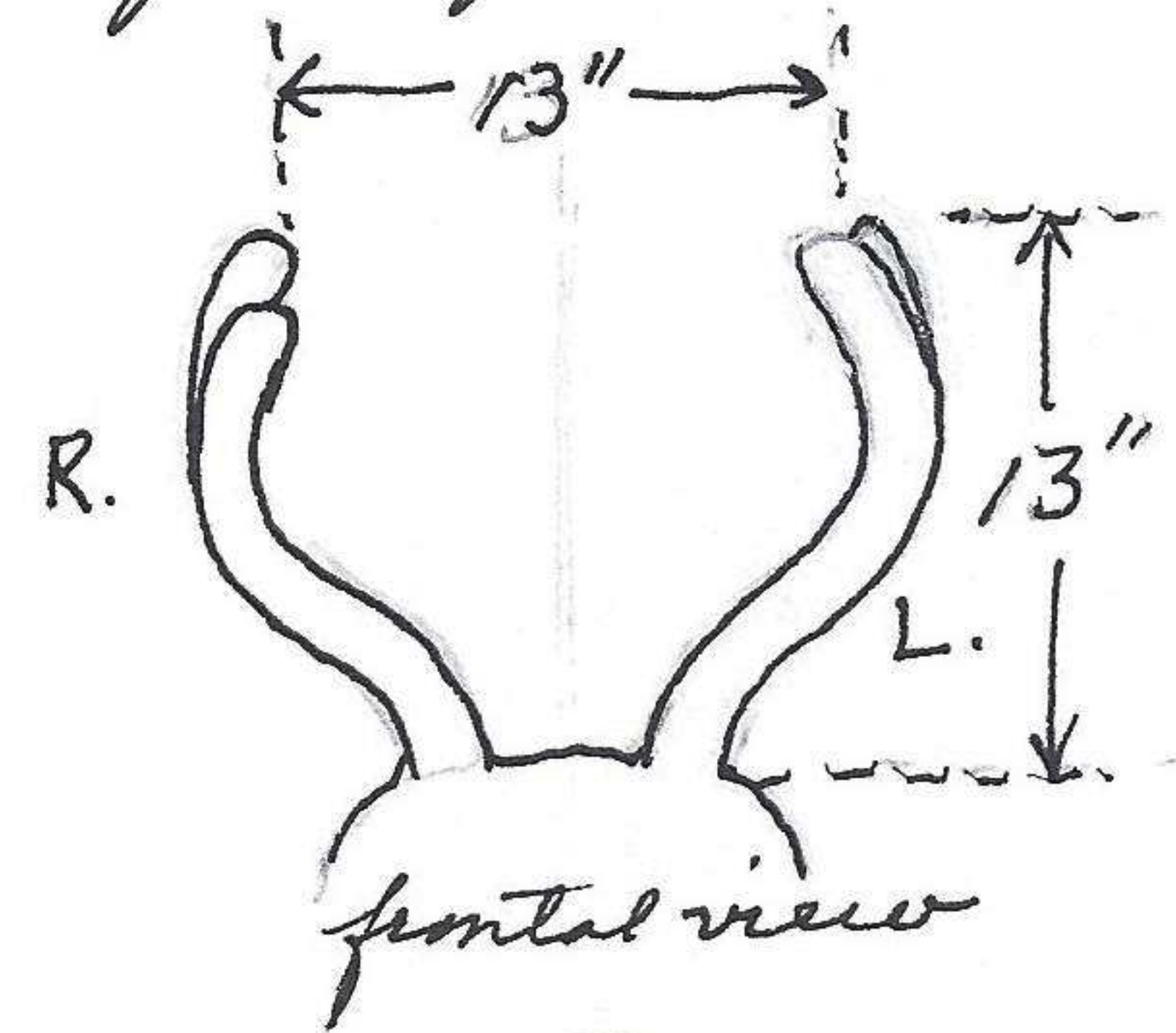
- 11. Install oil filter in line from bilge pump.
- 12. " septic tank and deck outlet for aspiration.

June 22, 1988

♂ mule deer, 30" high at shoulders, left antler shorter than right one.

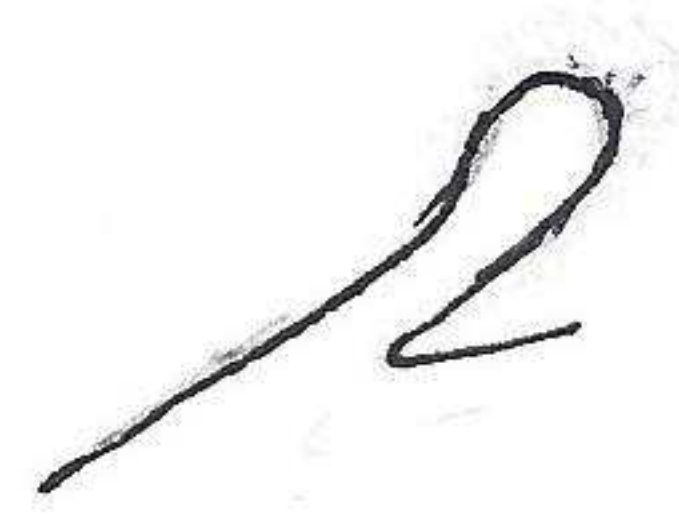
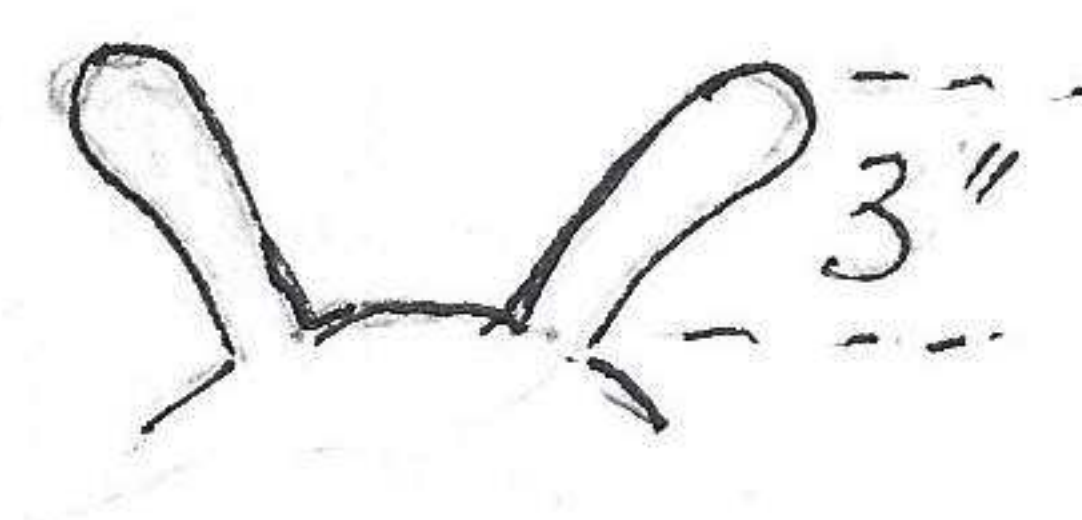


Watched Eastern gray squirrel forcefully chase American crow from feeder.



at 7:45 P.M male mule deer at feeder and first time observed. It was moderately tame and our movements in kitchen, 7 feet distance, did not disturb its feeding. Buck did not have tines 34" high at shoulder.

This buck fed for 12 minutes on cracked corn and wheat and then left to top of cliff via E trail, thence up slope to top of stairs then deer trail between two large Douglas fir to meadow.



a ♂ mule deer with antlers "V" shaped at feeder, 29" high at shoulders.

The first ♂ deer listed this date was observed to rest on Boundary Point from 10:20 To 11:00 A.M.

June 23, 1988

(30" high) ♀ at feeder with her 2 fawns.

Trip to Anacortes and Mt Vernon. Left 9:35 A.M. Birds observed: 3 glaucous-winged gulls, 2 glaucous-winged gulls. W Thatcher Pass, glaucous-winged gull, pigeon guillemot. E

Hatcher Pass, glaucous-winged gull, pigeon guillemot, marbled murrelet, glaucous-winged gull. On a log raft N of Ferry terminal at Anacortes, 38 glaucous-winged gulls. Arrived Anacortes.

Returned Lopez Island 5:25 P.M. (departed Anacortes) 2 single marbled murrelets, glaucous-winged gull. N Humphrey Head glaucous-winged gull. At Lopez Island ferry dock, 21 glaucous-winged gulls on piling (2 of them juveniles).

Have not observed river otter since last recorded in journal.

Large buck mule deer at feeder at 11:45 A.M. (34" high, no tines (eye)).

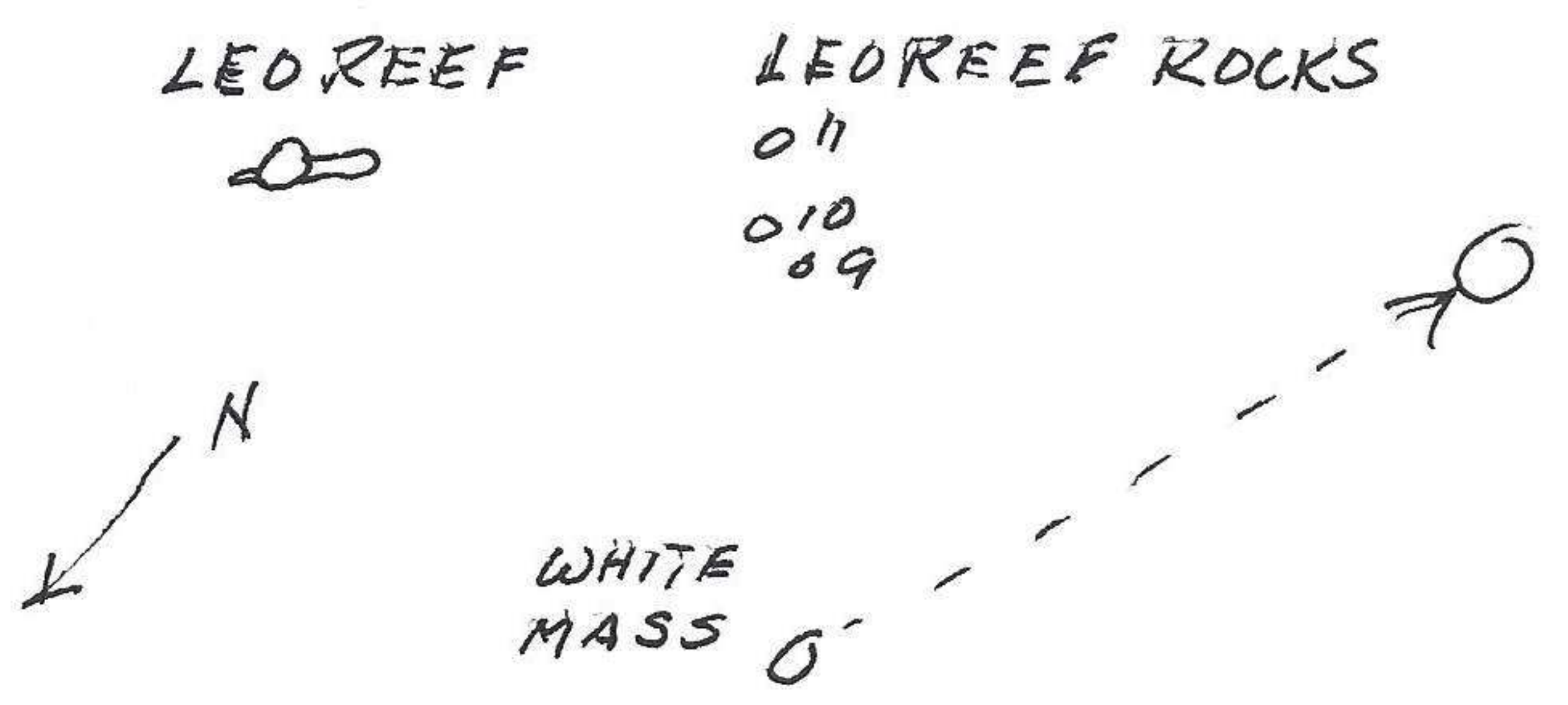
11:50 A.M. 29 harbor seal Leo Reef.
9:33 P.M. violet-green swallows active (entering & leaving nest)

June 26, 1988

| | | | |
|------------|-----------|-------------|--------------------|
| 10:00 A.M. | 15 | harbor seal | Leo Reef |
| | 8 | " " | Little Flower Rock |
| | <u>27</u> | | North Flower Rock |
| | total | 52 | |

12:00 P.M. Last 3 day maximum white inflorescence of ocean spray.

This morning between 7 and 9 A.M. white mass (approx 20' diameter) moved from 200' N Leo Reef Rocks no 9, 10, 11 to 1/10 mi. to south. Carried by currents travelling S. Wind from S.



7: June 27, 1988

7:30 AM male mule deer, 33" high at shoulders, at Bee feeder, antlers similar in size to ^{large} ♂ mule deer figured on June 22 date, except right antler with 1" tine. This ♂ is slightly smaller than one referred to immediately above. Left front point ^{left} shows ^{no} beginning of second bifurcation.

Another ♂ mule deer, 34" at shoulder, no tines and first front left point with beginning of bifurcation not present when observed June 22 (see journal). Although buck buck were together, each fed at the feeder alone. After feeding the stand

5 feet apart and groomed for 5 minutes. They left together.

June 28, 1988

Our neighbor O'Leary cut down a 12" diameter Douglas fir on shoreline, first above dissected Point. He intends to clear a corridor from house to shore. Advised him to first check with Community on Humphrey Head and also the shoreline committee. Took several photos:

880628-1. Photo from Bee House showing tree before being felled.

880628-2. Photo of tree as it falls to ground.

880628-3. Photo of their boat being pulled up beach of Spring Cove. Small limbs or logs are placed on beach for moving boat. Logs leaves at next tide. Note that rocks have been thrown to N on beach so that boat can be more easily moved.

12:00 P.M. 20 harbor seal Leo Reef.

11 " " Little Flower Rock

16 " " N Flower Rock

at north side of Lopey ferry terminal on pile barrier were 28 glaucous-winged gull. 5:50 P.M.

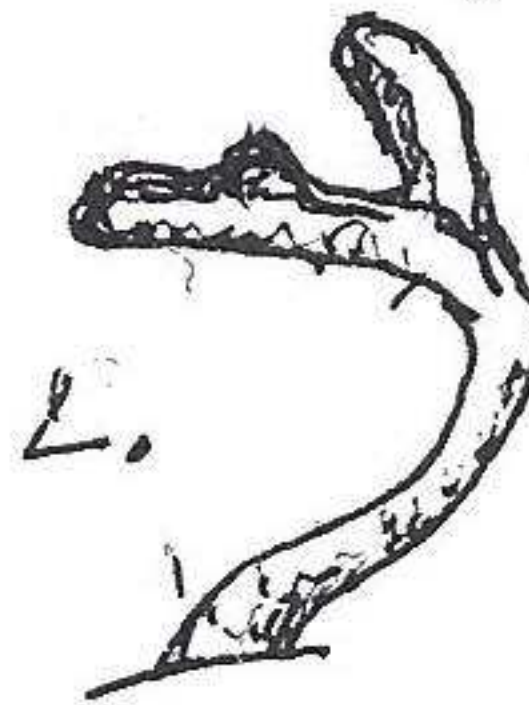
Jan. 29, 1988

9:00 A.M. 26 harbor seal Leo Reef.

9 " " on Little Flower Rock.

6 " " on north Flower Rock.

Photo 880629-1 of ♂ mule deer (34" high at shoulders) The anterior point is starting to bifurcate



Photos 880629-2, 880629-3 close-ups of the above mule deer.

June 30, 1988

Left 9:41 am. for Anacortes. while passing Leo Reef noted 22 harbor seal on N side only. 5 harbor seal on Little Flower Island, W end Thatcher Pass. Glaucous-winged gull, 2 marbled murrelet at E Thatcher Pass. 9 marbled murrelets in one flock. 10:16 Arrived Anacortes ferry terminal, 4 glaucous-winged gulls at ferry proper, others in bay to SW.

Continued to mt. Vernon and then returned to Anacortes. Left ferry terminal at 10:16 A.M. In bay to SW were 45 glaucous-winged gulls, 27 smaller gulls (mew?), ^{Enroute} 3 double-crested Cormorants, 3 marbled murrelets, 4 glaucous-winged gulls. Arrived Lopez Island.

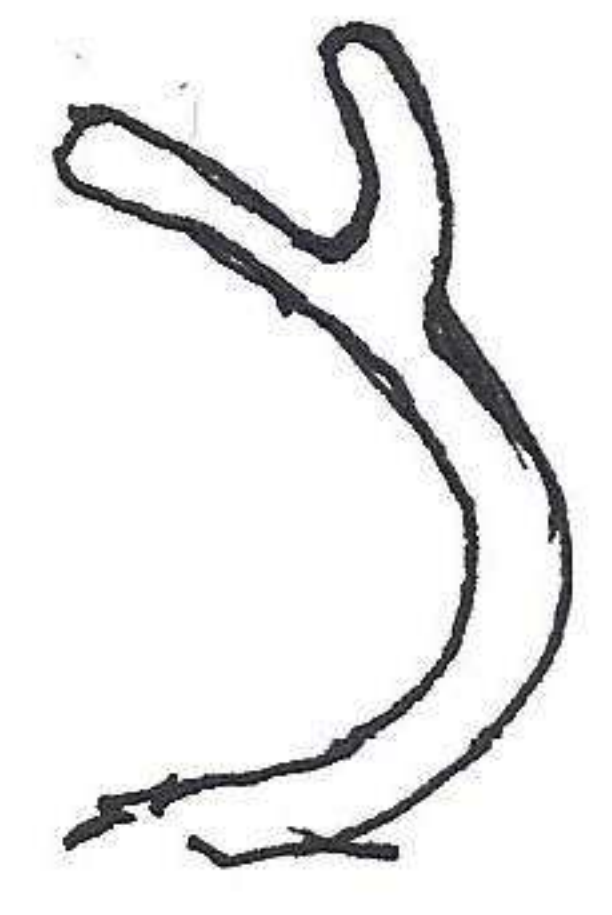
Bee Estate, ~~Humphrey Head~~, Lopez Island, San Juan Co., Washington
July 1, 1988

Highest and lowest tide this spring, was yesterday. The young chipmunks are smaller and lateral lower stripe is white instead of brownish-buff.

12:10 P.M. a yellow canoe and median aged man with posterior head bald. This man came from & returned to Swift Bay area (Port Stanley). He displaced 17 (all) harbor seal on Leo Reef. The seal all left abruptly at approx. 150 feet. The seal did not return to island for at least 2 hours.

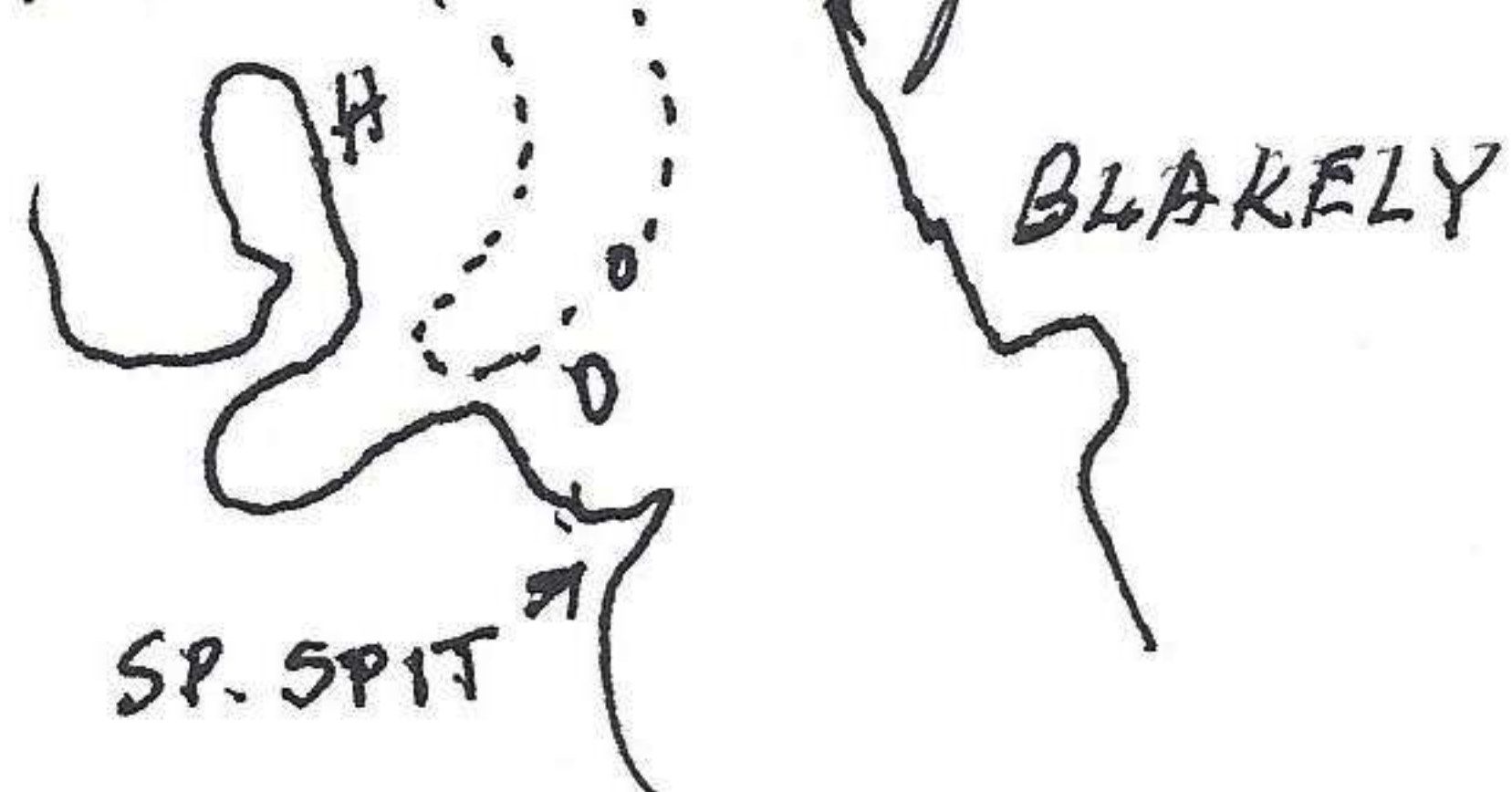
James Robert Bee and I cruised 2 hours to Flower Island, around Frost Island and returned to Shual Bay. An adult bald eagle circled twice above Humphrey Head marina and then continued north.

The male mule deer with single eye tine is now as follows:



July 5, 1988

6:00 A.M. Before surface of N Lopez Sound changed from mirror-like surface to ruffled surface, fish were active at surface. The fish were white and approx 8 inches long and characteristically jumped in air every 2 feet of a linear series of jumps. 5 jumps were average. Most jumps were within splash area but some jumped completely out of water as above. This continued for 20 minutes. Areas of individual fish activity is 40' apart on the overage and extended from Leo Reef, Flower Island N to indeterminate distance



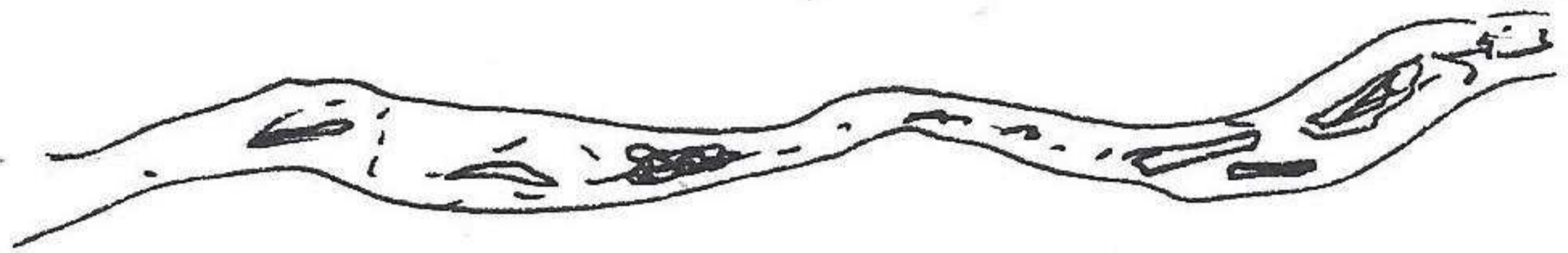
7:20 A.M. Ad. bald eagle flew S past Bee House to Lichen Point, thence SE to Frost Island. As it passed over Flower Island at approx 200', all gulls left the island and flew $\frac{2}{10}$ mile E then returned and immediately settled down.

9:10 A.M. Two harbor seal swam by Bee House at approx. 35' from shore. They continued 50' and then dove not to reappear in our area.

4:50 P.M. Single harbor seal swam out from Boundary Point some 50'.

For the last week, dead leaves of the madrona have been falling.

Noted that logs and debris follow tidal currents



Have not observed river otter since last recorded in journal.

Band-tailed pigeons are noted (for last month) on the average of 1 per every 4 days. Prior to that time they occurred in large flocks of 10-20 birds. See journal.

July 8, 1988

To Anacortes. No bald eagle on ^{nest} at N end Humphrey Head. Osprey flew over Frost Island to Thatcher and beyond toward Spencer Lake.

6 harbor seal on N side Leo Reef.

Osprey flew NE over Frost Island to Blakely Island.

Marbled murrelet W end Thatcher Pass

Blaucous-winged gull, 2 glaucous-winged gulls, 4 glaucous-winged gulls.

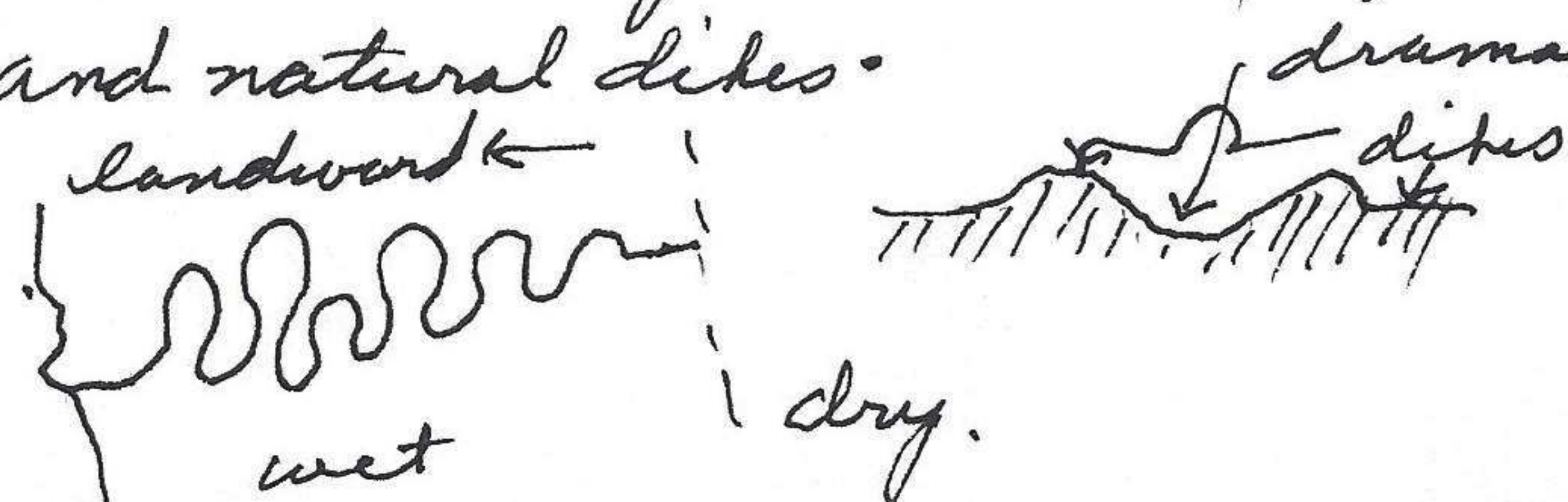
2 groups (6 and 4) of marbled murrelets.

Arrived Anacortes,

at City Park ^{on lawn} along banks of Skagit River N mt. Vernon, 28 mew gulls and 3 glaucous-winged gulls.

Returned to Anacortes.

In west (SW) end bay (W March Point Peninsula) noted outer 100' to 150' of tidal land wet from land drainage, beyond is dry at low tide. Drainage channel exceptionally developed into meanders and natural dikes.



Tidal lands are green in spring & summer.

red-tailed hawk at bridge (highway 20) over Swinomish Channel. that separates mainland from Fidalgo Island.

Left Anacortes ferry terminal at 8:20 P.M. 2 glaucous-winged gulls, 25 mew gulls in 100' long raft in channel N terminal, 2 single glaucous-winged gulls.

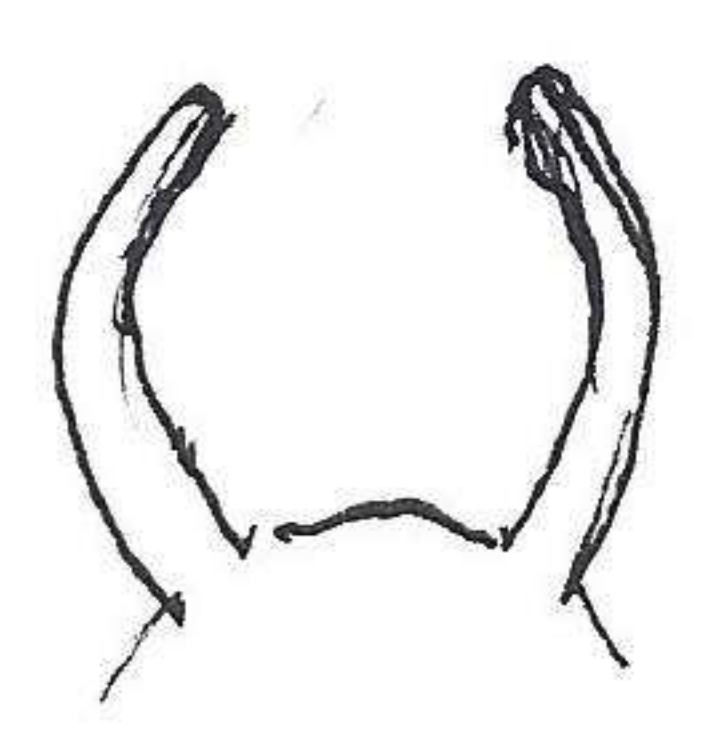
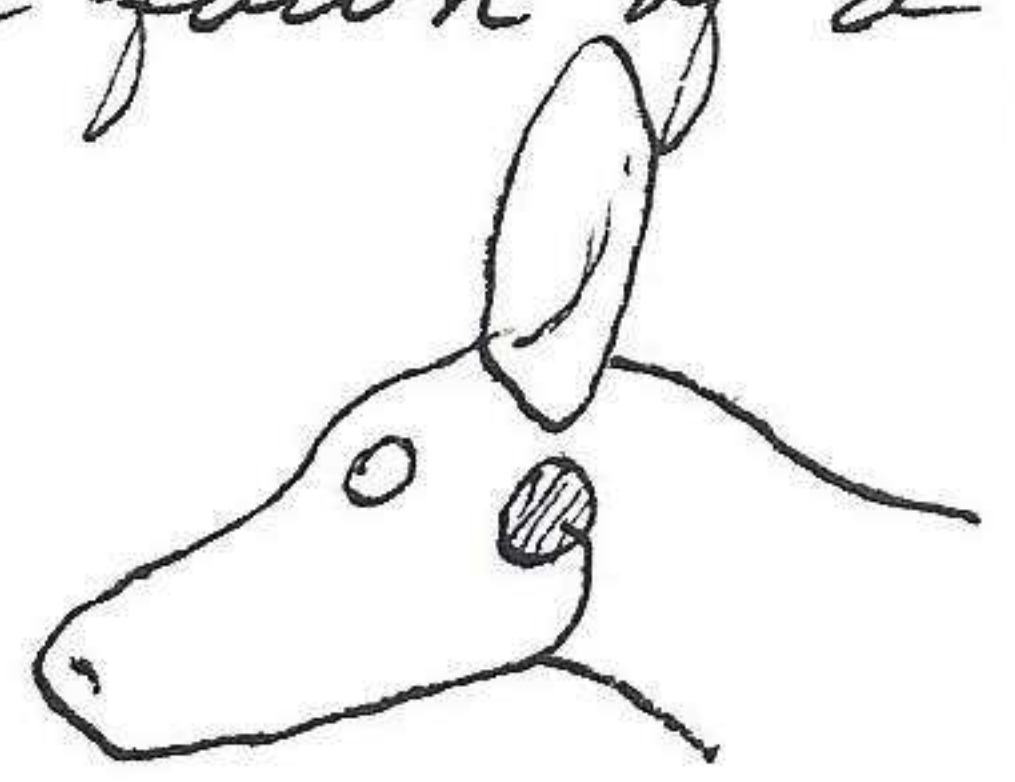
E Thatcher Pass, 2 glaucous-winged gulls, 1 glaucous-winged gull, 2 marbled murrelets.
W Thatcher Pass.

No bald eagle on nest at N end Humphrey Head.
32 glaucous-winged gulls on piling at Lopez Island Ferry terminal. Arrived about sundown, at Bee Estate. dry madrona leaves on 70%-95% of ground under madrona trees.

July 13, 1988

8:12 A.M. 17 harbor seal on Leo Reef, 30 on North Flower Rock.

A fawn of a pair of a ♀ mother had an abscess.

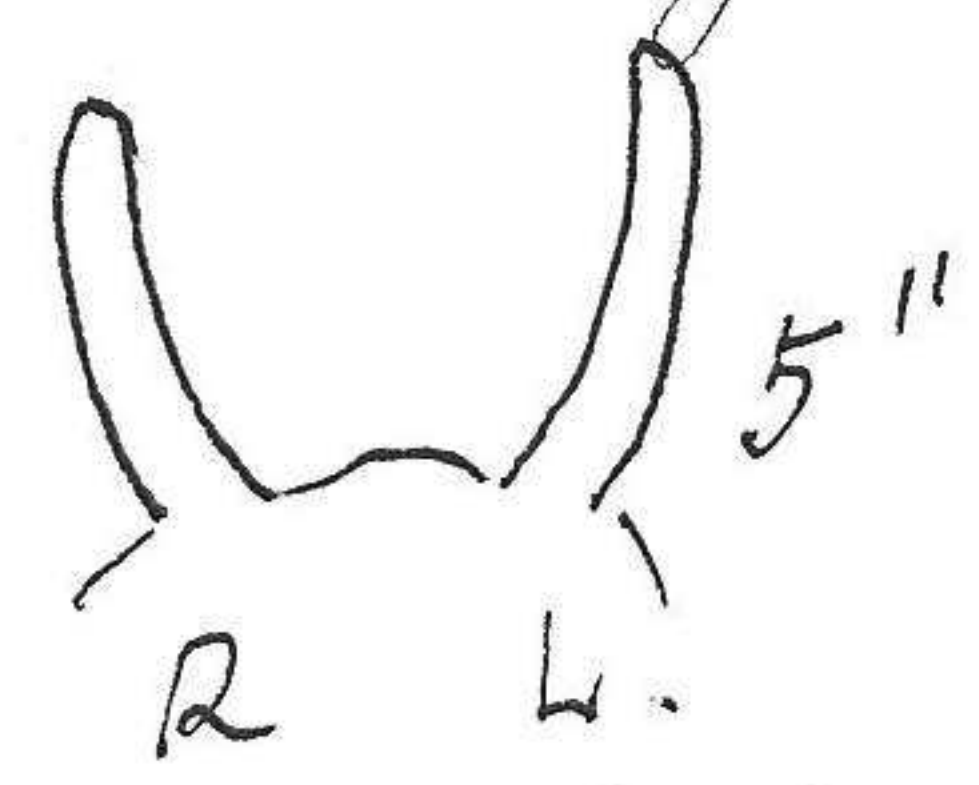
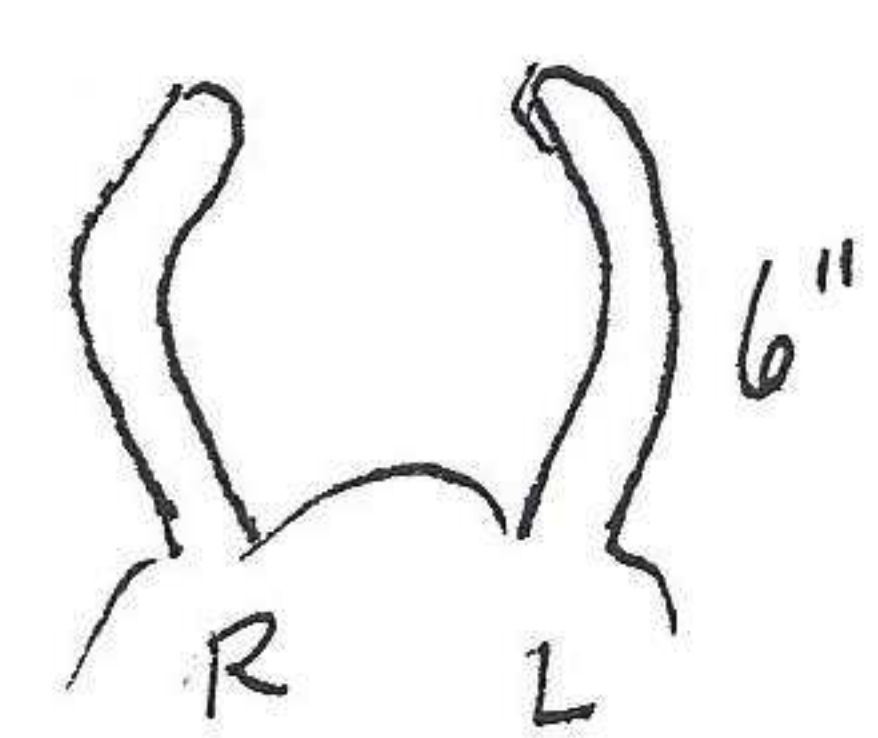
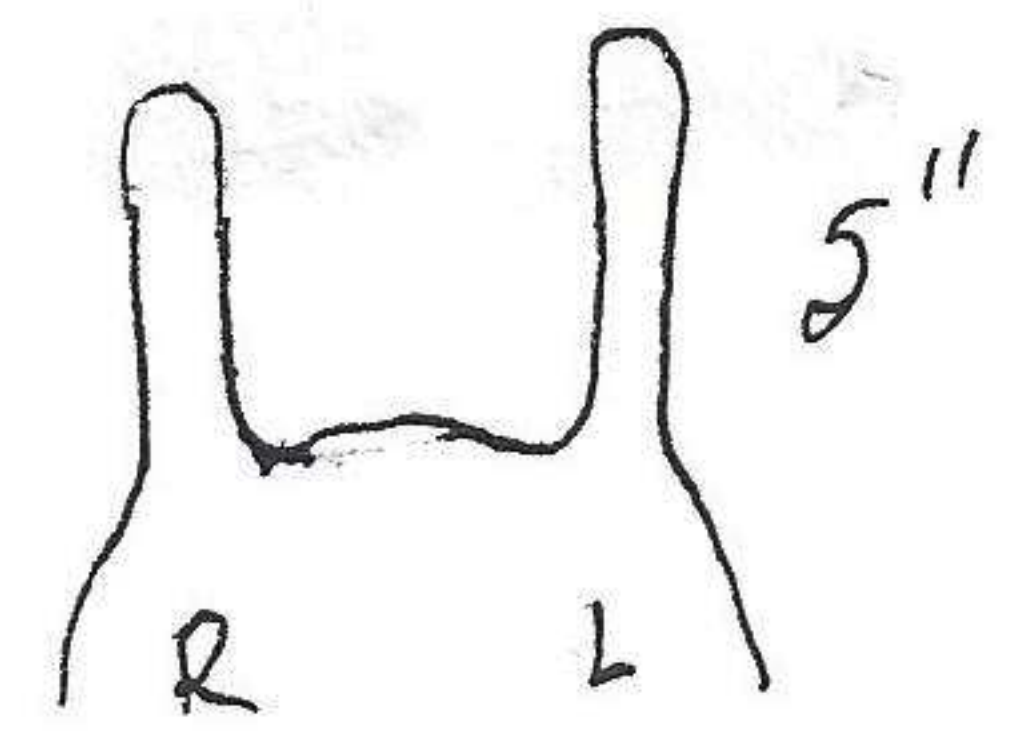


one of a group of 4 young bu

Left for Friday Harbor 10:15 A.M. (directly). 2 glaucous-winged gulls.

Flat Point. 3 single glaucous-winged gulls, 6 violet-green swallows. Arrived Friday Harbor.

Left Friday Harbor 2:07 P.M., 2 groups of 2 each glaucous-winged gulls. Group of 6, 20, 18 marbled murrelets, 3 glaucous-winged gulls, glaucous-winged gull. Arrived Lopez Island. At feeder at the Bee House were 3 young ♂ mule deer:

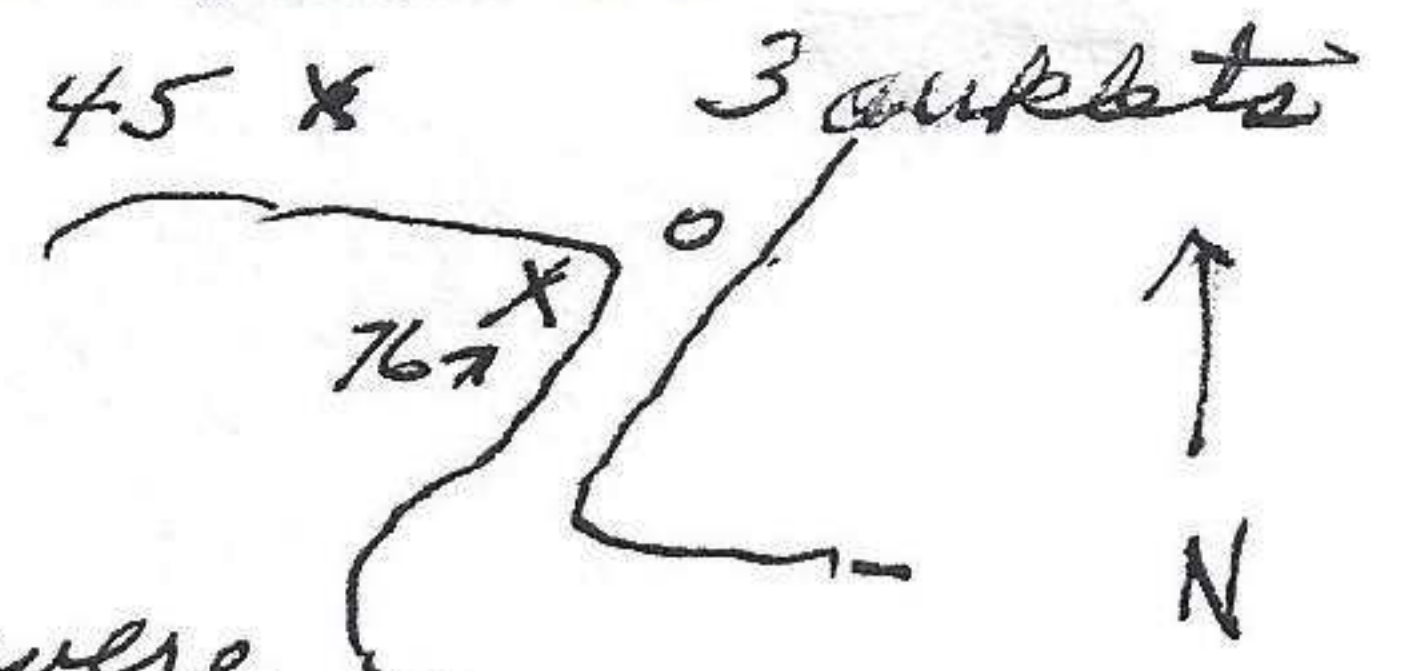


31" high at shoulder.

880714-86

July 14, 1988

at entrance channel to Fishermans Bay
 were 76 glaucous-winged gulls, 11 of which were
 subadults. 45 glaucous-winged gulls at fishing nest of
 Indian fishermen. 3 rhinoceros auklet at mouth
 channel.



Violet-green swallows (1 pair nesting at Bee House this summer)
 left nesting boxes after concluding nesting season.

July 16, 1988

♀ mule deer 29 3/4" high at shoulders with 2 fawn (22" at
 shoulders) fed at Bee House feeder. Neither of fawn has jaw
 abscess. One of the 2 fawns left the other fawn and mother
 and moved 150' up slope and finally out of sight.

Collected a black and orange wasp, no. 880716-1 at Bee
 House.

6:00 P.M. ♀ mule deer, 29 1/2" high at shoulder and one fawn.

Recorded mileage from Bee House to library at Lopez
 Village as 4.4 miles via Port Stanley-Hummel Lake rds and
 4.6 mi. via Center-Fisherman Bay rds.

Collected two digger bees nos. 880716-2 and 880716-3
 from an unconsolidated bank (road cut) 1 5/10 mi. S Humphrey
 Head marina (turn of road), at 10:10 A.M. 6 other digger bees
 were active. They are deliberate on approach, testing several
 holes before entering proper hole, whereas they leave hole abruptly.
 There are approx. 200 holes in this colony.

Collected *Thamnophis* at Bee House 25' from water of sound.

An adult ♀ mule deer at feeder and ^{a 3 year} male mule deer approached
 and the female extended its front legs and lowered hind legs with
 hind legs bent in a low crouch and moved away.

4 young second year male mule deers fed together at feeder
 and all accepted fawns. They were displaced by large adult ♀.
 Rufous hummingbirds left area this date.

July 21, 1988

Dark-eyed junco (Oregon subspecies) fed young cowbird. I have
 observed 2-8 cowbirds at Bee feeder in last 4 weeks.

Madrona trees have green berries and old leaves brown and 1/2
 gone.

^{inflorescence}
 Ocean spray brownish in sunlit areas and white in shaded areas.
 From 1/2 hr before to 1/2 hr after sunrise fish 8"-12" long surfaced
 in mid-channel of north Lopez Sound from Point E Bee House to

Flower Island. at times one fish would jump out of water 6-7 times, moving progressively forward as if being chased by a predator.

Brown creeper associated with 12 rufous-backed chickadees at top of stairs at Bee House.

On 4 trips to Lopez Village in last month have observed approx. 2-5 turkey vultures and 1 bald eagle on each trip.

at Bee House see on an average 1 bald each every 3 days.

The following mule deer have been observed this spring and summer at Bee House.

adult ♂ with full antlers but lacking one eye tine.

adult ♂ " " " but lacking both eye tines

Of the second year males antlers thus:

U

U

U

U

adult ♀ with 2 fawns

" " " 2 fawns (one of the fawns with jaw abscess)

" " " 1 fawn

Buster (a ♀ mule deer)

Sister (a ♀ mule deer) } 4 summers.

1 adult ♀ shy and wary.

1 ♀ last year.

Total of 18 in territory and all judged to be family related.

adult bald eagle alighted in top Boundary Point Tree for 20 minutes.

Ocean spray on Lopez Island now 99% brownish tan with only 1% white and these as individual flowers on otherwise brownish-tan trees.

July 24, 1988

Fog this A.M.

Collected the following hymenoptera from some locality as July 16, 1988. as follows:

880724-1 digger bee

880724-2 " "

880724-3 green cerambycid from Bee House (Douglas fir),
From same area as digger bees above and from some
holes used by digger bees:

880724-4 reddish wasp

880724-5 black & yellow banded wasp

880724-6 "14" wasp with equally long stinger

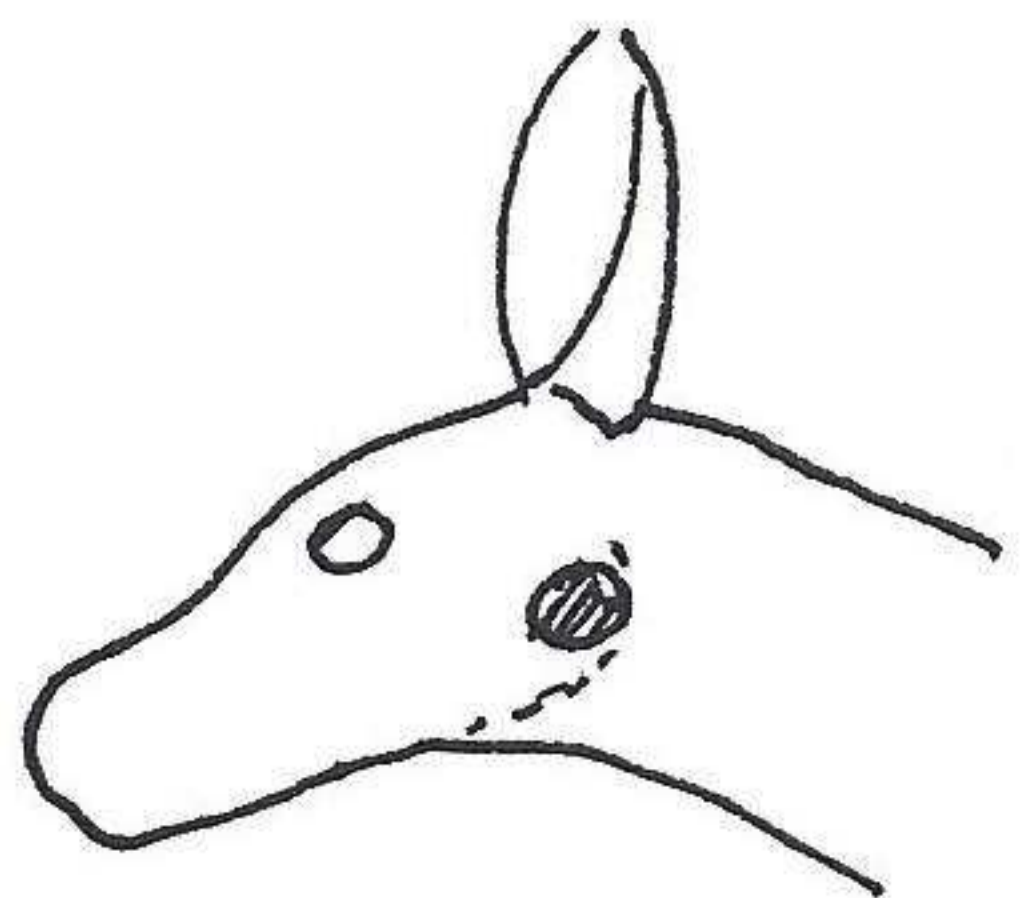
Don Jensen report 5 young otter at Blue Ford on Hunter
Bay area, Lopez Island,

Listed use of Spring Cove (Community property) and
shoreline in general.

1. No trees or shrubs to be cut.
2. Single stairway to beginning of shoreline
3. No permanent structures as tables, chairs, barbecue pits,
wind breakers, fireplaces, recreation equipment etc.
4. No modification of beach or contact with slope
5. No boat docks, moorage or bays
6. Driftwood remains in position & is not removed.
7. maintain natural flow of spring seepage
8. chairs & tables temporarily used for comfort and picnics
9. all trash and debris removed from shoreline.
10. Earphone music only.
11. no wood fires.
12. Enjoy as natural area and not used for recreation.
13. Normal conversation
14. no dogs
15. no rock climbing on N side Spring Cove.
16. no boat storage or buoy moorage.
17. Do not transgress on intertidal zones of animal and
plant communities or vegetation ^{on and} above shoreline except by trail.

Buster, a mule deer, ate cracked corn and whole wheat from
feeder, begged and received 5 slices of apple, then laid on ground
by feeder.

a fawn mule deer (2 1/2" high at shoulders) with abscess ^{scar} on
lower mandible at jaw angle now 1" in diameter and even
with skin. The abscess was originally 2 1/2" in diameter and
1" high. The mother left and the
fawn laid on ground by feeder for 20
minutes



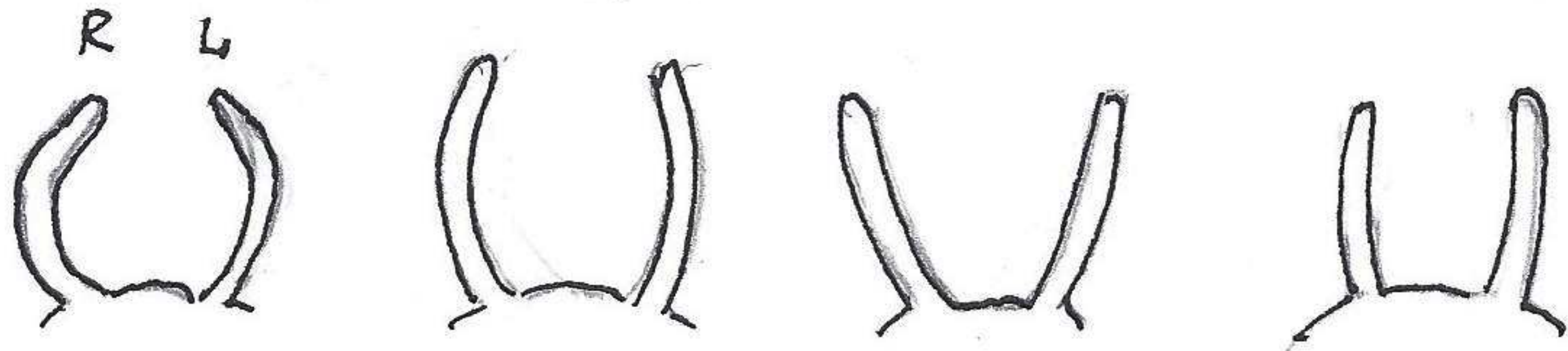
Rufous hummingbirds left Humphrey Head area one week ago on July 16, 1988. and they have not been observed since. The hummingbird feeder remains at same sugar-water level indicating the birds have not been in area.

Bonaparte gulls appeared regularly at Bee House as singles on July 19, 1988.

July 28, 1988

880728-1 Peromyscus m. hallisteri 160-72-22-19-19 gms ♂
From Bee House.

There are three mule deer that are commonly seen together:

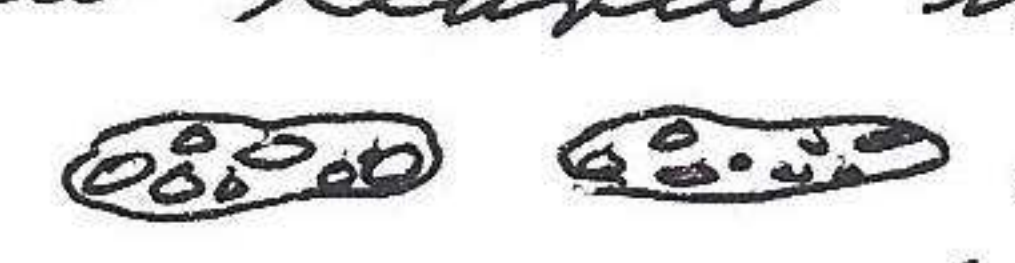


A female mule deer 30" high at shoulder is dominant over all four males above and also fawns.


Another ♀ mule deer 30" high is aggressive over all ♂ above and other females.

Right and left designations are according to deers right & left position. not as observed looking straight at the deer.

July 29, 1988

To Orcas Island via ferry. ^{are} Madrona leaves in masses of ^{floating} vegetation in all of Harney Channel . They also occur as single leaves generally dispersed.

4 Bonaparte gulls

8 Glaucous-winged gull at Shaw ferry terminal, 2 of them on nests on top of piling bundles 

Between Shaw Island and Orcas Island an American Crow landed on railing of lower car deck at front of ferry and rode for 3 minutes then left.

July 30, 1988

To Bee, a Grand Banks boat. At 4:05 P.M. an osprey hovered three times in 5th part Shoal Bay at near shoreline. On the 4th hover it dropped to water 30' from shore and picked up a fish 11" long. It flew N over marina, thence S against conifer sidehill gradually gaining altitude and finally

passed E over ridge and thence E, gaining altitude, to Blakely Island. As it passed over the ridge an adult bald eagle came from the SW and followed the osprey for about 1/10 mi. then returned to a perch on top of a conifer. SW of Humphrey Lagoon.

at the Bee, caught a dogfish 24" long in 20' of water, also 2 8" catfishlike fish.

Aug 1, 1988

880801-1 *Peromyscus m. hollisteri* [100]-[0]-24-19gms ♀
From Bee House. Tail completely sealed over.

A ♀ mule deer was standing on an 8x4 plywood and when startled adjusted feet on board with a loud firm sound indicating great pressure of feet on the board. It did not move forward but was preparing for forward fleeing.

A fawn mule deer (the one with abscessed jaw) called like a cat every 3 seconds for 9 times as it came in 110 feet to the feeder where other deer were feeding. It opened its mouth each time the call was given.

Aug 3, 1988

Sun up 6:12 A.M. water perfect reflection of background. For at least 1/2 hr prior to sunrise, 58 fish surfaced directly E of Bee House in middle 1/3 of N Lopez Sound in an area of 15x binocular. At sunup a boat passed S along E shore and waves took 13 minutes to reach the Bee House, and during that time the fish ^{momentarily} stopped their activity. There were 4 seal (harbor) 1-1-2 in area of fish activity. There were no harbor seal on Leo Reef at that time. At 6:28 A.M. fish activity stopped. At that same time 1 Bonaparte gull and 2 marbled murrelets arrive and were the only birds observed up to that time.

This morning ^{directly} to Friday Harbor, ^{by ferry.} Birds observed:
1 Bonaparte gull, 2 glaucous-winged gulls, 11 Bonaparte gulls, 18 glaucous-winged gulls in middle San Juan Channel, 1 double-crested cormorant, 28 glaucous-winged gulls and 5 Bonaparte gulls at green beam to S., Bonaparte gull, 5 Bonaparte gulls, 1 Bonaparte gull, arrived Friday Harbor.

12:03 P.M.
Left Friday Harbor, (via Wasp Passage). 2 turkey vultures sailing above Univ. Wash forest lands N marmes Station. Same number gulls in harbor (Friday Harbor).

1 glaucous-winged gull, 3 glaucous-winged gulls.
Wasp Passage. 1 Bonaparte gull, 1 Bonaparte gull, 2 glaucous-winged gulls, 1 Bonaparte gull, 1 glaucous-winged gull, 1 Bonaparte gull.

E end Wasp Passage. Bonaparte gull. Adult bald eagle flew SW in middle channel SW Oreas ferry landing.

Oreas. glaucous-winged gull.

Shaw. 4 glaucous-winged gulls, 8 Bonaparte gulls, 38 Bonaparte gulls on group, 15 Bonaparte gulls.

NE end Shaw Island. 2 Bonaparte gulls, groups of 3-2-1 Bonaparte gulls.

Arrived Lopez Island.

At Bee House 13 Bonaparte gulls flew by. There is a definite increase in Bonaparte gulls in this area of an almost lack of these gulls this summer.

Aug. 4, 1988

This morning and afternoon, approx. 150 Bonaparte gulls in area front Bee House out ^{to} 200 feet, in flight or on water and in loose aggregates. Populations vary from day to day.

Aug 5, 1988

4:20 P.M. 53 American crows in loose aggregate flew S out 200'-300' E of Bee House and 150'-250' high. They flew consistently S over Leo Reef, Frost Island and beyond. I have not seen this flight pattern before.

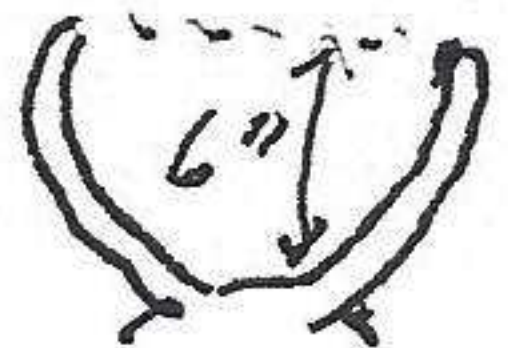

Last week a single, rather tame, band-tailed pigeon visited (average 3 times a day) the front feeder. It is approx 80% tamer than the regular flock of 5-15 birds that visit the feeder on an average of every 3 days.

A female mule deer with fawn 26" high is dominant over Buster, a mule deer.

♂ spike mule deer with "U" shape antlers + parallel is still 29 1/2" high at shoulders (its left antler shorter than right).

A ♂ mule deer 30 1/2" high at shoulder and "U" shape




Another male ^{mule} deer similar to above and measured 30" high at shoulders with antlers  and side view 
Left tear duct enlarged and gouge of hair on left hind quarters. Timed.

Aug. 8, 1988

880808-8 *Peromyscus m. hallisteri* 165-75-22-17-19gms ♂ testes 6mm skull only. From Bee House.

88080808-9 *Peromyscus m. hallisteri* 180-86-23-17-22gms. ♀ ut. normal. skull only. From Bee House.

One of the male mule deer with symmetrical antlers  fed at feeder with ad ♀ mule deer. They groomed each others neck and head.

Bats active twilight last night and at daybreak this A.M. Noted increase number shorebirds at SW end Shoal Bay.

Aug. 9, 1988

This A.M. at Swifts Lagoon noted 62 sanderling, 5 lesser yellow legs and 8 western sandpipers.

At the Low Beach Swifts Bay watched an osprey hover 5 times, then on the 6th dropped almost straight down from 60' and captured a fish (9" long). It flew W toward middle of island after flying N to Humphrey Lagoon.

Have observed 4 turkey vultures on trip to Lopez Village.

Spent evening on The Bee (a grand banks boat) in S end Shoal Bay approx. 10 mi. SW Humphrey Head Marina. Caught 1 spiny dogfish ^{22 mm} *Squalus acanthias*; 2 Pacific Cod measuring; (*Gadus macrocephalus*):

232 standard length

162 standard length

250 total length


and

178 total length

127 grams weight

47 grams wt.

and one Pacific staghorn sculpin

Buster, a mule deer and her fawn (23" high at shoulders) fed at feeder. I have not observed Buster with a fawn before. The fawn was lighter than other fawns and was losing its spots. Buster chased one of the curved spined mates  and then left feeder. The fawn followed Buster and twice nursed from Buster. They groomed each other on neck and head areas.

The male mule deer with straight and parallel antlers ~~11~~ has been associated with a ♀ of same size or perhaps slightly smaller. They frequently groom each other on the neck and head.

(Grand Banks)

This evening went to Bee boat (hence will be referred to 'The Bee' in journal). Two harbor seal fished approx 150' NW of outlet of Humphrey Lagoon. Observed at least 10 times in 2 hours. Two single great blue heron flew S over marina and thence to Swifts Bay via Humphrey Lagoon.

Aug. 10, 1988

To Anacortes by ferry. Left 11:40 A.M. Will keep complete list of birds. Bonaparte gull, glaucous-winged gull, no bald eagle on nest at N end Humphrey Head. At Leo Reef, 2 harbor seal on S side reef, 5 on N side. 4 harbor seal on N Flower Rock. At Point Island gulls in normal position on territories, 2 pigeon guillemot on water S of Pomter Island. In Rosario Straits, Bonaparte gull, group 2 glaucous-winged gull, glaucous-winged gull, pigeon hawk flew S past ferry, 11 pigeon guillemots one group, 4 Bonaparte gulls, 9 pigeon guillemots. Arrived Anacortes ferry terminal.

Aug 13, 1988

On return from Chris at Lost Lake, noted red-tailed hawk at Starwood Turnoff.

At Best road and no. 20 highway (NE in field) observed a whirlwind 30' in diameter and traveled 200' without interruption.

At 'The Bee' max temp. in cabin last week 104° max and 58° min. Greatest tilt from ferry wake 12½°. Takes 22 min. for waves to reach the boat in the S end of Shoal Bay from channel approaching Lopez Ferry Terminal.

Aug 14, 1988

This evening 5:40 P.M. at 'The Bee' caught spiny dogfish shark 37" standard length. Also one tree cod 6" standard length.

Aug. 16, 1988

23 harbor seal on Leo Reef this A.M. Also 2 on Little Flower Rock and 5 on North Flower Rock. Rain today and first this summer.

Young second year spike mule deer. (antler spikes parallel)
 allowed me to walk by him at 8' in Upper Parking Lot of Bee
 Estate

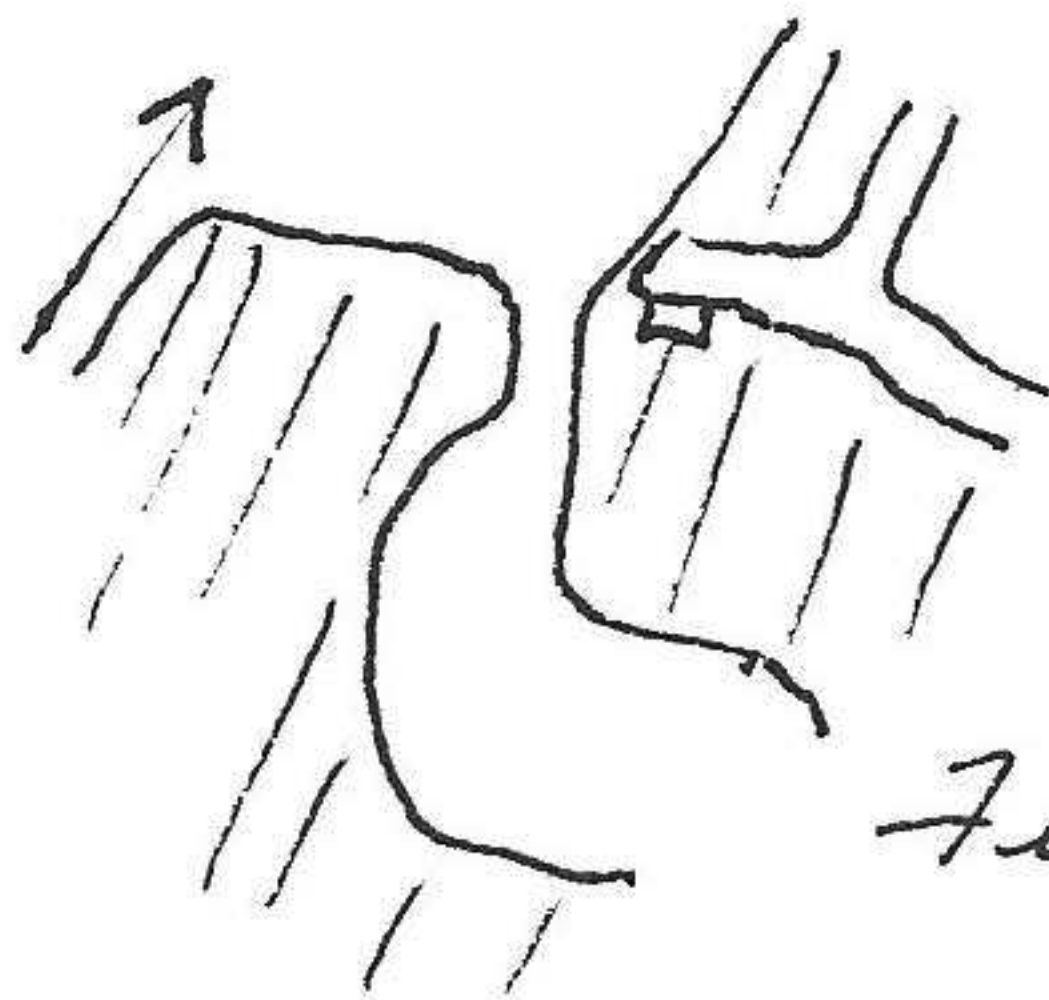
Spent evening on 'The Bee' and caught 4 true cod 6'1/2", 4'1/2",
 6", 7", (5:00 P.M. - 7:00 P.M.)

Aug. 17, 1988

1:30 P.M. no birds on Swifts Lagoon.

In Low Beach Swifts Bay at medium tide noted:
 on approx 200' beach, 8 Bonaparte gulls, 4 mew gulls,
 18 sanderling, 4 western sandpipers, 1 great blue heron.

Down Lease of fabric shop SW Past office note a
 single grey whale swim NE past sandy peninsula. It disappear-
 ed when a boat past by.



Fishermans Bay.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co, Washington

Aug 18, 1988

880818-1 *Peromyscus m. hallisteri* 171-80-23-18-24 gms. ♂

Caught in Bee House.

To Anacortes via ferry. Left 7:25 A.M. will keep complete
 record:

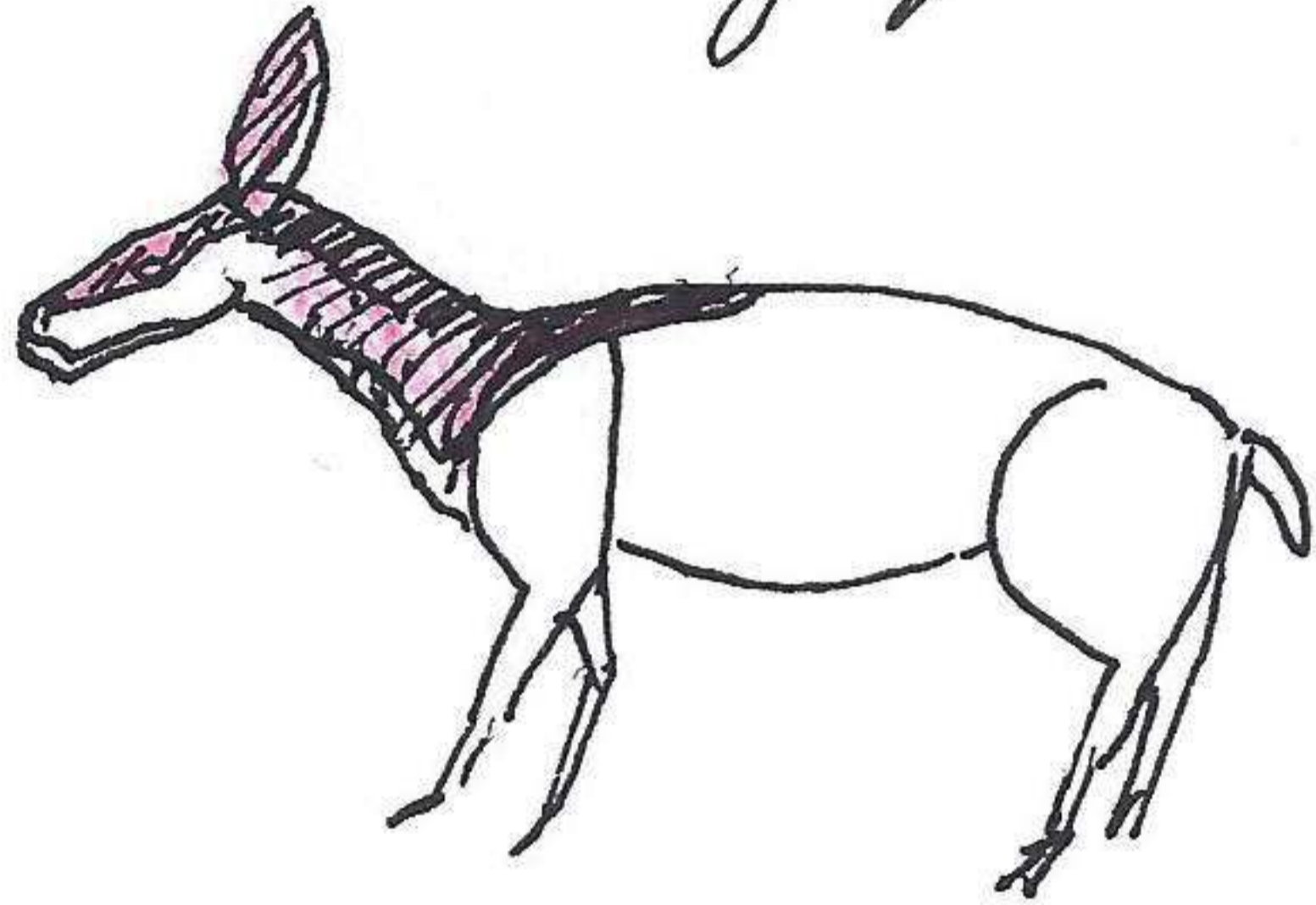
glaucous-winged gull, C. murre, mew gull. no bald eagle at
 nest n end Humphrey Head. Common murre, glaucous-winged
 gull, Bonaparte gull, 3 Bonaparte gulls, 5 harbor seal Les Reef.
 10 glaucous-winged gulls on Flower Island. marbled murrelet.
 12 glaucous-winged gulls generally distributed S side Thatcher
 Pass. 4 Bonaparte gulls one group, 5 Bonaparte gulls, adult
 bald eagle top tree by edge of water 1/10 mi E of my residence
 on n end Aleator. E end Thatcher Pass 6 Bonaparte gulls.
 Beyond fog bank to Anacortes. at Anacortes ferry: double-
 crested cormorant, 28 glaucous-winged gulls + 4 Bonaparte gulls
 Left Anacortes on return trip to Lopez. First 3rd of
 trip across Rosario Straits observed: 3 glaucous-winged gulls,
 Bonaparte gull, double-crested cormorant, Bonaparte gull, 2 Heermanns

gulls, 2 single pigeon guillemots, 2 pigeon guillemots, pigeon guillemots, double-crested cormorant. 5:23 P.M. E Thatcher Pass
 glaucous-winged gull, 4 glaucous-winged gulls, 2 Bonaparte gulls.
 W end Thatcher Pass. Willow Island, a glaucous-winged gull feeding young on nest in white area of SW corner.
 Cormorant sp.?, Bonaparte gull. no ^{bold} eagle on nest N end Humphrey Head.

Aug 19, 1988

♀ mule deer 29" high at shoulders most aggressive deer at feeder and elsewhere.

a fawn mule deer. 22 1/2" high at shoulders, first to start change of pelage. (losing spots and rich color of hair).



Aug. 20, 1988

♀ mule deer ^{28"} and her two fawns 22 1/2" high at shoulder (largest) of 2 fawns. After all three fed for 10 minutes they left and at 30' out stopped to groom necks & face. The largest of the fawn attempted twice to mount the adult female.

Deer flies, generally one fly per individual deer, harassed the deer. The deer shook skin, shook heads & neck and in several instances left area by running.

This A.M. checked trap in first floor (basement) of Bee House and caught:

880820-1 Peromyscus m. hollisteri. 159-73-23-18-18 gms. ♂

August 20, 1988

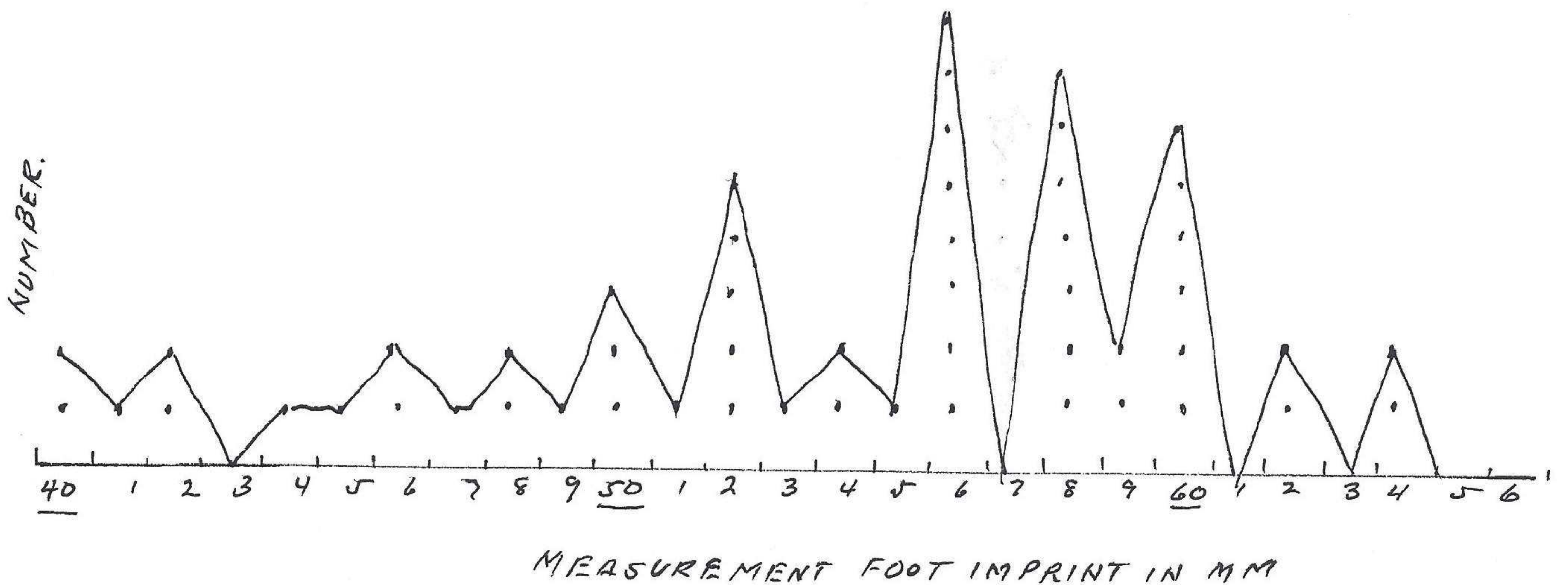
mule deer
 2 bucks (antlers spikes and approx 5" long) spared by placing head near or against each others head and pushing with gentle force. One skiddish and would jump backwards in several directions, swing head & necks from side to side and fake forward movements. Also noted 2 adult females at feeder, stand up-right against each other and fight with thrusting front legs.

also an adult ♀ curved in low bent knees in presence of a ♂ with spikes 5" high. All bucks in area still in velvet.

Aug 21, 1988

Measurements of mule deer foot imprints on surface of styrofoam insulation sheet placed on ground on NE side Bee House:

| | | | |
|-------|----|----|----|
| 40 mm | 50 | 56 | 60 |
| 40 | 50 | 56 | 60 |
| 41 | 51 | 56 | 60 |
| 42 | 52 | 56 | 60 |
| 42 | 52 | 56 | 60 |
| 44 | 52 | 56 | 62 |
| 45 | 52 | 58 | 64 |
| 46 | 53 | 58 | 64 |
| 46 | 54 | 58 | |
| 47 | | | |
| 48 | 54 | 58 | |
| 48 | 55 | 59 | |
| 49 | 56 | 59 | |



The above chart represents size of individuals in population but not population size. Only imprints with measurable qualities were selected. Measurements above approx 1/2 imprints on board.

The deer fed to 10:00 AM and returned 4:30 PM for evening feeding.

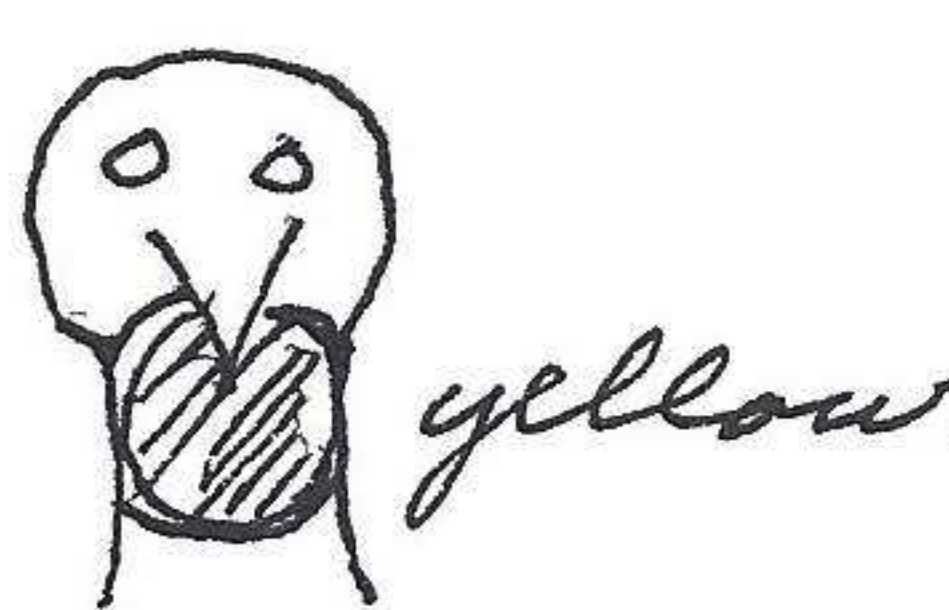
Checked 'The Bee' at 5:00 PM. Enroute by dingy, approx. 2/10 mi. record debris on surface. Eat grass 1 per 15'; thistle seed, 1 per 10 feet; rockweed, 1 per 18'; 1/2 area (5' diameter) free of debris.

at 'The Bee', waves from ferry boats 1 mi to N, take 22 min. to arrive causing the Grand Banks to list up to 14°.

Back at Bee House measure one of this years fawn ^{mule deer} as 24" high at shoulders. [at the Bee caught 2 spiny daffish 18 and 20" long and a true cod 8" in length, both standard measurements]

Aug. 23, 1988

To Anacortes by ferry. Complete census. 3 harbor seal on Leo Reef and 18 glaucous-winged gulls. 6 glaucous-winged gulls on Flower Island.

Return to Lopez Island by ferry. At terminal in marsh area to SW noted 1 ♀ yellow-headed blackbird. also in same area, 1 great blue heron, 20 barn swallows, 5 gold finch, 19 glaucous-winged gulls (on piling), 8 mew gulls (on piling), 4 starling, 3 double crested cormorant, 3 American crow.  At 8:45 P.M. in same area 5 flocks of ducks sp.?, flew E averaging 25 birds per flock. no record of birds on return trip.

Aug 25, 1988

880825-1 *Peromyscus m. hallisteri* 172-85-23-19-17gms ♂

From Bee House (basement).

11:00 A.M. approx 2,000 mew gulls in 6 groups on outer edge tidal flats (low tide).

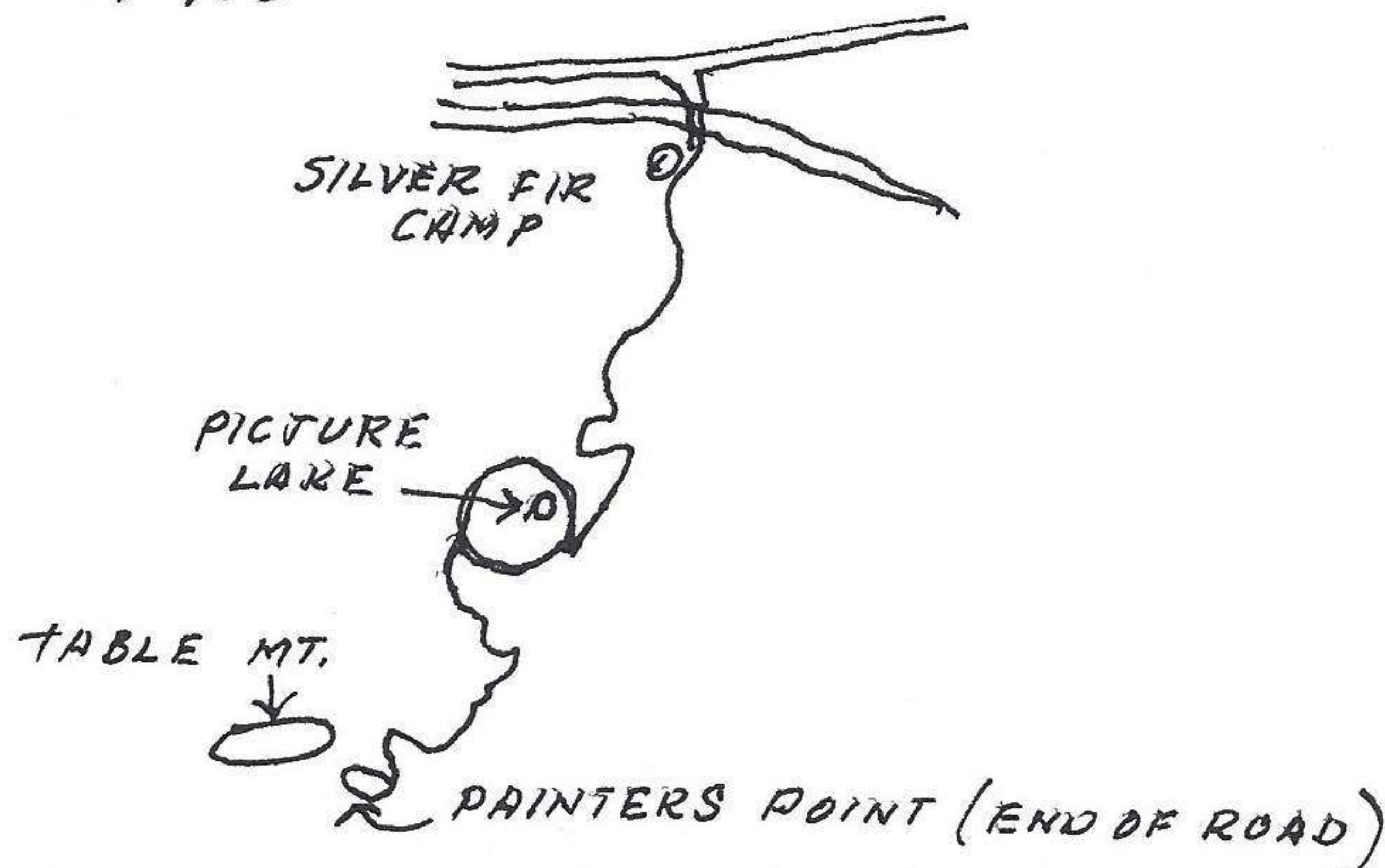
Aug. 26, 1988

To mt. Baker for 3 days. Left Lopez Island ferry terminal in Barth motor home at 1:32 P.M. Will keep complete record to Anacortes. mew gull, mew gull w Thatcher Pass. Bonaparte gull. Painter Islands with full number of glaucous-winged gulls on territories?, mew gull, marbled murrelet.

Continued to Silver Fir Camp and stayed overnight there.

Aug 27, 1988

From Silver Fir Camp. to Picture Lake to Painters Point at end of road. at Painters Point the ranger reported a ♀ and 2 cub black bears on E end of ridge bordering



parking lot to S. The goat come to parking lot in evening from slope of canyon to S. At this time groups of young people are rebuilding trails, closing off trail not to be used in the reconstruction and planting bare areas trampled by humans. To put 200-300 people on these parking bordering trails is not realistic. From this area of Painter's Point, ^{and lower down} recorded photos of mt. Baker and Annette 880827-1; mt. and lake in foreground 880827-2; mt. Sucksan from Picture Lake 880827-3

No birds or mammals in this area. The parking lot is size of football field and plans are to pave road from lodge area below to here.

Photo 880727-3 of this lake + S. Left area and returned to Picture Lake. Road N & W of lake a wide 3 lane road, meadows W end lake now confined to trail traffic only with old trails and trampling replanted. A natural succession would have been a better plan.

Left area and drove to Chandellier (E. of Glacier) and stayed in camping area behind. All government campsites taken. In this area were Townsend Chipping (1), American Crow (2). Bird life deperate in the entire N Fork Nooksack drainage, at least from road.

Aug 28, 1988.

Left Chandellier and returned up Canyon to Nooksack Falls where a photo was taken:

880828-1. Note one Douglas Squirrel here. *Tamiasciurus douglasii douglasii*. The orange belly diagnostic.

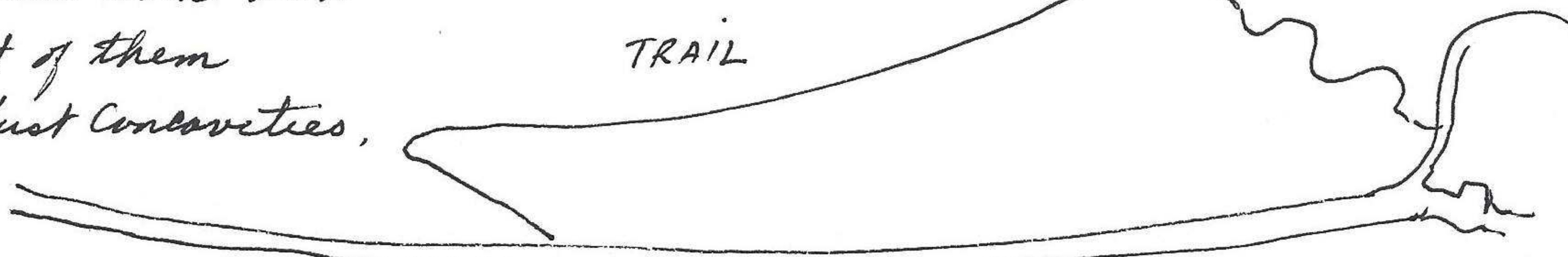
From here drove to Silver Lake, N of Glacier and camped in no 1 of sec 2. at one of the building used by barn swallows, 10 birds converged and called when we passed by.

Took boat from dock and Camp to N end lake & return. Birds observed: 2 woodchucks, 2 spotted sandpipers, 2 American Crows, 4 barn swallows.

On ridge trail north of Camp:

11 Dusky grouse with area 30' x 20', most of them dusting in dust concretions.

DUSKY GROUSE → N. →
TRAIL



Camp no 1, sec 2.

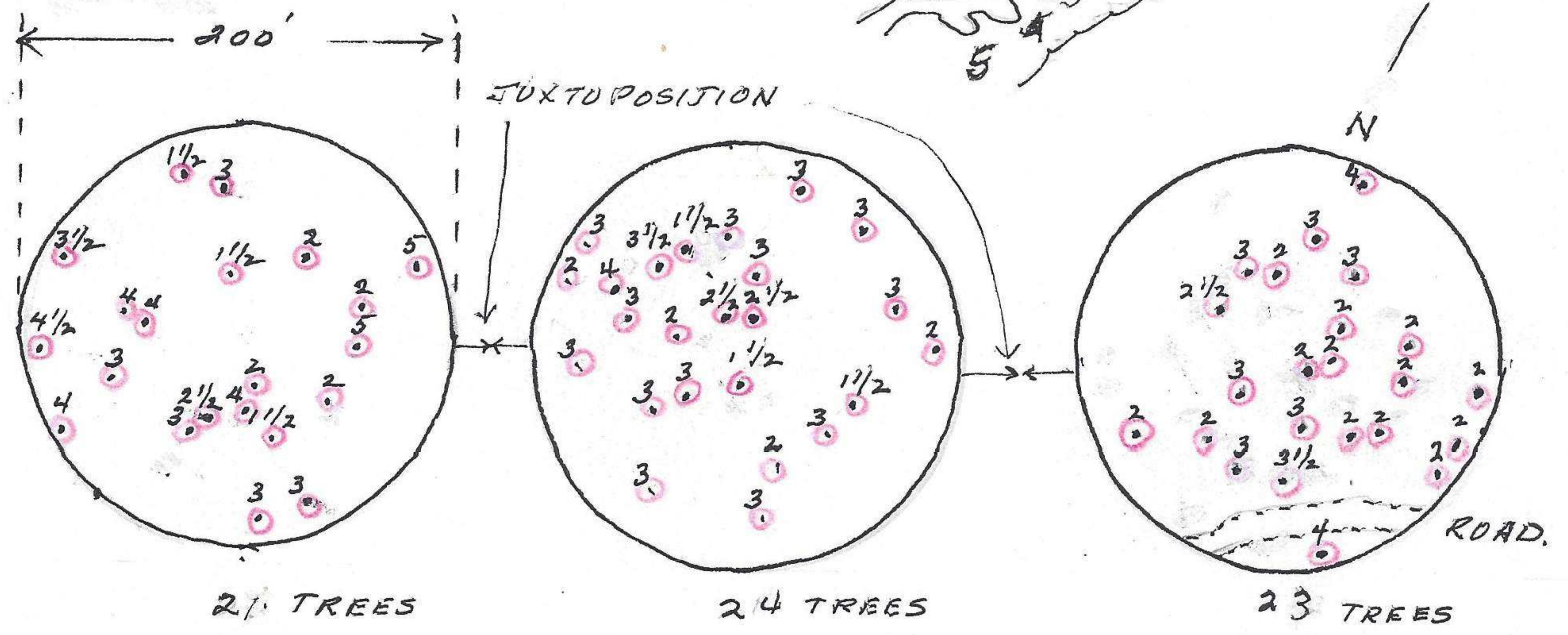
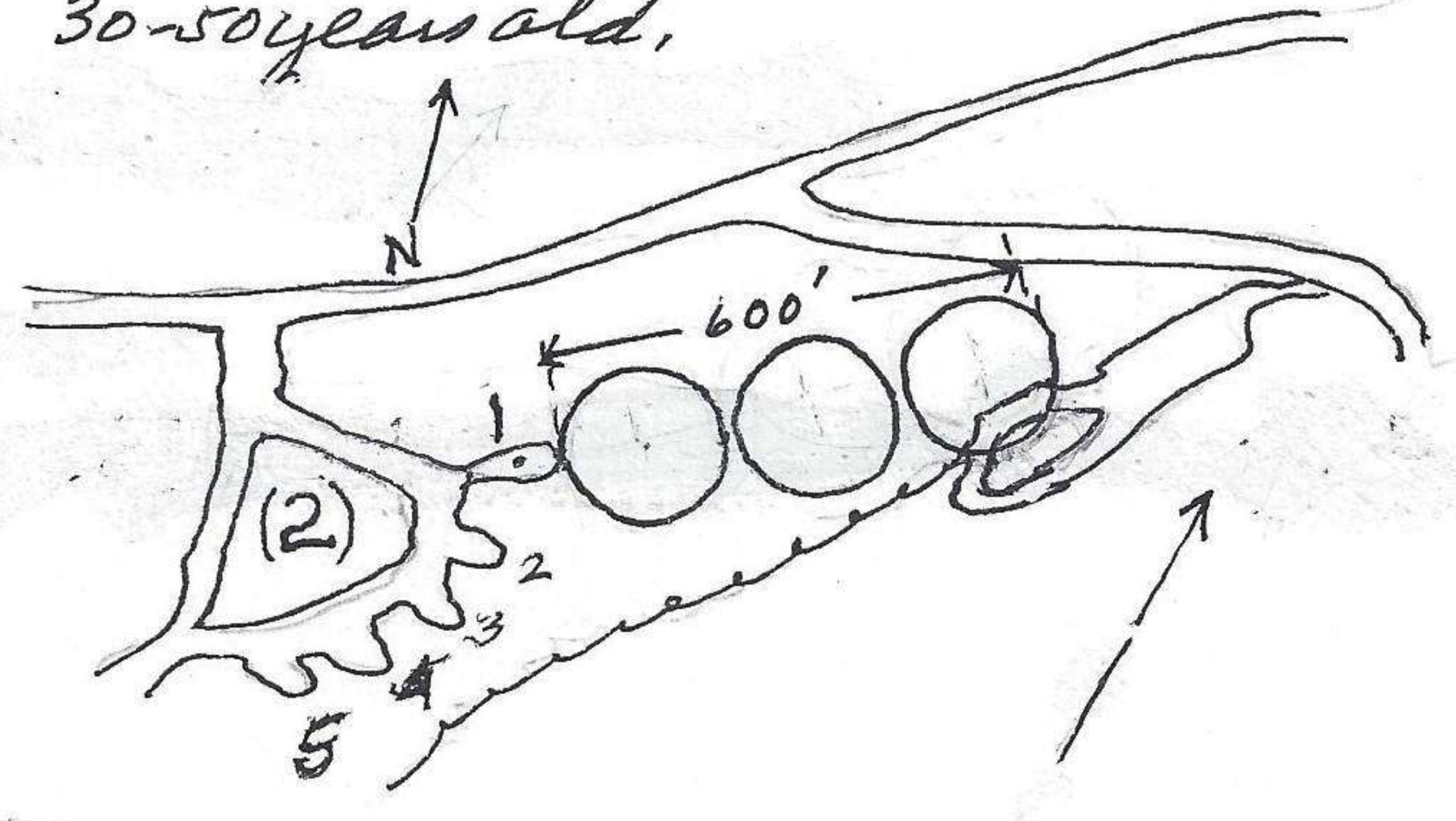
First one left and flew out of sight downhill, 2 more left 20 seconds later but remained in area, 4th bird left area 10 seconds later, 5, 6, 7 bird left, ^{15 seconds later} and remained in area, 8, 9, 10, left 20 seconds later and remained in area. The last one left 3 seconds later and flew beyond area and out of sight. This area had draw and in deciduous (few conifers) forest and considerable underbrush.

Aug. 29, 1988

A Douglas squirrel chipped for 2 minutes at 8' distance from trunk of a hemlock tree. Evidence of worked cones in area.

many holes made by pileated woodpeckers in conifer trees, some fresh and others could be 30-50 years old.

Recorded distribution and diameter of trees cut approx 100 years ago(?). including hemlock, Douglas fir and red cedar.



| | | TREE SIZES (DIA.) | | | | | | | | | |
|--|----------|-------------------|----|--------|----|--------|----|--------|----|-----------------------|--|
| | | 1 1/2' | 2' | 2 1/2' | 3' | 3 1/2' | 4' | 4 1/2' | 5' | | |
| AVE DIA. 2.87 3.0 2.75 | CIRCLE ① | 3 | 4 | 1 | 5 | 1 | 4 | 1 | 2 | 21 TREES | |
| | CIRCLE ② | 3 | 4 | 2 | 13 | 1 | 1 | 0 | 0 | 24 TREES | |
| | CIRCLE ③ | 0 | 13 | 1 | 6 | 1 | 2 | 0 | 0 | 23 TREES | |
| | TOTAL | 6 | 21 | 4 | 24 | 3 | 7 | 1 | 2 | 68 TREES IN 3 CIRCLES | |
| <p>AVERAGE SIZE TREE = 2.88' DIA. (feet) (1 1/2' - 5')</p> | | | | | | | | | | | |

Each circle 200' diameter and three circles in juxtaposition area identified by campground designations, at Silver Lake. In these same circles are approx. 400 living ^{conifer} trees in all stages of development, the largest 3' in diameter. Each circle has the above number of 400. The largest tree in general area is 6' in diameter and it is a red cedar.

Left Silver Lake 11:00 A.M. Pine maples in full red color.

Continued to Lopez Island. Enroute left Anacortes ferry terminal at 5:04 P.M. and made census of birds to Lopez: 2 Bonaparte gulls, 2 glaucous-winged gulls, Bonaparte gull, glaucous-winged gull, marked murrelet, glaucous-winged gull, glaucous-winged gull, Bonaparte gull, 2 single glaucous-winged gulls, E Thatcher Pass, W Thatcher Pass, glaucous-winged gull. no bald eagle on nest on N end Humphrey Head.

At Bee House an adult ♀ mule deer (29" high at shoulders) and her 2 fawns (23 1/2" high) at feeder. Also last year's young (29") ♀.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington
~~near the lighthouse~~ ~~at the lighthouse~~ ~~at the lighthouse~~
 Sept 3, 1988

While on 'The Bee' in Shoal Bay moorage at 1 hr. before ^{on top} sundown observed approx 80 Bonaparte gulls circling a 200' length of Humphrey Head just above tops of conifer trees. This area is ridge directly above marina. They appeared to be capturing insects.

First pigeon gullimat observed at boat.

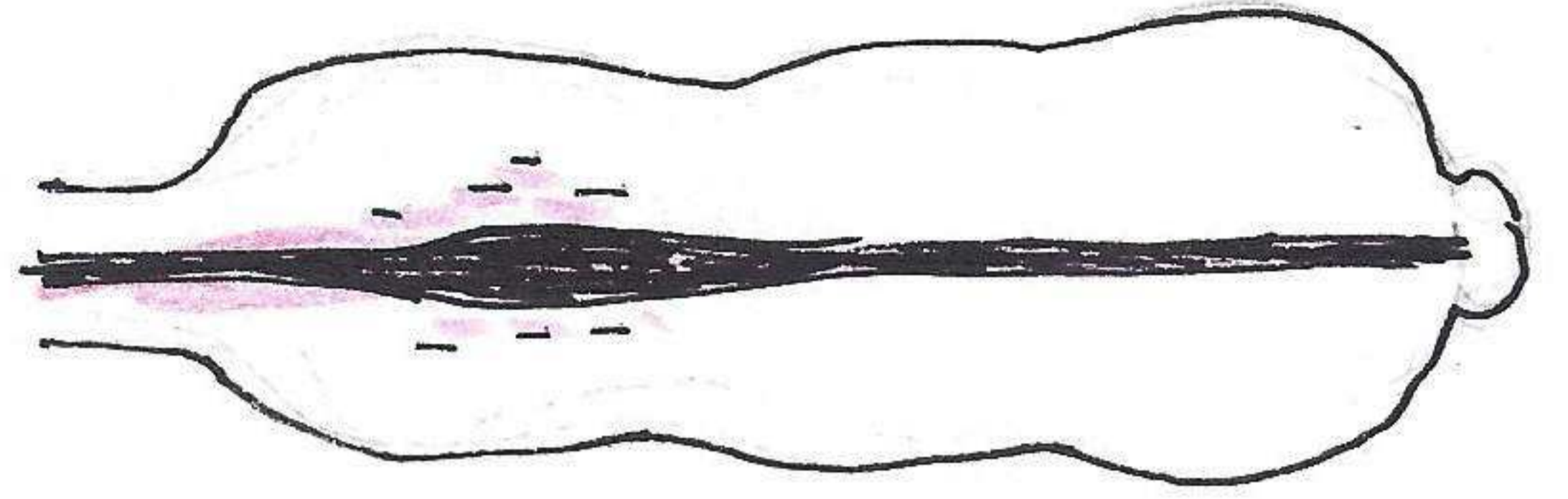
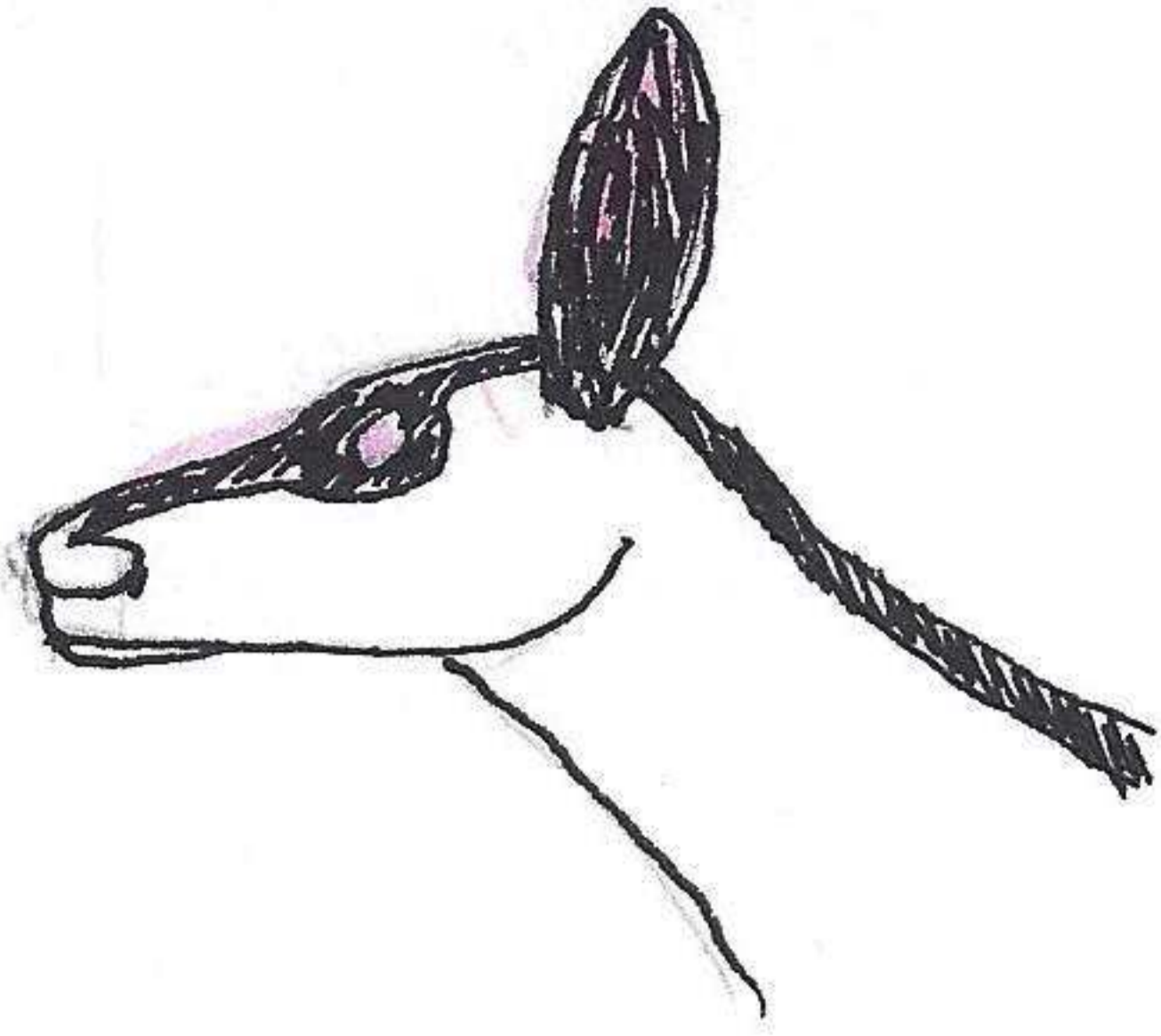
2 harbor seal observed at least 7 times surfacing between boat & shore to S.

One group of Bonaparte gulls, approx 200, swam as one group from outlet of Humphrey Lagoon N around 'The Bee' and then back to point of origin. They were swimming but not feeding.

One group of approx. 900 Bonaparte gulls flew S and W side of Shoal Bay approx. 60' above water. As they approached the S end of bay they met a conifer tree barrier which caused them to disperse in several directions other than their course to the S. After this temporary confusion, they reformed and alighted on the water. This was at sundown.

Sept 4, 1988

change of summer to winter pelage of
Buster, a ♀ mule deer. ^{and red} Black = winter
pelage, white = summer.

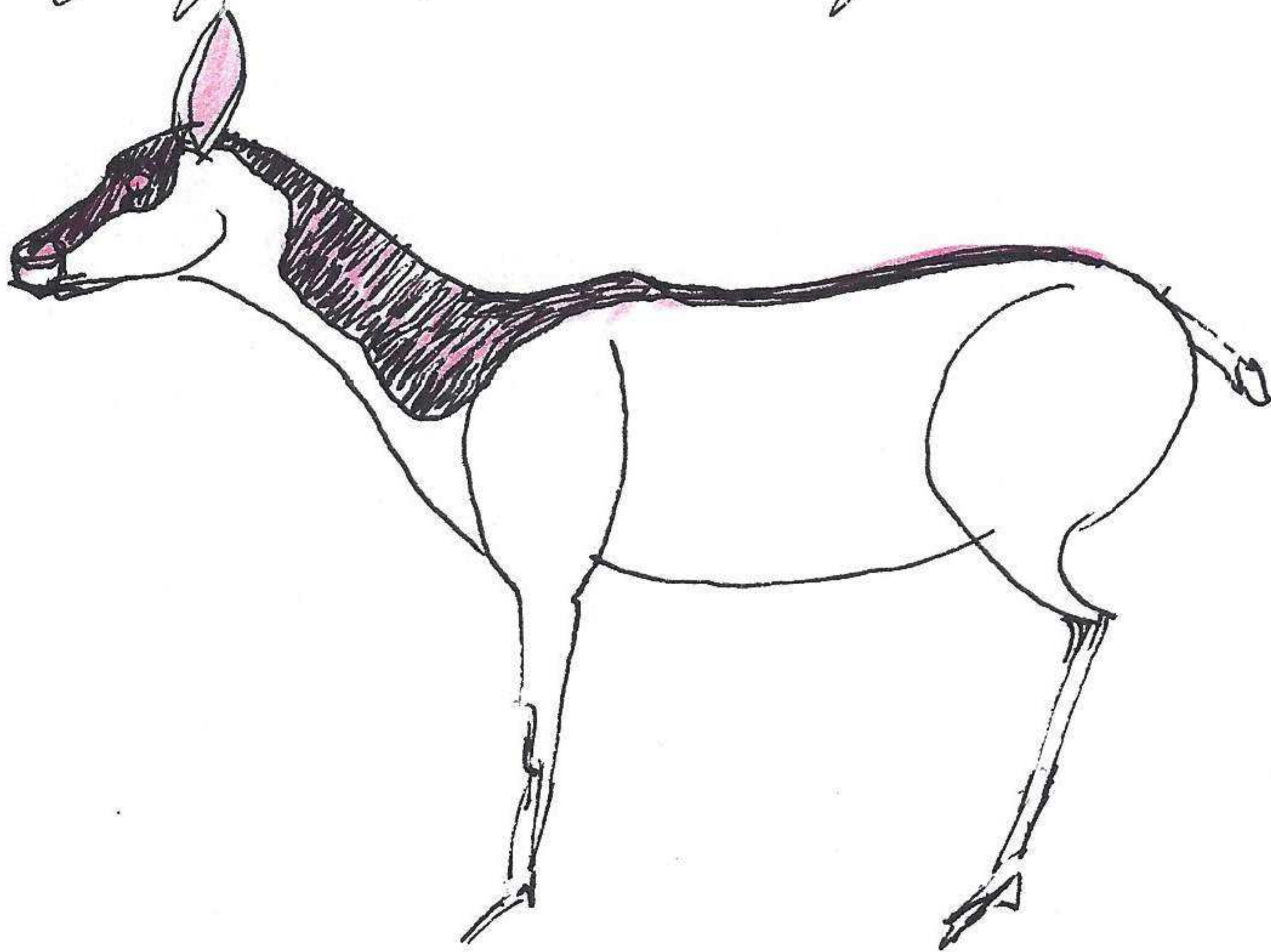


The change is from a colorful golden brown of summer to a rather dull grayish black of winter.

This mule deer, Buster, challenged another ♀ mule deer slightly smaller by thrashing head & neck from side to side at the direction of the other ♀, at times contacting the other deer and biting it. It charged the other ♀ at 3 feet, bit her again. The ♀ being pursued left and ran up slope. Buster took stance with hind legs extended backward & remained in this position with mouth partly open.

male deer with antlers freed of velvet. The antlers now are less than $\frac{1}{2}$ the diameter of the velvet vested antler. The sharp terminals are exposed.

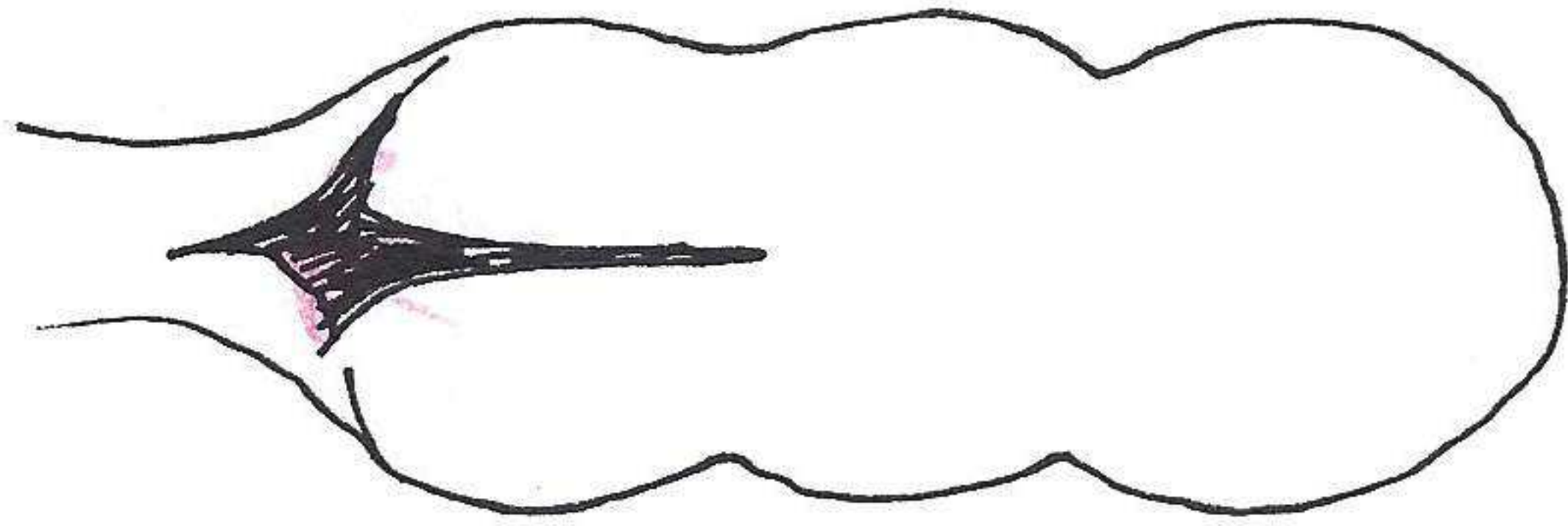
A ♀ mule deer (at 29" height at shoulders) is in following stage of pelage change from summer to winter.



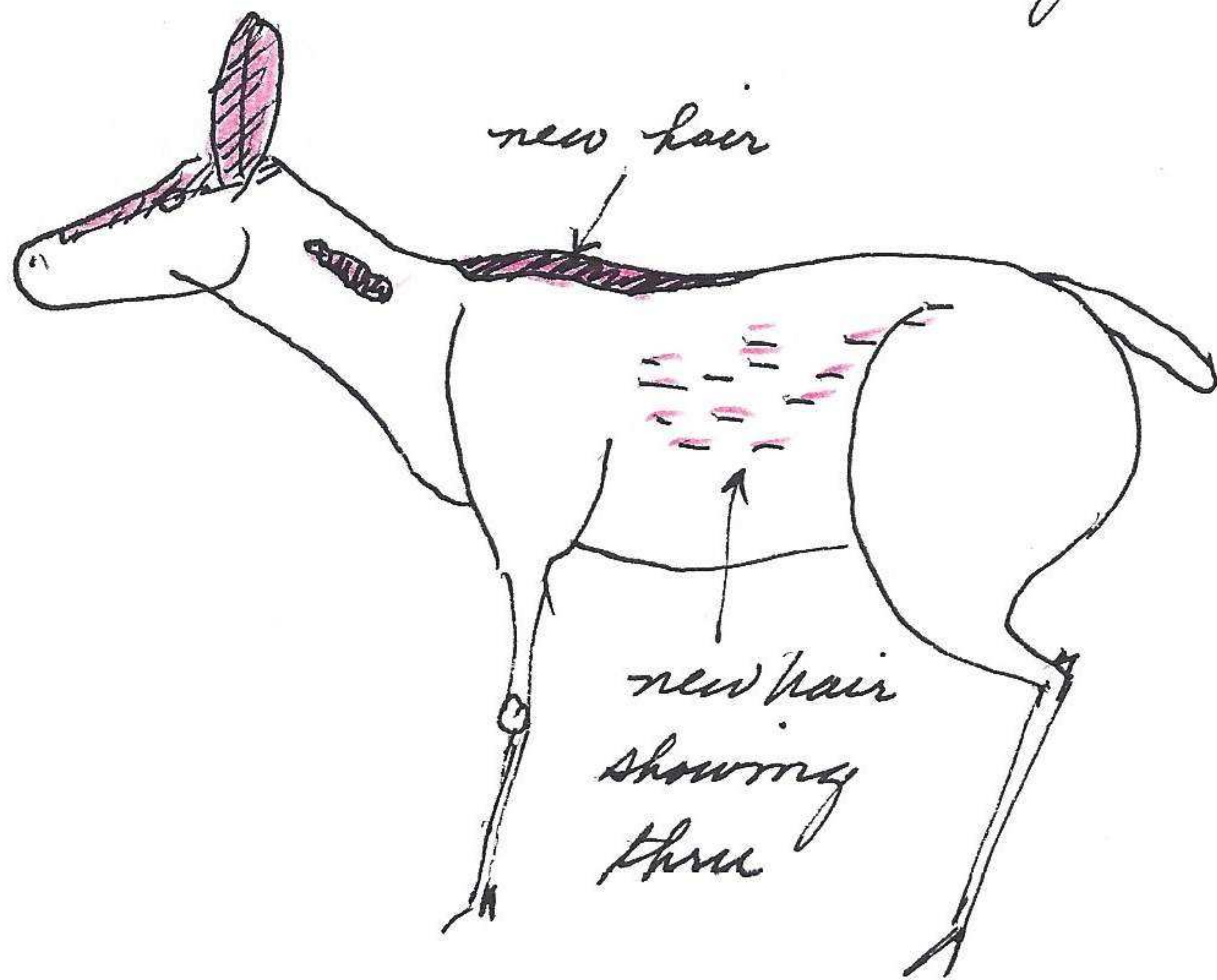
Sept 5, 1988

at 6:00 A.M. noted 5 bats flying back and forth in front of bedroom windows at Bee House, approx. 40 feet above water. Ordinarily one or two are observed. They continued to 6:11 A.M. and this took refuge in roof of house. As an individual

approached the swallow nesting box, it would make a circle in front of it (3' diameter) It is in-
 interesting how a bat can locate a small crevice by radar signals alone. Circle
 There are two kinds of bats that fly by the house; one a fast straight flyer and one that flutters irregularly and is slow.
 a female mule deer 29 1/2" high at shoulders is in this stage of pelage change: (black = new hair).

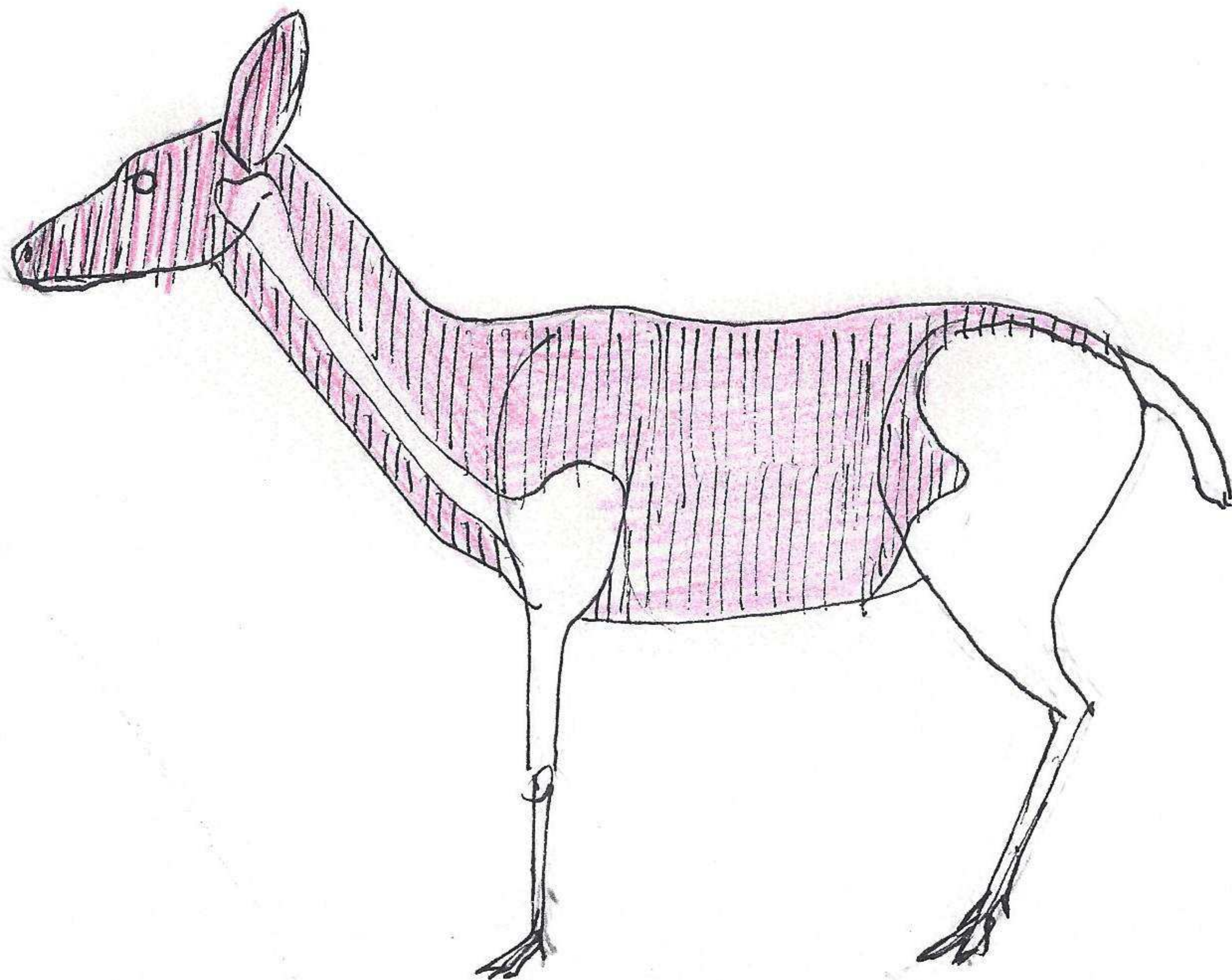


another ♀ mule deer (29" high at shoulders) shows the following pelage change;



a Townsend chipmunk bit the hind hoof of this deer and the deer jump in reaction. The chipmunk are commonly observed feeding or running under deer.

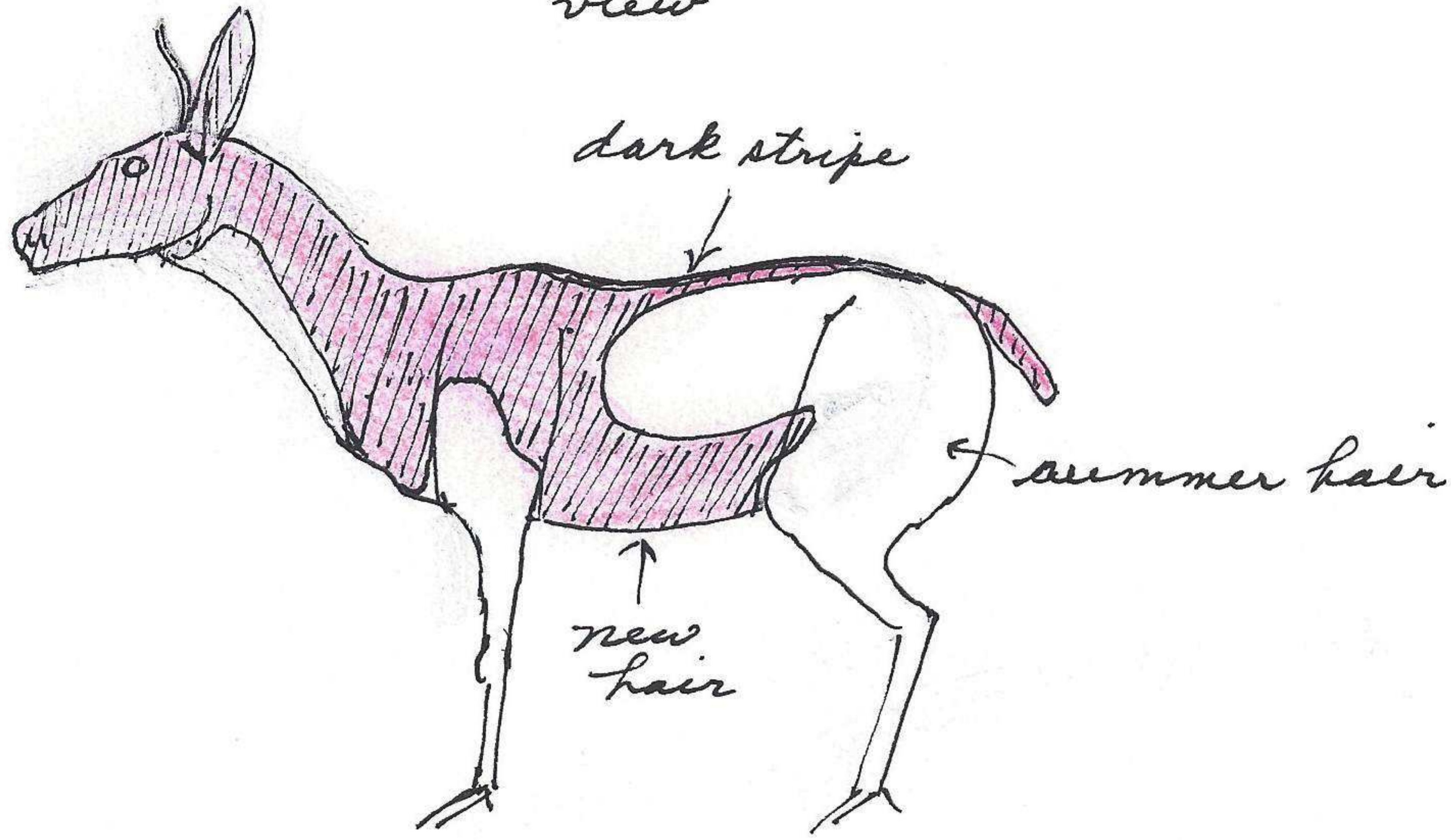
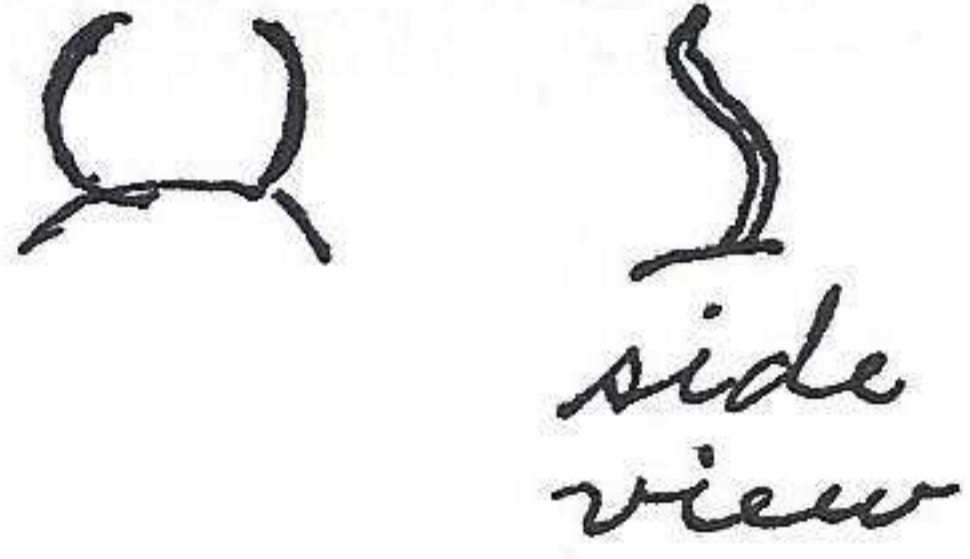
another ♀ mule deer 28 1/2" high at shoulders thus:



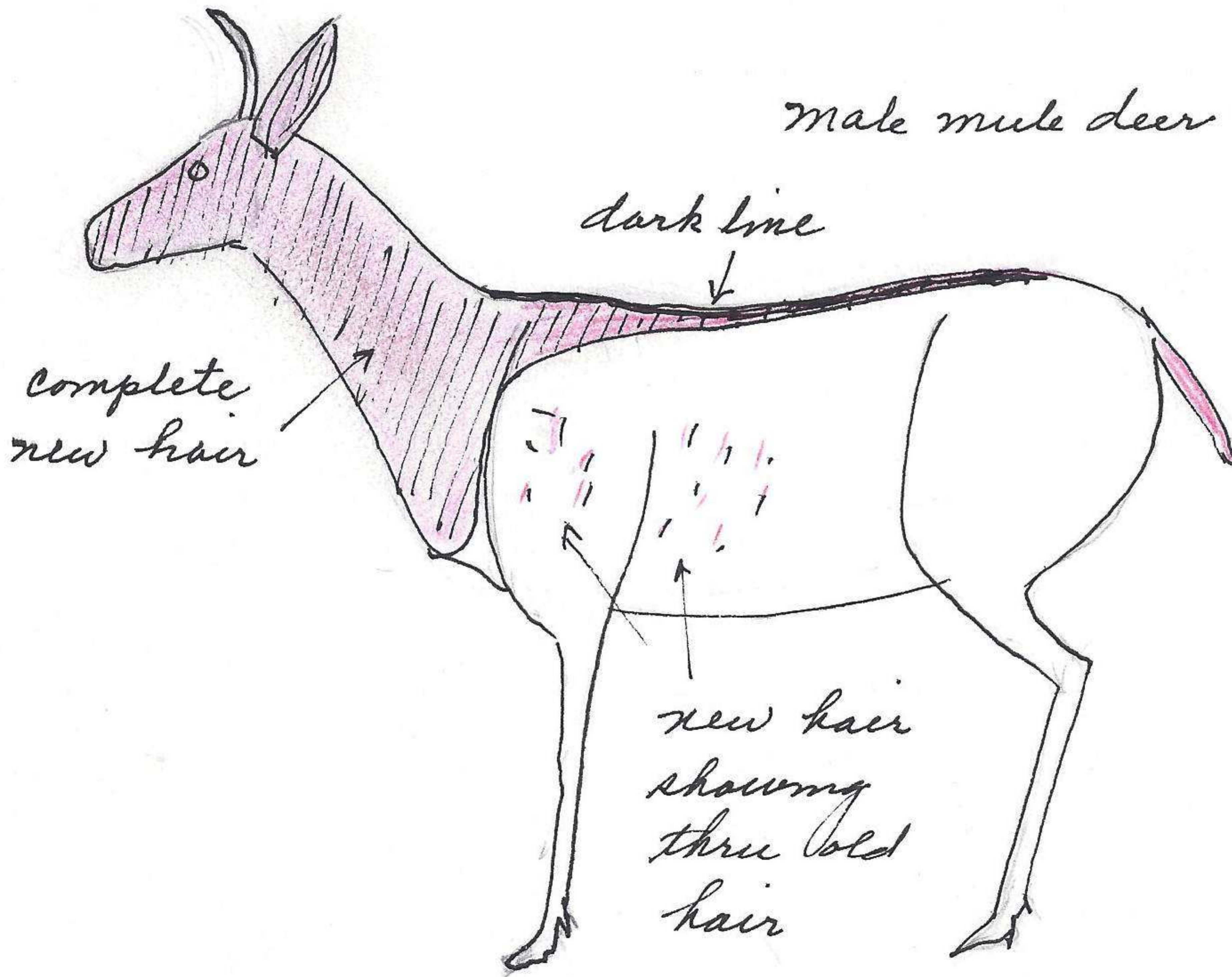
Sept. 7, 1988

9:00 A.M.
5 1/2" high,

male mule deer (31" high at shoulders) and antlers
and no velvet. Its pelage pattern:



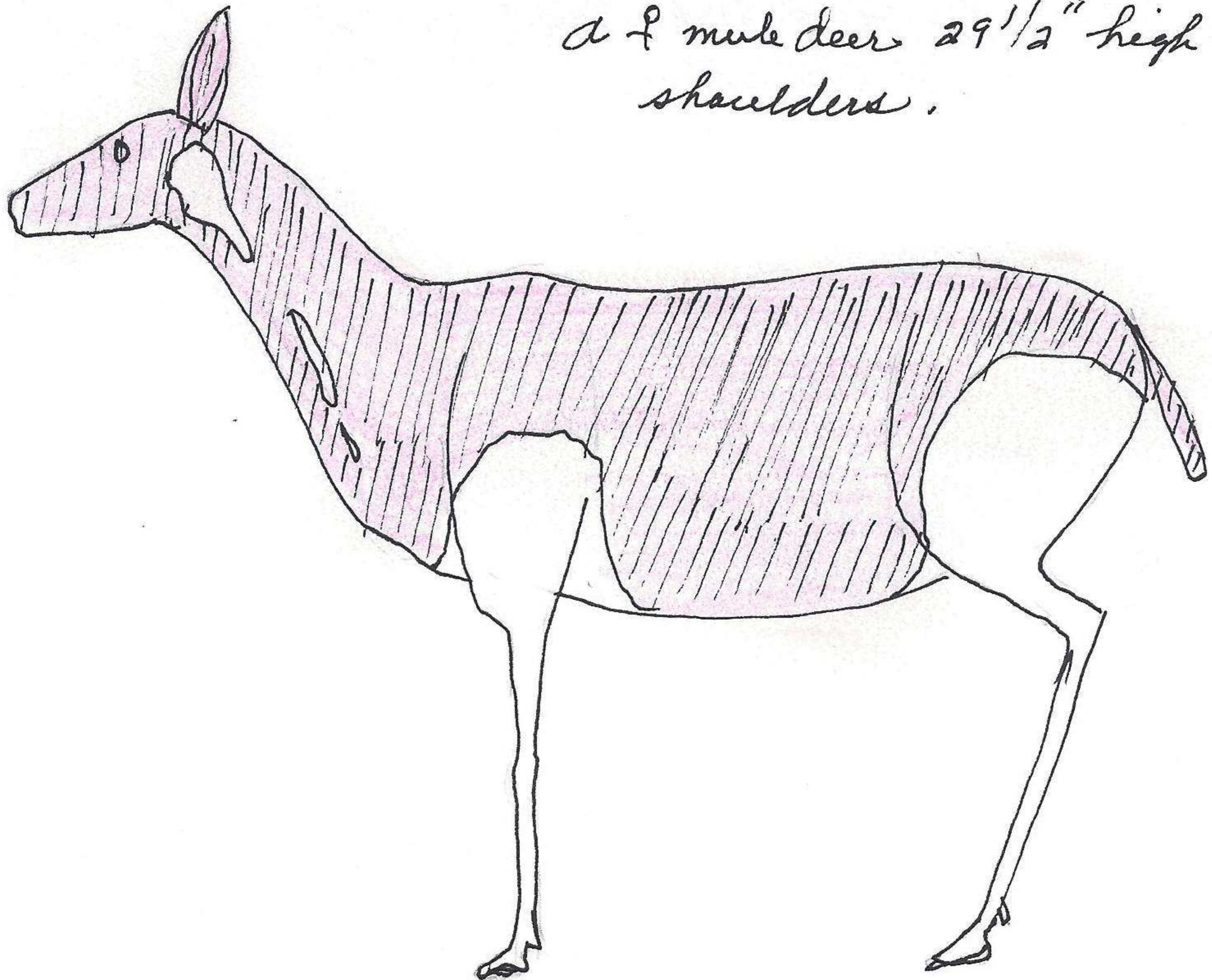
This ♂ came from benchland to NE of Bee House and returned same direction.



male mule deer 30" high at shoulders, antlers 6", no velvet,

There were 6 *Eutamias townsendi townsendi* feeding on ground beneath deer. At one time a chipmunk entered feeding box and both deer and chipmunk fed 3-4" apart (from mouth of deer).

a ♀ mule deer 29 1/2" high at
shoulders.



2:30 P.M. mouth channel into Fishermans Bay (on sand bar to W. 17 young glaucous-winged gulls, 126 adult glaucous-winged gulls. One harbor seal at entrance to channel into Fishermans Bay.

Sept 8, 1988

To Anacortes at 9:20 A.M. Complete census: 9 harbor seal on Leo Reef, 6 on N Flower Rock. 3 glaucous-winged gulls, 2 double crested cormorant.

W Thatcher Pass, glaucous-winged gull, Bonaparte gull, mew gull.

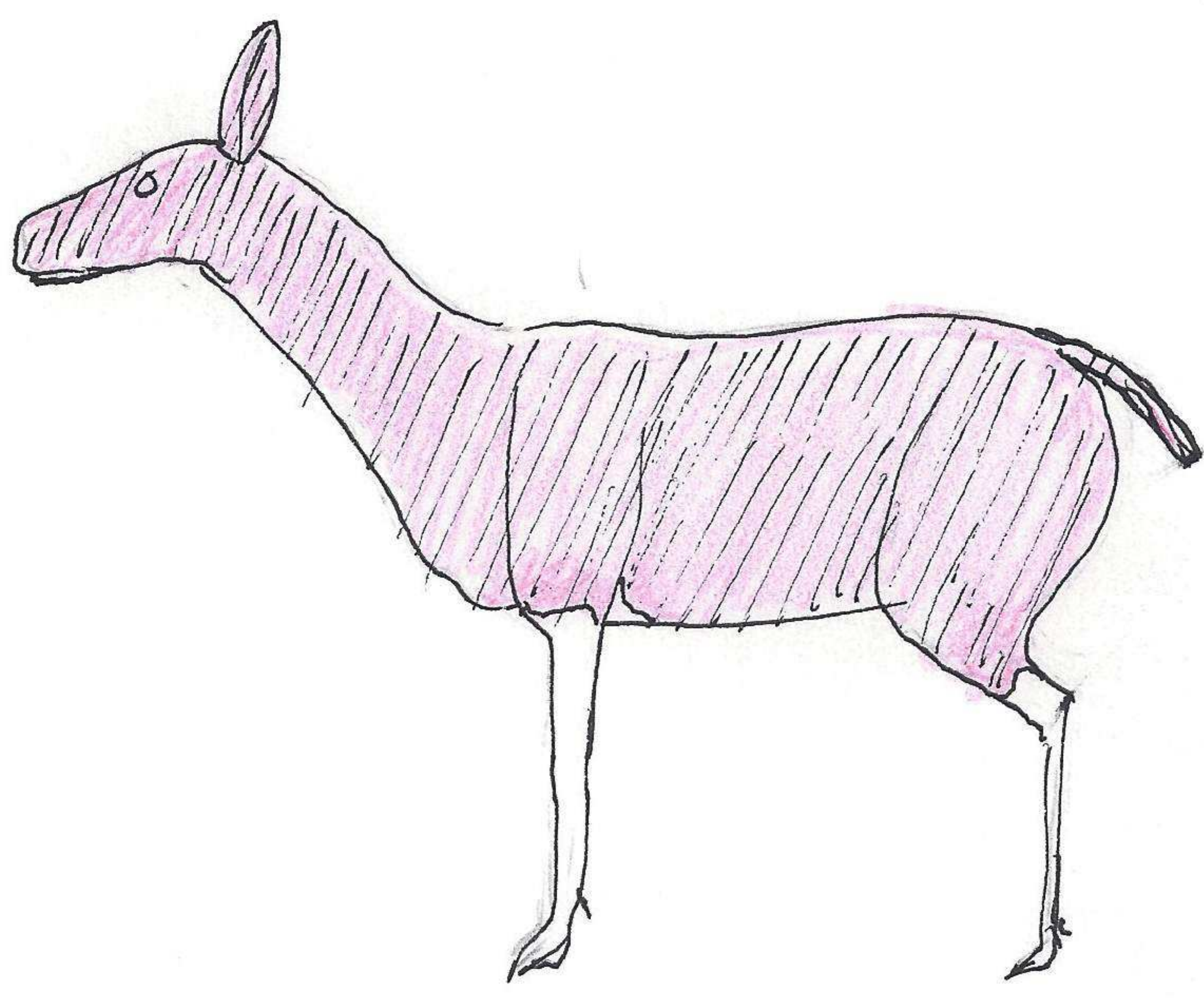
Gulls on Painter Island 1 per 6'. Rosario Straits: Bonaparte gull, 2 glaucous-winged gulls, 2 glaucous-winged gulls, 2 mew gulls, 2 glaucous-winged gulls, mew gull, Bonaparte gull, mew gull. Arrived Anacortes ferry terminal.

Returned Lopez Island 5:12 P.M.: 3 glaucous-winged gulls, 1 mew gull, 2 marbled murrelets, Bonaparte gull, 3 double-crested cormorants, Bonaparte gull, 3 Bonaparte gulls, Bonaparte gull, all flying E. 2 glaucous-winged gulls in Rosario Straits, marbled murrelet, 2 glaucous-winged gulls, mew gulls, double-crested cormorant. E Thatcher Pass, 2 single glaucous-winged gulls, 4 Bonaparte gulls, W Thatcher Pass, glaucous-winged gull, Bonaparte gull, glaucous-winged gull, no bold

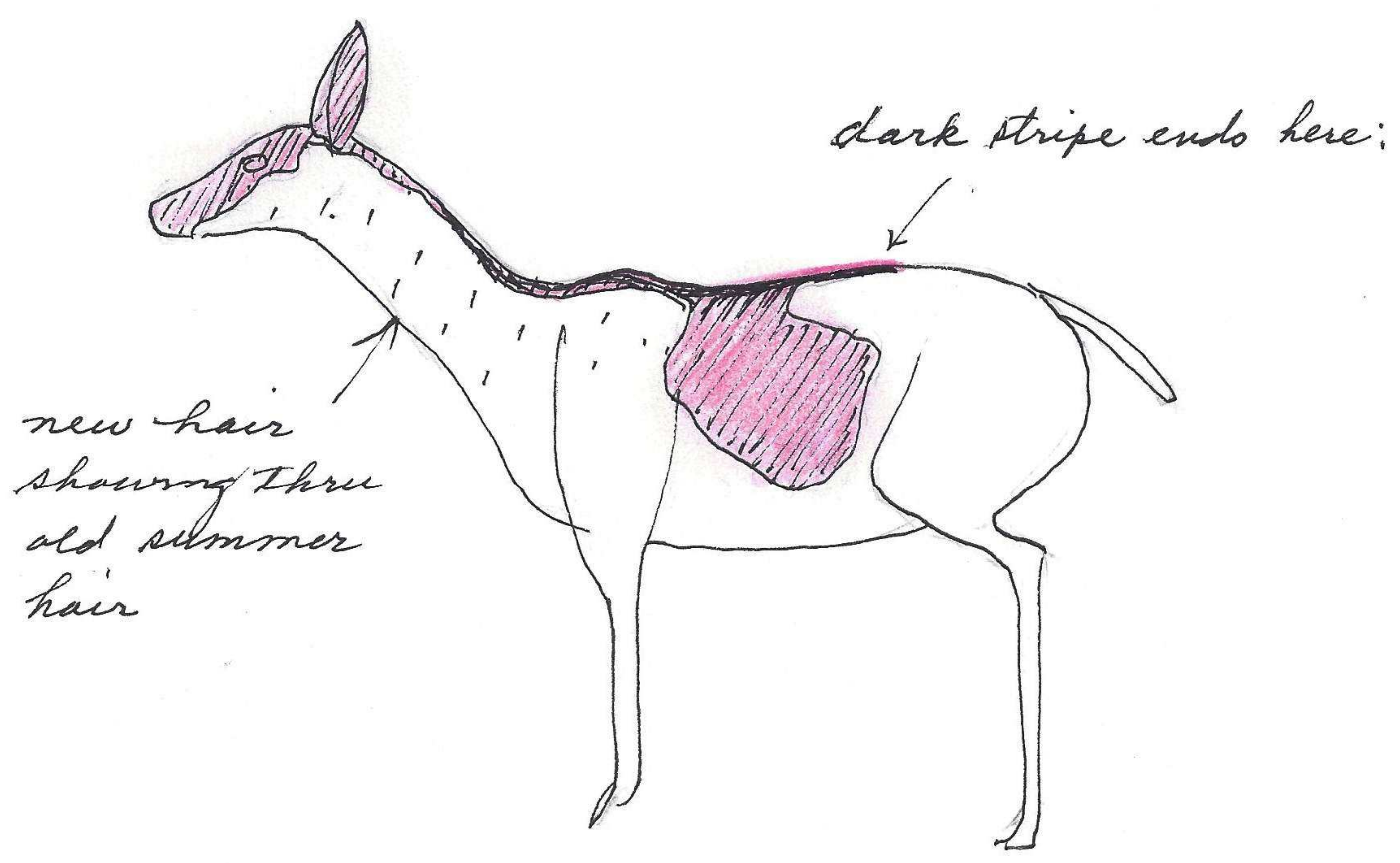
eagle on nest at N end Humphrey Head. Arrived Lopez Island. 14 glaucous-winged gulls on piling at ferry terminal.

Sept. 10, 1988

8:30 A.M. an adult ♀ mule deer, 29 1/2" high at shoulders at feeder.



A ♀ mule deer 29" high at shoulders is the most aggressive deer of 8 other ♀'s at feeder



Sept 11, 1988

This A.M. to Anacortes (approx 9:30 A.M.). Between Willow Island and W entrance Thatcher Pass: 8 common tern, 20 Bonaparte gulls, 15 mew gulls, 18 glaucous-winged gulls.

Beyond James Island in Rosario Straits were: approx. 1200 common murre, 1000 glaucous-winged gulls, 400 mew gulls, 150 marbled murrelets.

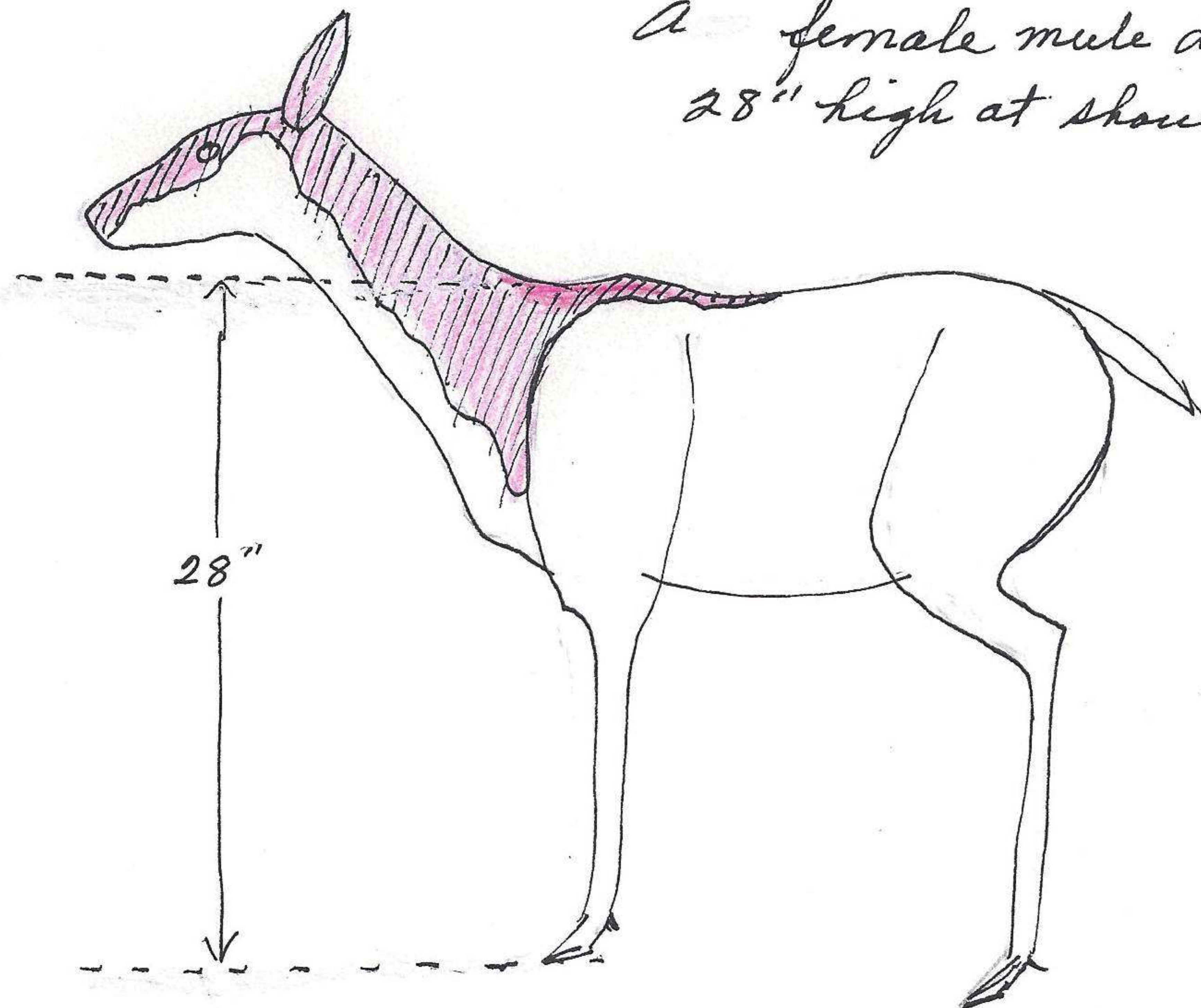
On the NW side of Mt. Baker, there is a rock ridge that is open to top of Peak and would make a snowless ascent.

Returned Lopez Island at 5:00 P.M. no census.

Sept 12, 1988

8:15 A.M. a pileated woodpecker at Bee House (SE side) in a live Douglas fir tree overhanging water on shore below.

A female mule deer measuring 28" high at shoulders



Two lions mane jellyfish (Cnidaria) at 6:30 P.M. at below House. Diameter approx 10" each. Sometimes they float with current upside down.

For last 3 days the two ♂ mule deer (both illustrated Sept 7, 1988 in journal) sparred head on for 3 minutes. One later rubbed spike antlers on a limb of madrona.

2 marbled murrelets fished 12 from shore in front of Bee House, chasing small 2"-3" minnows from under floating rock weed and from ball of minnows.

Sept. 13, 1988

This afternoon check 'The Bee' a Grand Banks Boat and recorded max. temp 112°F , min. 50°F for last week.

This evening between 6:00 and 7:00 P.M. caught 3 spiny dogfish measuring 21", 22", and 21" standard length.

The common tern is the most common tern or bird in the S end of Shoal Bay.

Sept. 14, 1988

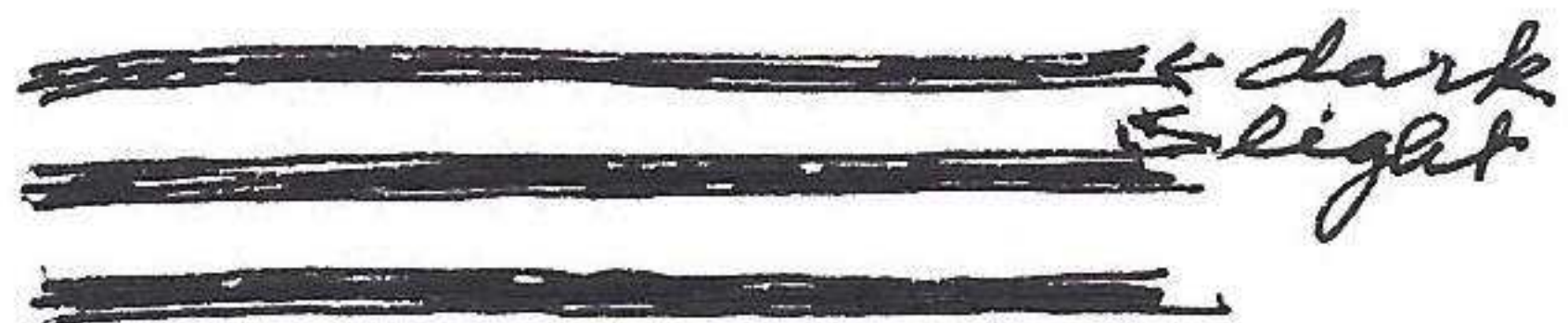
6:17 A.M. Last bat to fly past bedroom windows of Bee House. For the last 10-12" they have been flying back and forth in front of the house and at this level is approx 60' above water of shoreline below.

6:30 A.M. Maximum brilliance in morning sky.

6:30 A.M. E and N of Leo Reef there are 148 surfacing of fish at one moment. 15 glaucous-winged gulls generally distributed, $\frac{1}{3}$ of which are bathing and flopping wings.

34 glaucous-winged gulls on Leo Reef, no harbor seals.

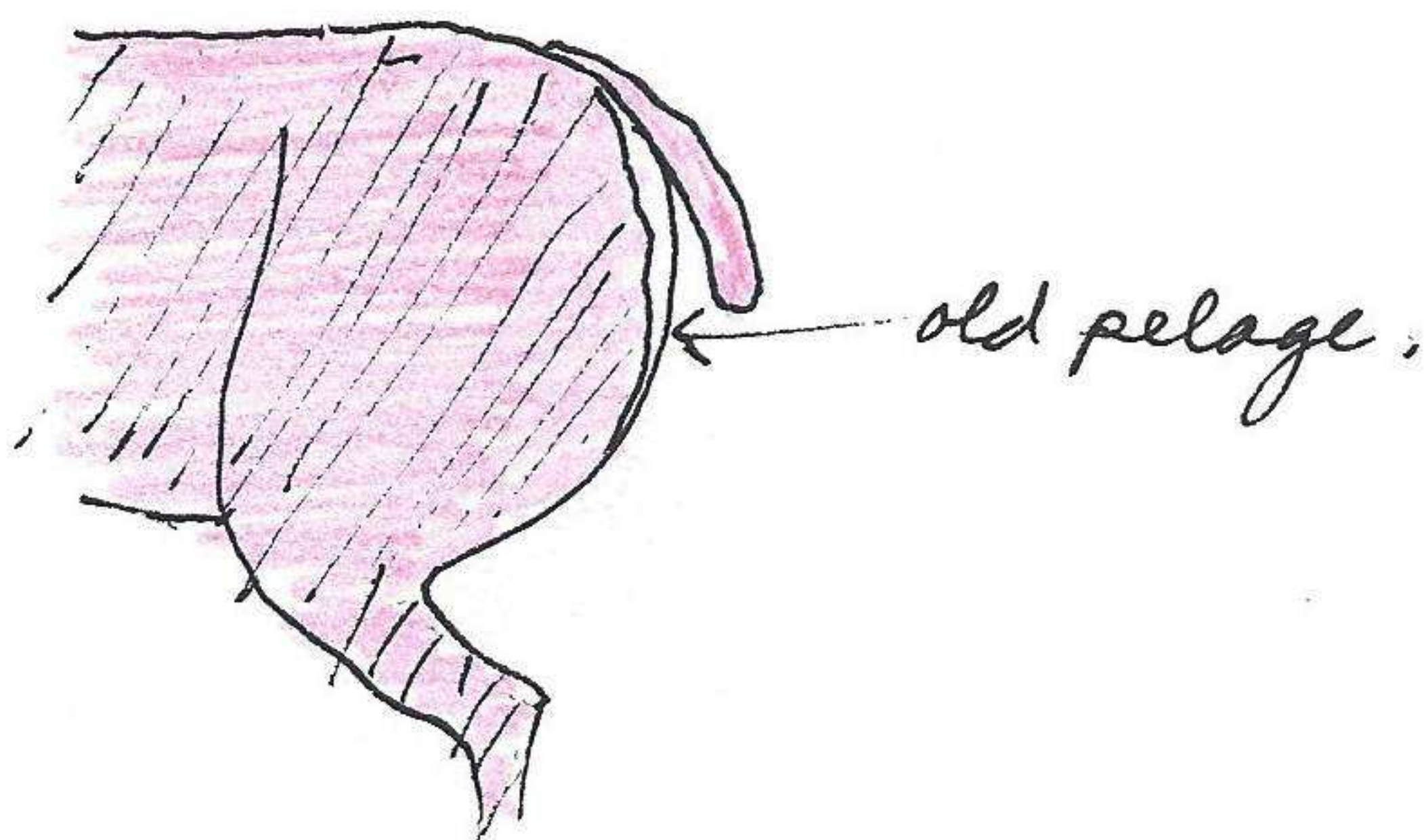
First ^{glaucous-winged} gull to fly past Bee House at 6:41 A.M.

First boat to pass at 6:42 A.M., ferry 6:48 A.M. As slow moving boats produce (when view toward morning lights) segmented beads — — — — — and when waves moving toward the observer  the pattern is perfect parallel dark and wider light horizontal stripes.

6:53 A.M. first glaucous-winged gull past Bee House, $29\frac{3}{4}$ " high at shoulders

8:40 A.M. a female mule deer at feeder showing almost complete pelage change from golden-browns of summer to gray of winter.

8:45 A.M. 5 river otter by Bee House swimming N and following shoreline out 1-3'. These are first observed since last recorded in journal.

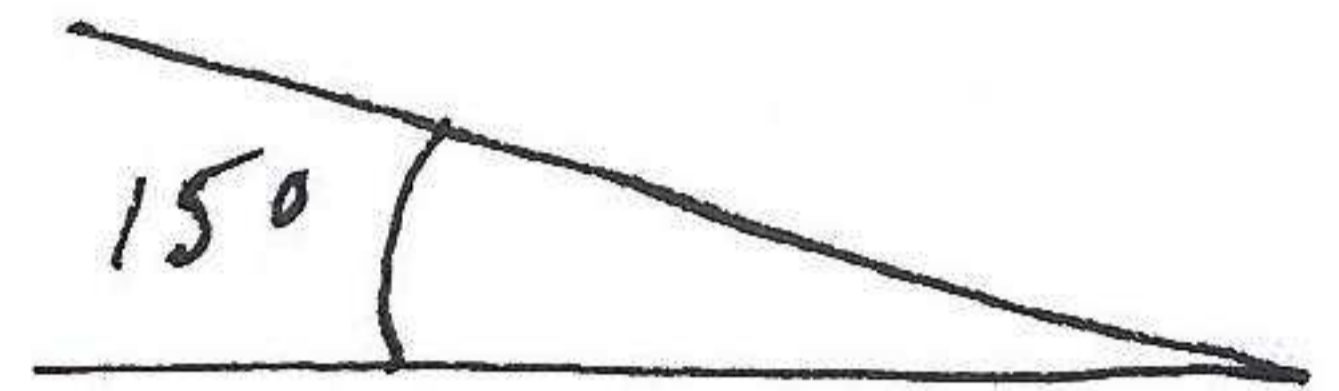


1:45 P.M. From Bee House can see 16 harbor seal, 15 double-crested cormorant and 4 glaucous-winged gulls on Leo Reef. In N. Lopez Sound, S and E of Leo Reef, are 42 common murres in

5 small groups. One harbor seal worked area in front of Bee House, out 8' to 50' from, about 12:00 A.M. to 1:45 P.M.

This evening to 'The Bee' in Shoal Bay. Caught 2 dogfish (spiny) measuring 23 and 21 inches in standard length. Watched a Bonaparte gull chase a common tern for 2 mins. The tern had better maneuverability but the gull persisted but without success.

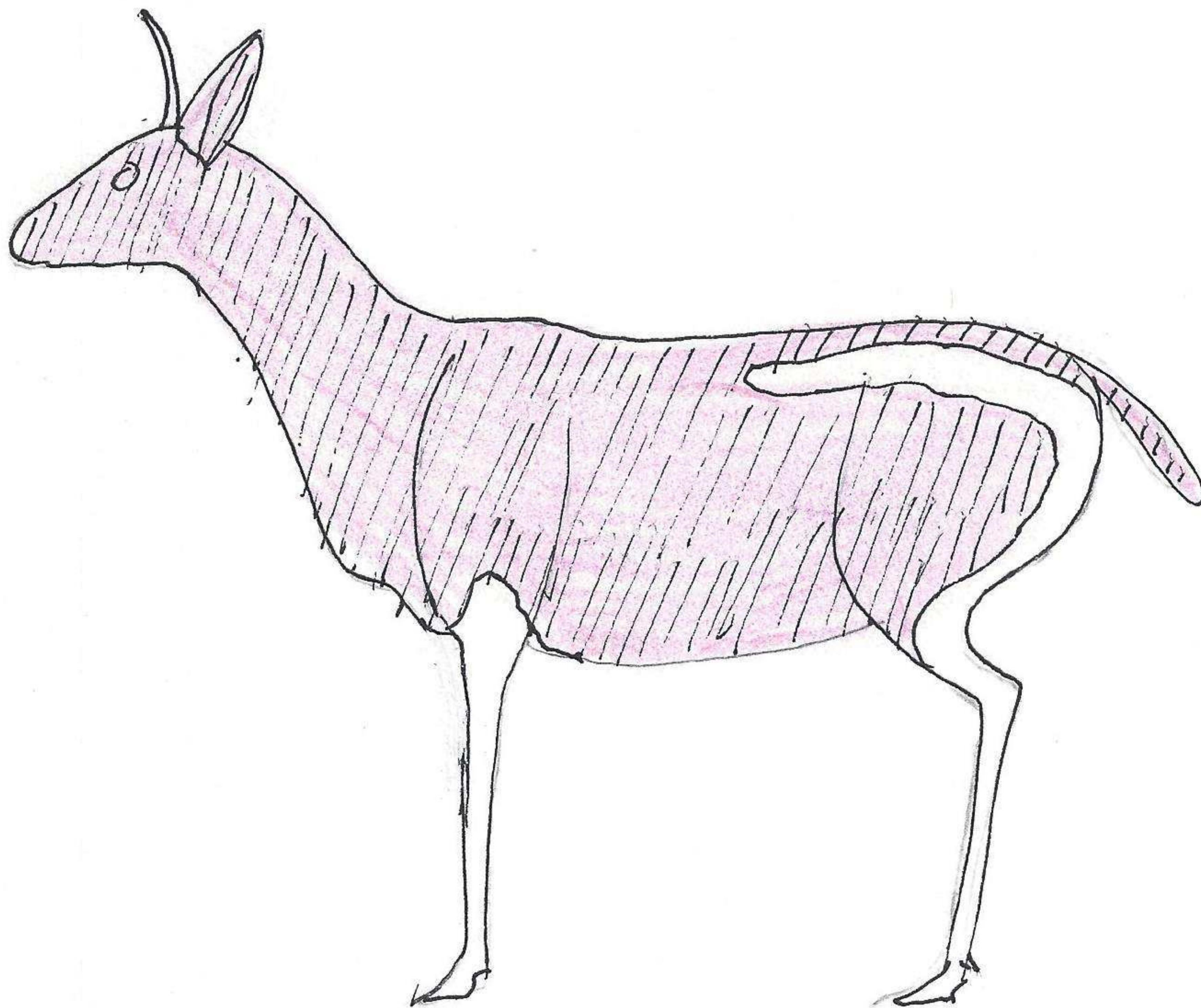
The boat tilted 15° from waves of ferry that passes by $1\frac{2}{10}$ mi. to N. The waves take 22 minutes to arrive at boat at anchor in S end Shoal Bay



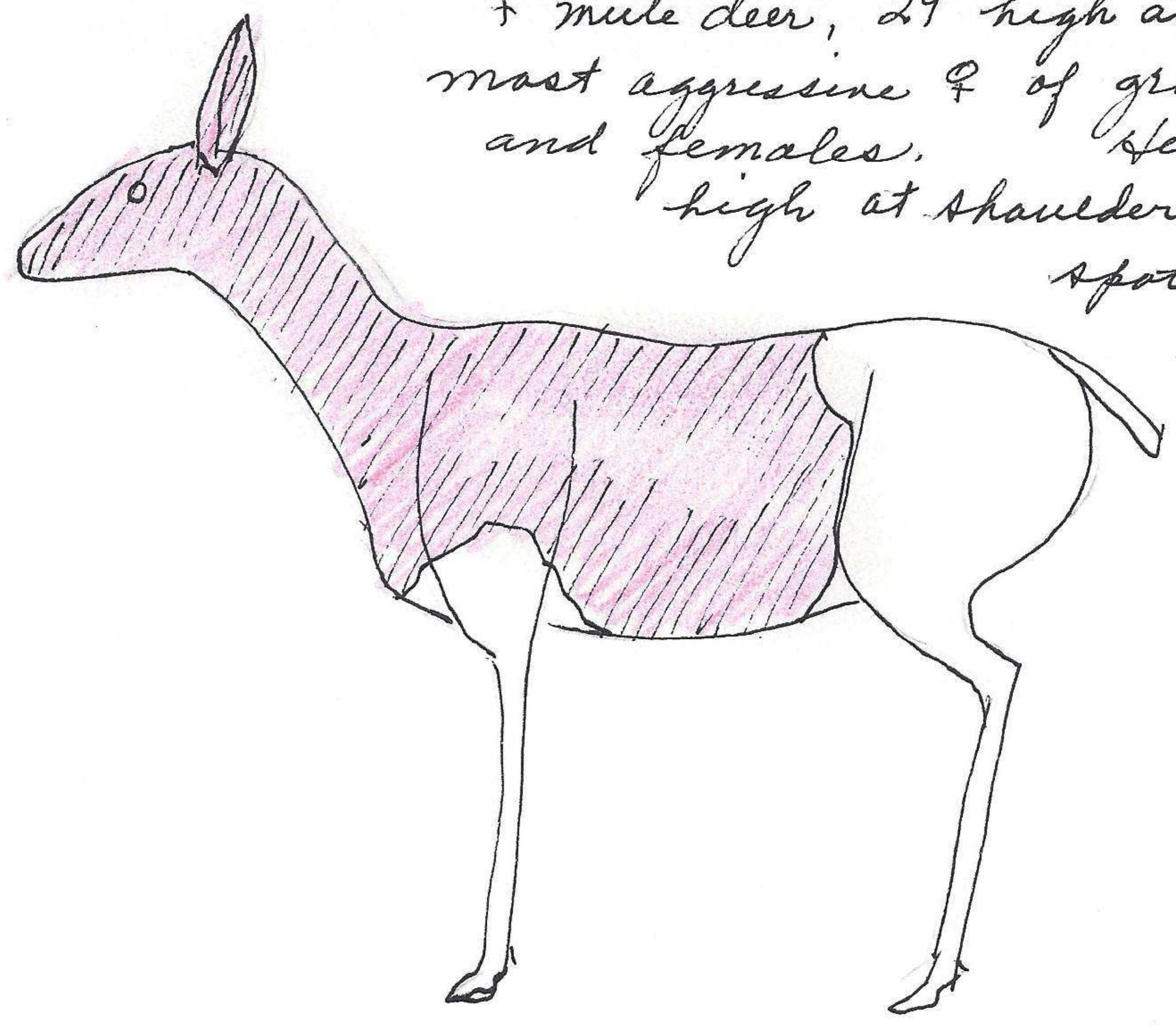
Sept. 15, 1988

8:45 A.M. Feeder at Bee House:

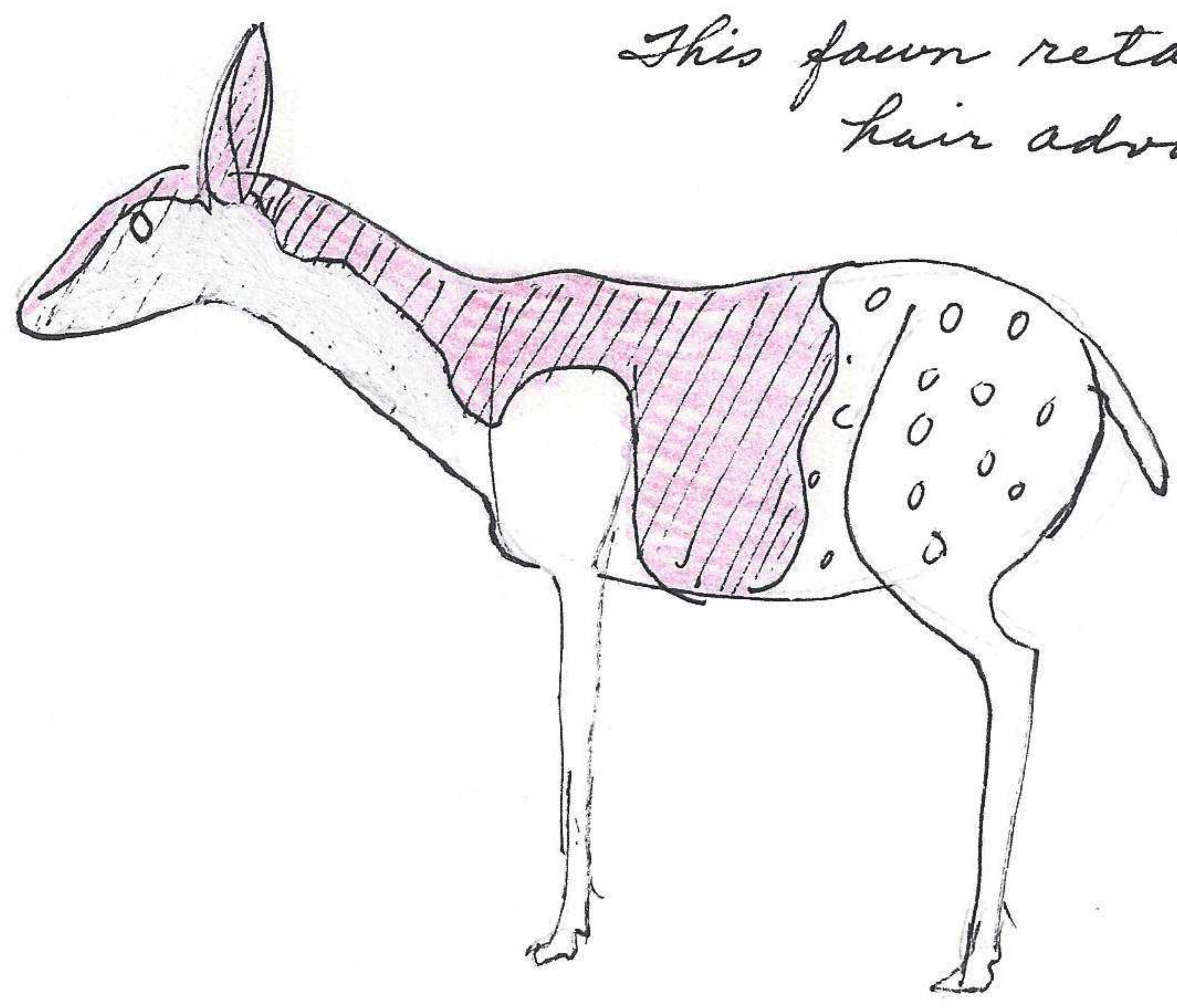
male mule deer, 30" high at shoulders.



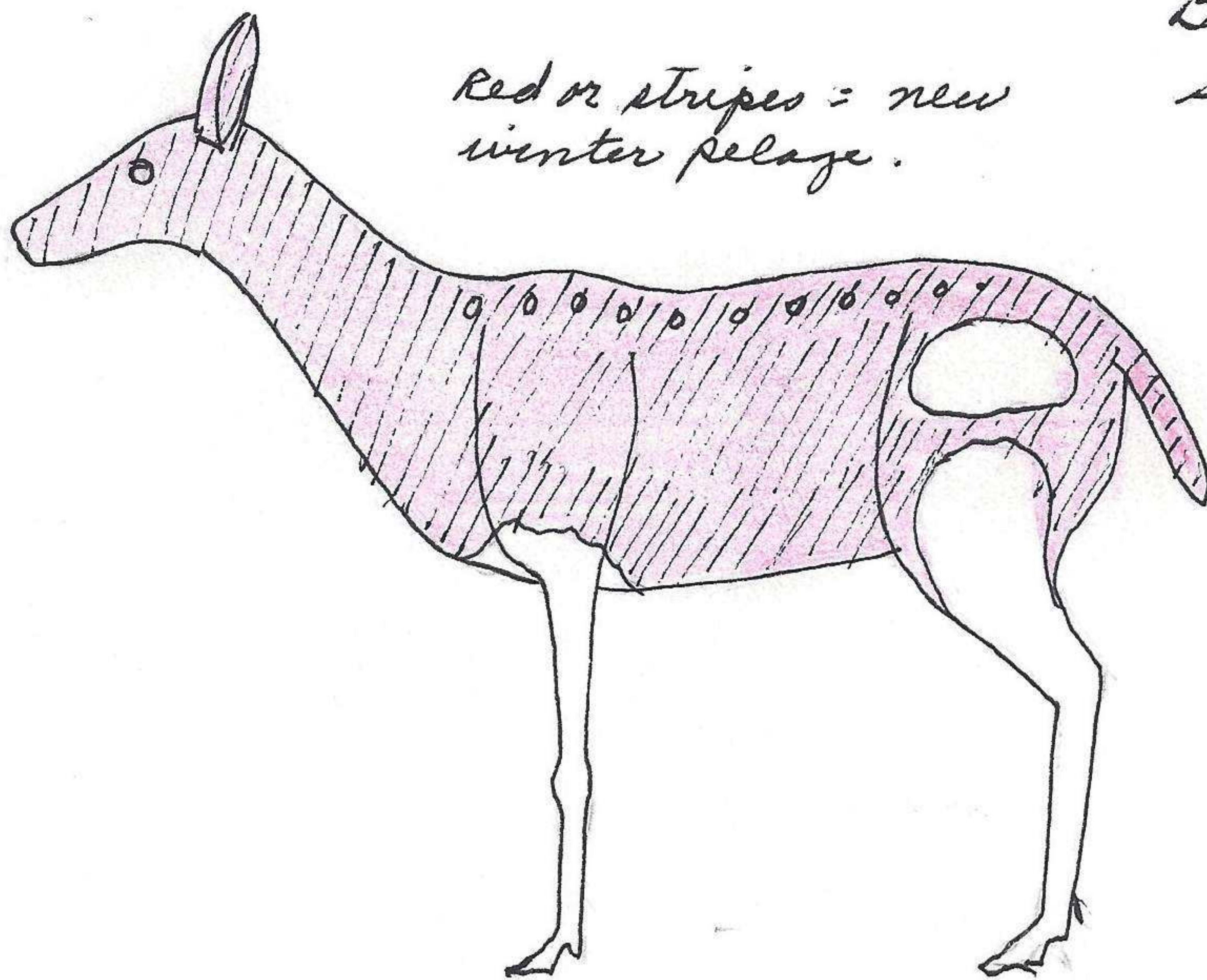
♀ mule deer, 29" high at shoulders,
most aggressive ♀ of group of 11 males
and females. Her fawn at 24"
high at shoulder has lost all
spots and new hair
is ^{light} brown
instead of
gray of female
hair.



This fawn retains spots but new
hair advancing. There is
a dark line down
median back.



Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington
 Sept. 17, 1988



Red or stripes = new
 winter pelage.

Buster, a mule deer, ♀.
 She has dots along
 each side medial
 line.

Her fawn, 24 1/4"
 high at shoulders
 has complete winter
 pelage and like
 its mother has
 dots along medial
 line but pelage
 lighter (golden-brown)
 than dark grey fe-
 male.

a ♀ mule deer 29" high at shoulder with complete winter pelage.

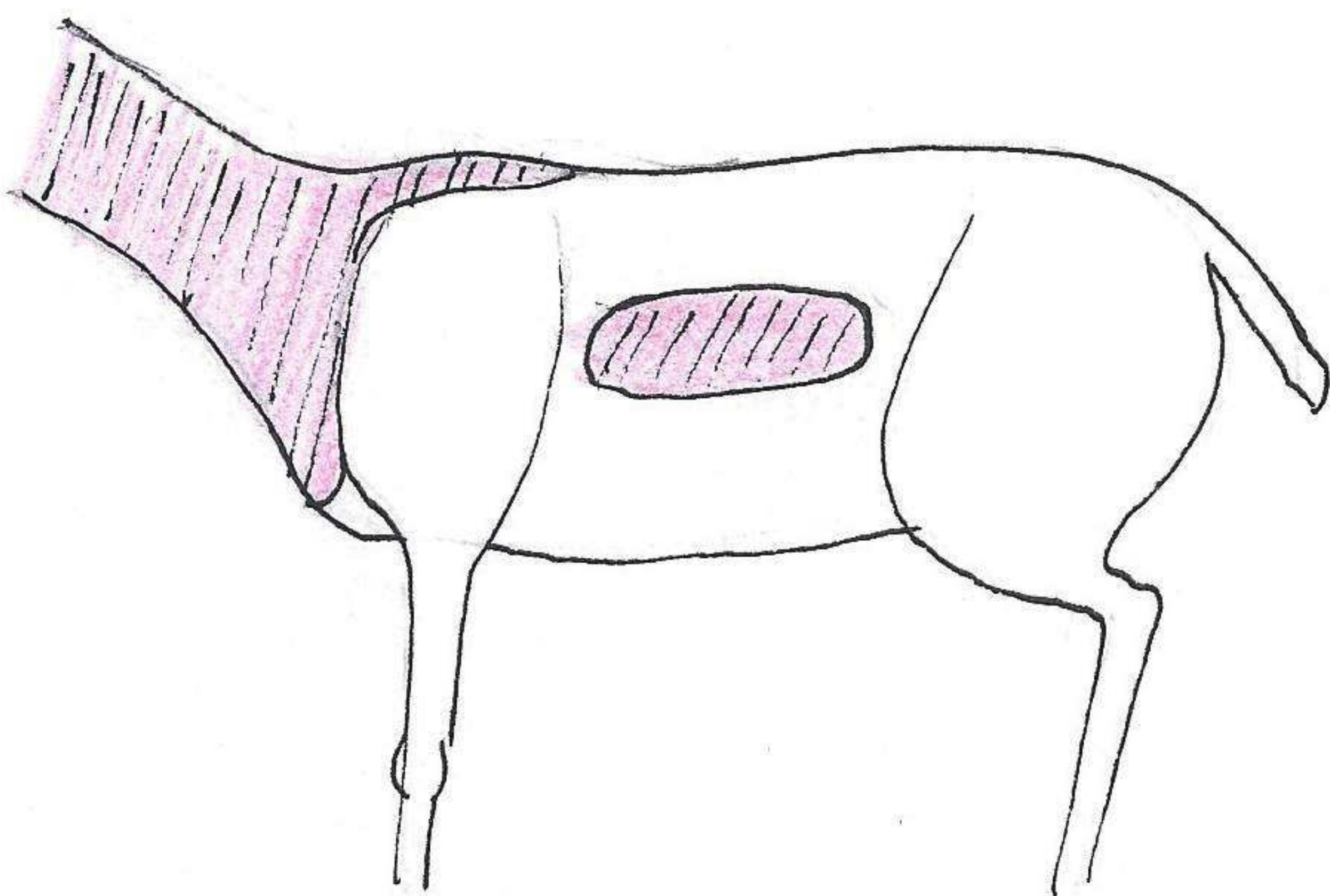
a ♀ mule deer 25 1/2" high at shoulder with complete winter
 pelage.

A spiked ♂ mule deer (the male featured on Sept 15, 1988
 notes) smelled the air with mouth open as do bucks later
 in rutting season. The ♀ adult deer are definitely more
 nervous and aggressive than in summer.

Sept 18, 1988

An adult ♀ mule deer, 28 1/2" high at shoulder, with
 complete winter pelage. It is difficult to judge if lower
 limbs and post-ocular patch are, in fact, in winter pelage.

A ♀ mule deer 28 1/2 inches high at shoulders, is in
 this pelage change:



880918-1 Peromyscus maniculatus hollisteri 172-81-22-18-18gms ♂
testis 7mm. From Bee House.

7:15 A.M. 2 marbled murrelets swam 5 in front of Bee House some 20'-30' from shore. They swam underwater for approx 50' then surfaced together for 30 seconds and then dove again to repeat their 50' underwater spans. At each surfacing 3 Bonaparte gulls flew to their point of emergence (within 3-6").

Buster, a ♀ mule deer has same pelage as of Sept 17, 1988. but dorsal rump replaced with new winter pelage.

2:00 P.M. 12 harbor seal on Leo Rock no 4, 9 on Leo Rock no 5, 5 double-crested cormorants and 3 glaucous-winged gulls on Leo Rock no 6.

A common loon fed in front of Bee House (40-50') for 1/2 hour. When bathing it flapped wings on water and moved each time some 8' or so, then raised its body and flapped its wing in an upright position.

880918-2 Eutamias t. townsendi. 250-114-36-20-82gms ♀.

6:00 P.M. Strongest wind this summer (from S) with waves 10' interval and 1 1/2' high. Waves 23 per minute. White caps.

Sept 19, 1988

To Anacortes. no census. 1 bright yellow tree 80' W of power line and N end Pelator Island. Some sign of yellow in trees and shrubs 100 or so feet W of this tree. Otherwise no fall color in trees on slope at least when viewed from ferry.

Spent night at Thousand Trails. The salmon pens off Lone Tree Point and the recreational facilities now occupying the foreground of the lodge has destroyed the scenic value of this once beautiful peninsula and sound beyond.

Sept. 20, 1988

Left Thousand Trails and drove to Anacortes ferry terminal. A mourning dove flew over terminal. while waiting loading of ferry observed from rear of ferry: (all flying E). Bonaparte gull, double-crested cormorant, 2 individual glaucous-winged gulls, 2 ducks (sp), 3 single glaucous-winged gulls, double-crested cormorant, Bonaparte gull, glaucous-winged gull.

Left terminal on ferry at 5:27 P.M. Will keep complete census.

Bonaparte gull, marbled murrelet, 9 single glaucous-winged gulls, In middle Lasario Straits, 6 groups common murrelets of approx. 10 birds per group. 18 glaucous-winged gulls generally distributed; 12 pigeon guillemots, 7 marbled murrelets, all above ^{linear} area and 2/10 mile wide. 3 common murrelets, 2 ^{single} glaucous-winged gulls, Point Fountroy. W Thatcher Pass. Group 12 glaucous-winged gulls E. of Leo Reef. 3 glaucous-winged gulls, 6 common murrelets. Lopez 6:05 P.M. 12 glaucous-winged gulls on piling of Lopez ferry terminal.

Sept 21, 1988

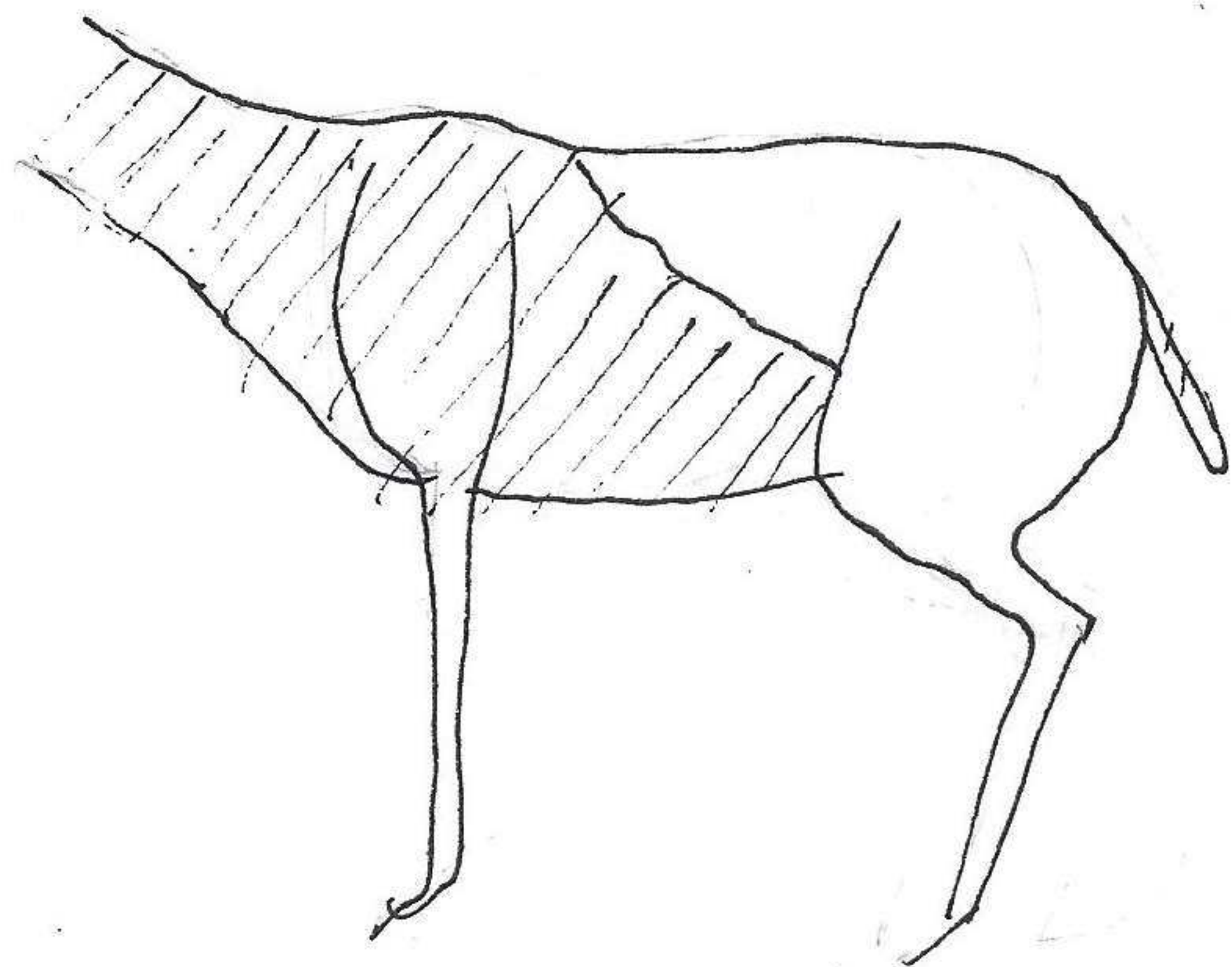
880921-1 *Peromyscus m. hollisteri*. 186-92-23-20-28gms ♂

mule deer at feeder:

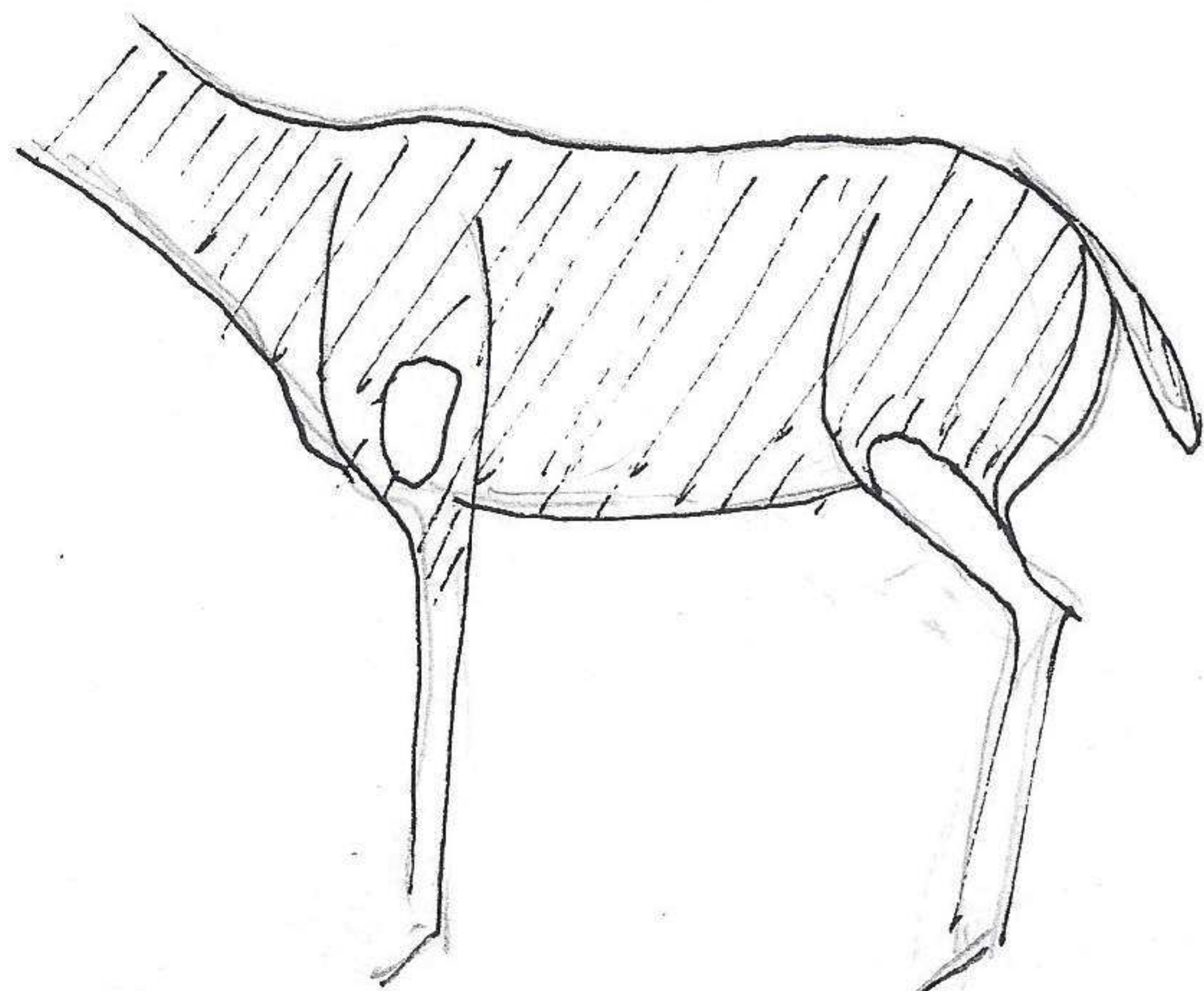
♀ 25 1/2" high at shoulders, pelage (winter) complete.

♀ 29 1/2" high at shoulders, mother of above and complete pelage change. Both have faint spots adjacent medial back line.

10:10 A.M. 5 river otter to NE past Bee House (one group)
Red-billed grebe in Spring Cove and sleeps 80% of the time



mule deer ♀ 28" high at shoulder showing pelage change from summer to winter (striped new pelage)



♀ mule deer 28" high at shoulders. Winter pelage almost complete except spot on foreleg, hindleg and posterior border of rump.

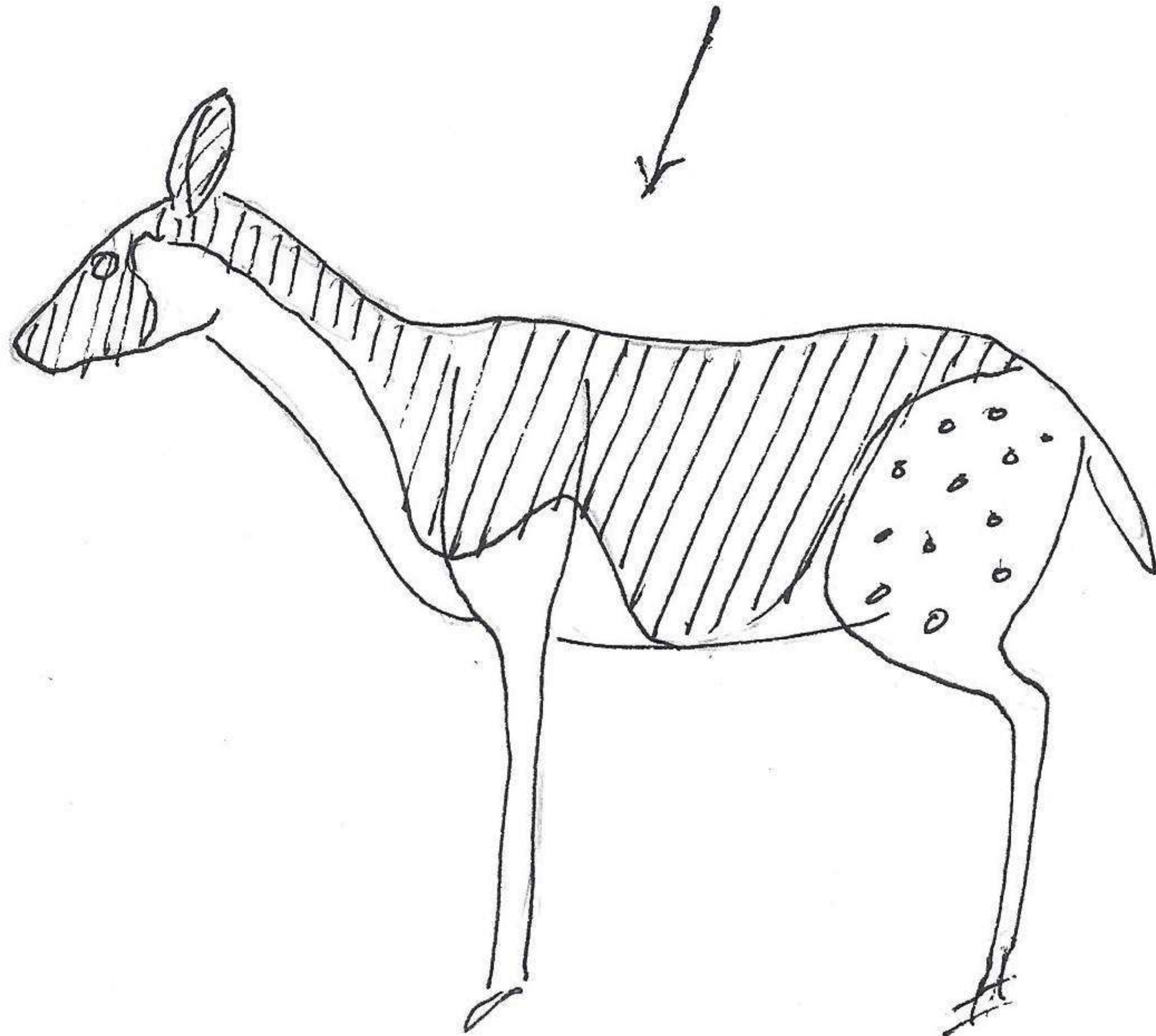
7:30 P.M. 2 bats (approx 4" wing spread observed flying in front (SE) of Bee House at 3rd floor level. First time observed in evening. They remain in area for about 1/2 hour then move elsewhere.

Sept 22, 1988

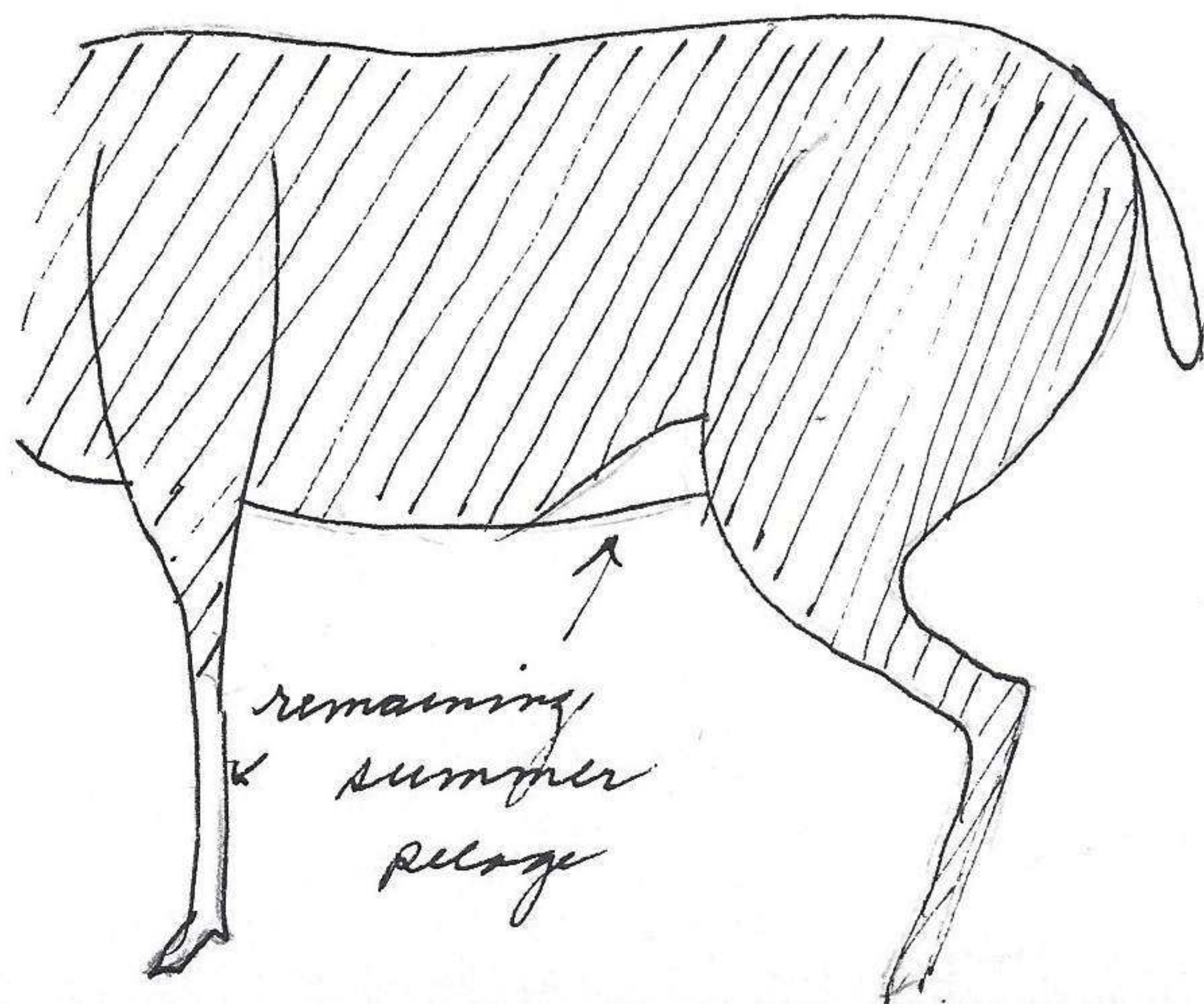
12:00 P.M. 16 harbor seal, 6 double-crested cormorant on Leo Reef.
2 pigeon guillemots between Bee House and Leo Reef.

Sept. 23, 1988

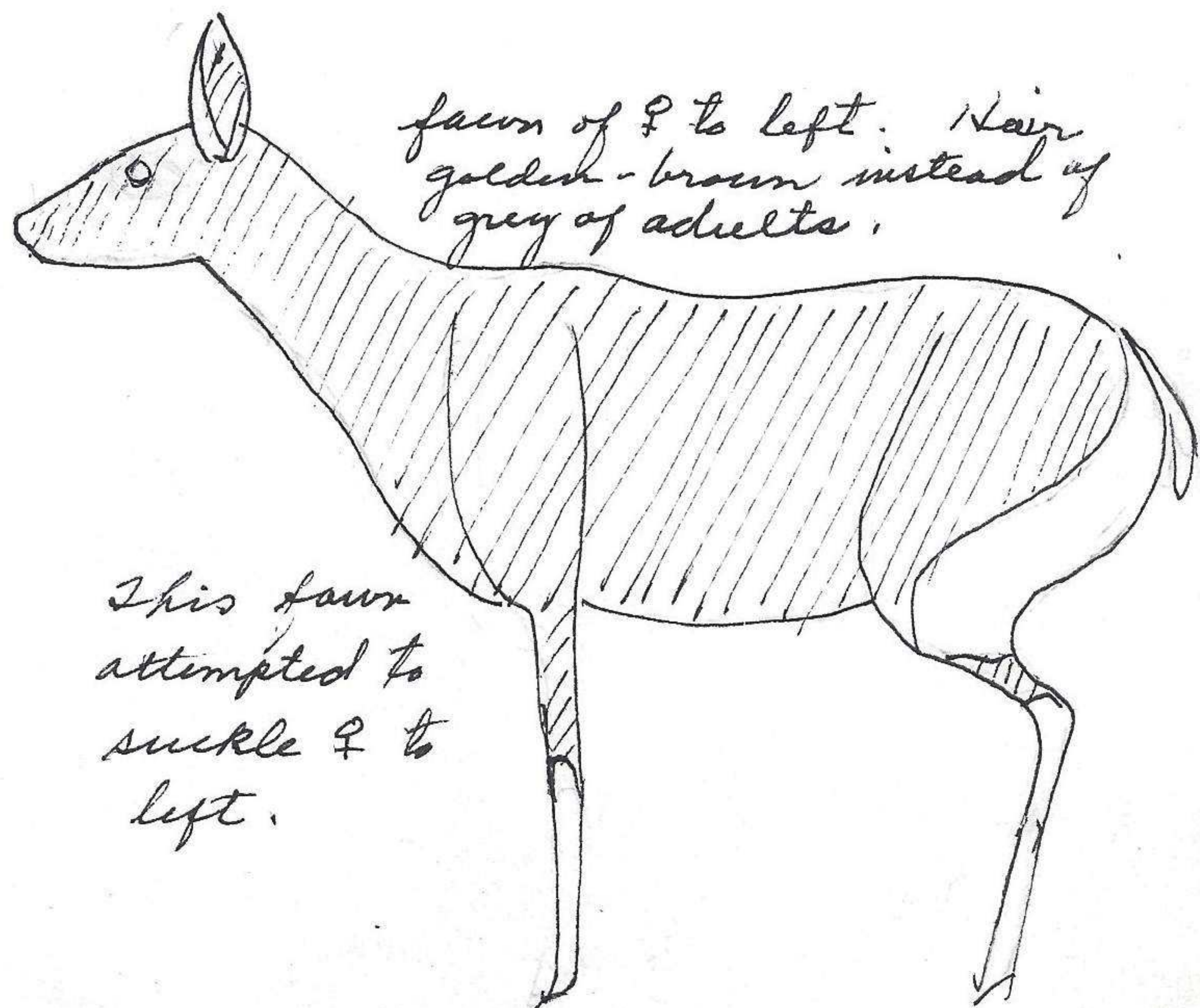
8:45 A.M. a mule deer (fawn of the year) at feeder. It measured 23" high at shoulders. new hair replaced with longer hair than adults and golden-brown instead of grey pelage of adult winter hair.


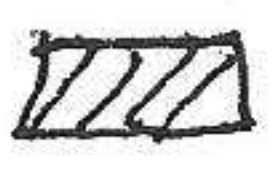


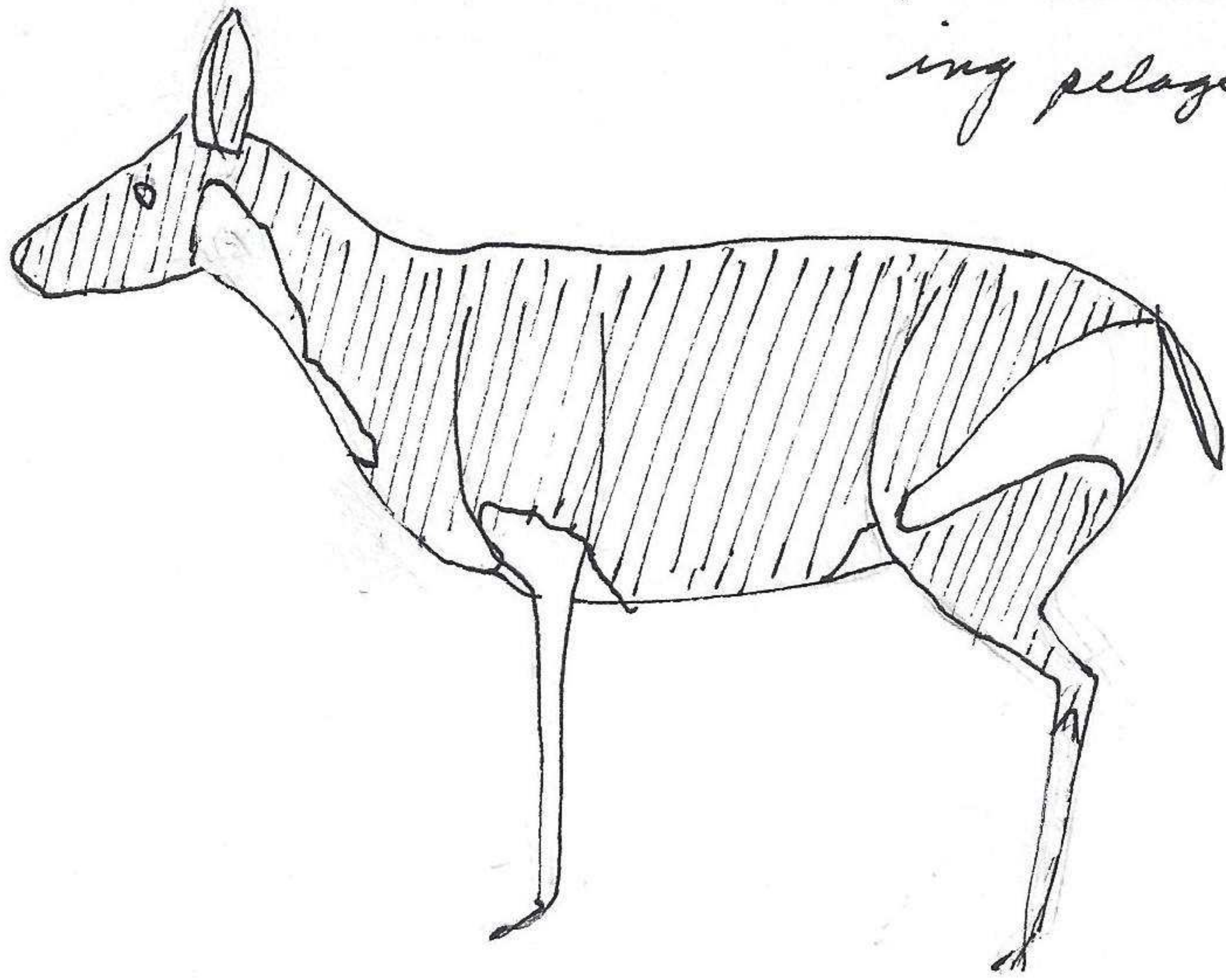
adult ♀ mule deer almost complete hair change to winter



fawn of ♀ to left. Hair golden-brown instead of grey of adults.



Buster, an adult female mule deer showing pelage change from summer  to winter .



9:28 A.M. 5 river otter in close grouping swim NE past Bee House. many references in journal report direction as N or S but a critical direction is NE and SW. and should be so interpreted.

12:08 P.M. redtailed hawk flew SW past Bee House at approx. 100' above house. no glaucous-winged gulls on Flower Island.

12:10 A.M. On Leo Reef are: 25 cormorants, 17 harbor seal and 2 glaucous-winged gulls.

Deciduous trees on W side Blakely Island (directly E of Bee House, are turning color; mostly yellowish-green, 30% red and 6 trees bright yellow.

Sept. 24, 1988

10:00 A.M. 51 cormorants, 27 harbor seal and 6 glaucous-winged gulls on Leo Reef. (light rocks). Also 1 harbor seal on Leo Reef Rock no. 10, 2 harbor seal on Little Flower Island Rock and 2 glaucous-winged gulls on Flower Island.

10:20 A.M. an adult ♀ mule deer, 29" high at shoulders fed from hand for first time. Pelage all winter hair.

Sept. 26, 1988

10:20 A.M. 18 harbor seal, 22 cormorants and 6 glaucous-winged on Leo Reef

Left on The Bee (boat) 12:00 P.M., circled Obstruction Island via Peavme and Obstruction passes, thence Olga and return to Shoal Bay anchorage. 18 harbor seal on Spindle Rocks. Temp. in boat since last used max 114°F min 49°F

Sept. 27, 1988

made trip on 'The Bee' leaving Shoal Bay at 10:00 A.M. at 2620.1 hr. meter. Enroute to Oreas Landing estimated 240 common murrelets (groups 8-20), 2 rhinoceros auklets, 6 marbled murrelets ^{and 30 surf scoters}. Diesel at Oreas Landing at 2621.4 hr. meter; port side tank 50, starboard tank 0. Price \$1.03 per gallon. Changed oil. Continued W past N side Bell Island, thence thru narrow pass between Crane Island & Oreas Island, thence N to Deer Harbor Resort. Enroute observed 3 roven flying W over Crane Island (approx 1000 ^{high} ft.), 30 common murrelets, 5 marbled murrelets, 46 Herrmann gulls and some glaucous-winged gulls, mew gulls and Bonaparte gulls. Left and passed Fawn Island, (W side), N Reef Island, W McConnell Island, W of Yellow Island thence to Friday Harbor at 3:20 P.M. at 2622.7 hrs meter. Left Friday Harbor, circled Brown Island counter-clockwise & thence E. NW of Conae Island observed 2 surf scoters, 32 Herrmann gulls closely packed on shorerocks, 2 mew gulls, 2 glaucous-winged gulls, 18 Bonaparte gulls. Another group of approx 150 Herrmann gulls on rock headlands E side Conae Island, again closely arranged, 18 others on dull kelp masses. Along these kelp caught 16" steelhead, and another one (?), twice the line resistance. Glaucous-winged gulls, mew and Bonaparte gulls also in area. Today observations selective. Continued Shoal Bay Anchorage.

7:30 P.M. enroute to ferry terminal (Lopez) observed 3 mule deer on new grassy area at Odlin Turnoff and 2 others between there & the ferry terminal. For the last month the average number of deer along this same route is 2 (0-5). On return from ferry terminal (in front of Swendemanns on Humphrey Road) noted a mule (ad) deer licking the fur of a road kill rabbit.

Sept. 29, 1988

At 8:35 A.M. 10 mule deer at feeder at Bee House consisting of 3 ad. ♀, 5 fawns, 2 spike ♂.

Wasp active (1) at noon.

2:30 P.M. 17 double-crested cormorants, 45 glaucous-winged gulls, 28 harbor seals (one yellowish-brown) on Leo Reef. On Big Flower Rock 22 glaucous-winged gulls. On N Flower Rock, 5 double-crested cormorants, 3 glaucous-winged gulls. Flower Island (NE Point) 12 glaucous-winged gulls. None on upper slopes or ridge.

Common murre lowers front end (head, neck and chest) into water before submerging with a quick wing thrust downward. The call is a low grunting.

4 mew gulls, 45 glaucous-winged gulls and 8 Bonaparte gulls between Bee House and Leo Reef.

Sept. 30, 1988

880930-1 Alaucomys sabinus 260-128-37-21-58 gms
♀, ut. normal. Presented by James Robert Bee. This flying squirrel came from approx. 2 mi E Duvall, King Co., Wa.

Six day trip to Vancouver by Barth motorhome. Left Lopez Island 9:40 A.M. via ferry. Left Orcas 10:29 A.M. for Friday Harbor via Crane Passage. Enroute to Bell Island 4 Bonaparte gulls, 12 glaucous-winged gulls, 2 Bonaparte gulls, 12 Bonaparte gulls, 2 double-crested cormorant. Along Crane Island, 4 Bonaparte gulls, 2 double-crested cormorant, glaucous-winged gull, three common murre, 2 Bonaparte gulls. W end Crane Island adult bald eagle carrying a 3' long snake (?). At no 1 marker to W 5 Bonaparte gulls, 1 peregrine falcon, 3 single glaucous-winged gulls, 3 glaucous-winged gulls. Entrance Friday Harbor 80 Bonaparte gulls, 45 glaucous-winged gulls, 2 glaucous-winged gulls. Arrive Friday Harbor 10:55 A.M. Left 11:14 A.M. 25 glaucous-winged gulls at terminal. In San Juan Channel to Yellow Island; 3 Bonaparte gulls, 3 single Bonaparte gulls, 1 double-crested cormorant, Herrmann's gull, glaucous-winged gull, 3 Bonaparte gulls. Beyond Yellow Island ^{going} to NW, glaucous-winged gull, common murre, 2 glaucous-winged gulls, 3 glaucous-winged gulls, mew gull, 3 single glaucous-winged gulls, mew gull, 2 single glaucous-winged gulls. Spieden Island (E end), 3 Bonaparte gulls, Herrmann's gull, Bonaparte gull, 11 Bonaparte gulls at marker. W end Spieden, Left ^(point) Stewart Island; 6 Bonaparte gulls, 2 cormorants, 4 glaucous-winged gulls, 1 common murre, 2 mew gulls, 2 mew gulls, 3 glaucous-winged gulls, mew gull, mew gull, glaucous-winged gull. Trees on Dooch Island scrubby. marker to S (green marker), 8 cormorants, glaucous-winged gull, double-crested cormorant, 2 cormorants, glaucous-winged gull, cormorant, 8 mew gulls, glaucous-winged gull. Groups of common murre are: 4, 1, 5, 7, 6, 8, 3, 5, 4, 14. Light at E end Forrest Island: 8 harbor seal, pelagic cormorant,

3 glaucous-winged gulls on small island. at west Sidney Island sandbar: 28 double-crested cormorants, 300 glaucous-winged gulls, Between sandbar and Sidney: Cormorant, 2 Bonaparte gulls, 6 mew gulls, 3 glaucous-winged gulls, 3 common murre, 6 common murre, 2 common murre, 2 cormorants, cormorant, common murre, Sabine's gull, 2 common murre. Leona mane common in Haro Straits.

Continued to Victoria on Vancouver Island and parked overnight parking on town town parking area. (at docks).

Victoria, Vancouver Island, British Columbia, Canada
Oct 1, 1988

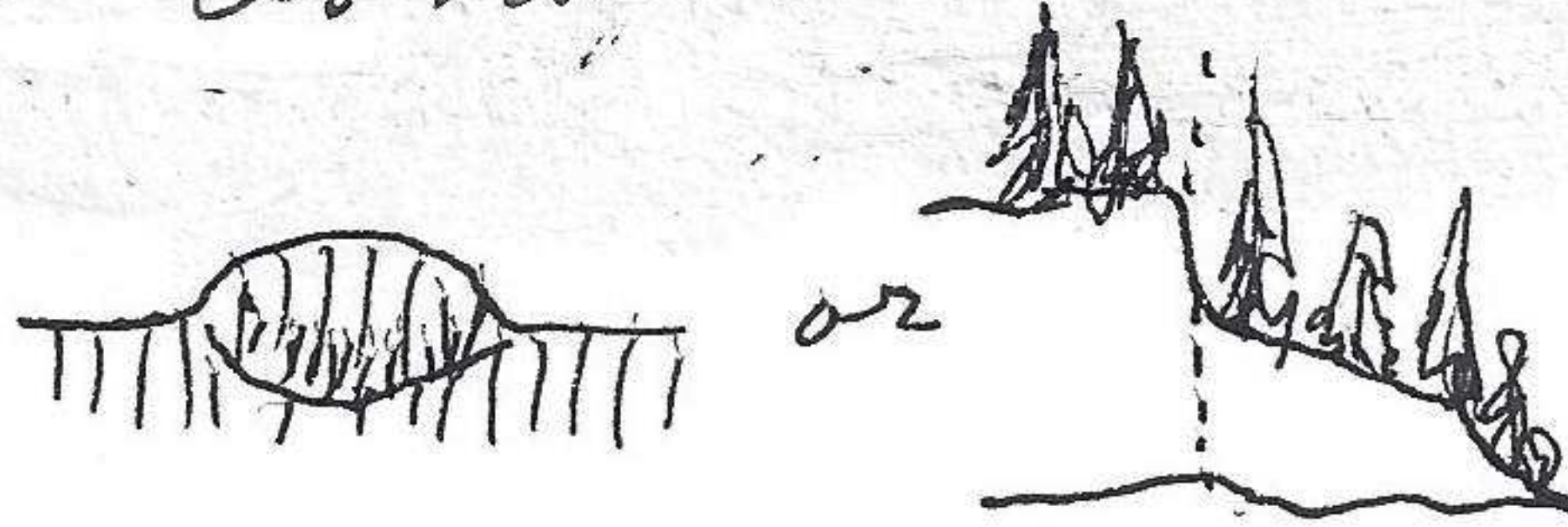
Left Victoria 10:33 A.M. Highway 1 to just S of Parkville, thence W on 4 to Ark Resort at E end Great Central Lake, 10 mi N Port Alberni, mileage 64497.2. At this Camp only bird observed was ruffed grouse. Falls at outlet impressive.

Great Central Lake, Vancouver Island, British Columbia.
Oct 2, 1988

Left with fog 300 ft. (9:00 AM). This camp has beautiful view to W. Taylor Arm mileage 509.4, Sutton Creek at mileage 524.0

at Sutton Pass where we trapped years ago (see journal Aug 6, 1970.), 3 raven flew W across pass.

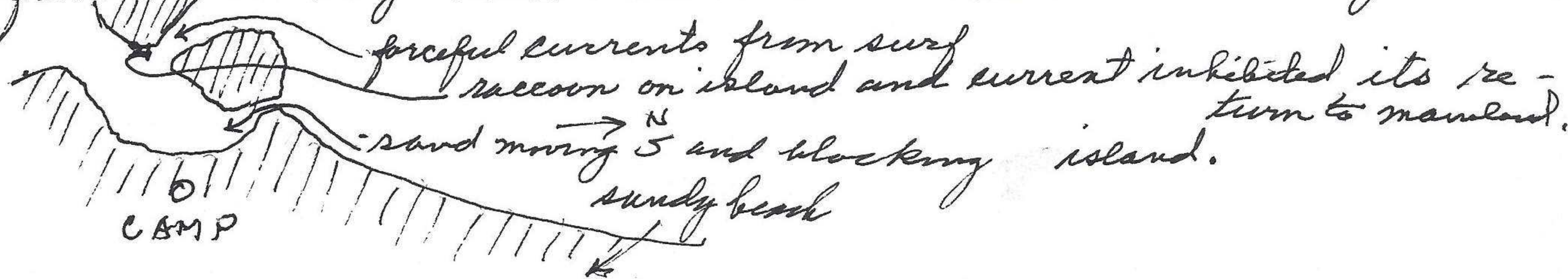
At national Park Campgrounds landslide on slope 20' x 80'



6 NW crow, 2 common raven
4 Common crow. Identification of NW crow and common crow

doubtful. NW crow does seem much smaller than the common crow. Continued N to Crystal Bay Campgrounds. This is the

* best of all commercial camps. (Oct 3, 1988) A neighbor camper from the mainland recalls a John Bee in Wokester, England. He played in a movie house and as he and the organ pushed up thru the floor of the stage he was announced as "And now here is John Bee".



The northwestern crow exhibits a closer family or group organization than the common crow and has a different call but is not the lower and harsher call it is supposed to make.

Continued Tofino and ate at the Blue Crane on E side town on waterfront. This village is entirely different than when visited in 1970. The manager said 8 Orcas were observed a week ago and 3 were seen this A.M. chasing salmon to the south in same bay. A river otter also passed by here yesterday. While at Blue Crane restaurant, ^{overage of} 8 glaucous-winged gulls passed by per 10 minutes. NW crow in area. Two great blue heron fed from docks. Approx 170 glaucous-winged gulls on two small islands N and E, none in water.

at Combers Beach, in one group, approx 621 gulls: glaucous-winged 500, herring gull 40, California 3, ring-billed 10. One isolated group of 45 adult and 31 imm. glaucous-winged gulls. Gulls favored fresh water inlet for drinking and bathing.

Rodan Hill. while on top 48 Canadian Geese fly S at approx. 150' high.

Enroute to McKenzic Beach observed 2 ring-billed gulls.

Oct 4, 1988

9:00 A.M. rain all night. Waves 10 per minute. Rain forms lake lee of sandbars on beach. Approx 95% of gulls are glaucous-winged. Individual ring-billed gulls feed at high run of waves as the waves fan over beach. Left and visited Cucluellet then headed E. at entrance of highway 4, mileage 64654.1 at 11:44 A.M.

663.4 Tamiasciurus in tree at side of road.

683.6 Suttin Pass

713.0 Alberni. 1:30 P.M. Left 2:30 and continued to ferry terminal at Nanaimo at 4:04 P.M. In retrospect noted colored trees, mainly maple were more prevalent & more color on E side Vancouver than on W side. Left Nanaimo 4:04 P.M. by ferry, thence to Horseshoe Bay, thence 1 to E and finally 5 and S. Camped at Mt. Vernon Thousand Trails, arriving 8:30 P.M. at mileage 64855.

Aug 5, 1988

Left La Conner Thousand Trails for Anacortes ferry.
Red-tailed hawk at $3/10$ mi S on Whitney Road from highway
20.

Left Anacortes ferry terminal 4:10 P.M. Birds observed enroute
to Lopez: 2 cormorant, Bonaparte gull, 2 pigeon guillemot, 2
common murre, Bonaparte gull, pelagic cormorant, mew
gull, glaucous-winged gull, mew gull, common murre, 2
glaucous-winged gulls, Bonaparte, glaucous-winged gull, com.
murre, marbled murrelet, 2 single glaucous-winged gulls,
mew gull, double-crested cormorant, glaucous-winged gull,
W end Thatcher Pass, mew gull, double-crested cormorant,
12 glaucous-winged gulls, 4 glaucous-winged gulls, 1 pelagic
cormorant,

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington

Oct. 6, 1988

Bats stopped foraging 7:30 A.M. Foggy.

Oct. 7, 1988

A group of fishing birds SE of Bee House (out 200') con-
sisted of: (at 5:30 P.M.)

- 5 western grebe
- 3 Pacific loon
- 9 pelagic cormorant
- 4 marbled murrelet
- 2 common murre
- 2 glaucous-winged gull
- 8 Heermann's gull
- 3 mew gull

7:15 P.M. ♂ mule deer at feeder, 22" high at shoulders.
♀ was with mother (25" high at shoulders). Both these deer are
smaller than the main group of deer. Both spooked.

Dark-eyed junco^s (Oregon sp.) returned to Bee House after
absence this summer.

Oct. 8, 1988

5 river otter passed NE in front of Bee House 5' from shore
at 9:30 A.M.

Oct. 12, 1988

4:00 P.M. at Swift Bay approx 50'-300' from shore:

160 surf scoters
 2 ♀ buffleheads
 small sandpipers
 4 horned grebes

at Swifts Lagoon

2 northern pintail

Fishermans Bay Causeway (no wind)

W side:

8 horned grebes

23 surf scoters

2 killdeer

1 common loon

14 common crow

6 glaucous-winged gulls

8 Bonaparte gulls

1 ad. bald eagle on top first tall tree N end of causeway
It flew N.

5 great blue heron.

2 buffleheads

when viewing San Juan Channel from above locality can see birds throughout the area as far as I can see. They are generally distributed in groups of 1 to 50 averaging 8. I would estimate 2500 birds

at Bee House 1 and 2 Common raven flew N along crest of Humphrey Head at the rate of approx 1 every half hour. from 10:00 - 11:45 A.M. They called as they passed by.

Oct. 13, 1988

Twin mule deer fawns of year (25" high at shoulders) and mother at feeder. One ♀ mule deer 30" high at shoulders.

Two ^{ad.} ♀ mule deer at feeder and in combat. One left 20' and the other watched from feeder then left in same direction and walked slowly toward first ♀ but when within 4 feet charged the ♀ and chased it at high speed up the slope for 100'. It appeared as if the one deer preformed with premeditation!

The two male spike mule deer are frequently observed sparring and are not sexually concerned with females. However, they have gone thru the development of being second at the feeder among ad. females to dominant.

Bee Estate, Humphrey Head, San Juan Co., Washington
 Lopez Island,

Oct 13, 1988

881013-1 *Peromyscus maniculatus hallisteri* 154-70-22-19-17gms ♂
 From Bee House

881013-2 *Peromyscus maniculatus hallisteri* 170-82-23-19-20gms ♂
 From Bee House

Bald eagle (ad.) on light beacon from 10:10 AM to 12:05 P.M.
 keeping all birds away. Harbor seal remain and are not
 concerned with its presence.

Made trip on The Bee (Annette and I) from Shoal Bay
 to S end Trump Island and return. Will keep complete
 list of birds. When entering boat the min-max. thermometer
 registered (in cabin) 42° and 86°F. Left 2:18 P.M. at hr.
 meter 2625

From S end Shoal Bay:

6 western grebes in one group.

32 pelagic cormorant on whitewash cliffs NW end

Humphrey Head,

1 marbled murrelet

8 glaucous-winged gulls

N. end Humphrey Head:

2 western grebes

2 marbled murrelets

3 glaucous-winged gulls

4 western grebes

2 double-crested cormorant

1 glaucous-winged gull,

1 rhinoceros auklet

1 marbled murrelet

4 western grebes

2 marbled murrelets

1 pigeon guillemot

1 Bonaparte gull

1 Bonaparte gull

1 marbled murrelet

1 surf scater ♀

1 great blue heron

Spencer Spit

- 6 western grebes
- 1 common loon
- 8 western grebes
- 66 surf scoters
- 4 western grebes
- 1 common loon
- 1 jaeger?

Temp of boat in cabin 60°F

- 1 rhinoceros auklet
- 2 Bonaparte gulls
- n end Trump Island (now E)
- 1 great blue heron
- 10 pigeon guillemot
- 2 marbled murrelets
- 2 single glaucous-winged gulls
- 1 mew gull
- 1 Bonaparte gull
- 16 Bonaparte gulls

5 end Trump Island at 4:22 P.M. and begin return trip up W side Trump Island.

- 1 common loon
- 1 glaucous-winged gull
- 1 double-crested cormorant
- 1 great blue heron
- 3 glaucous-winged gulls
- 2 pelagic cormorant with 1 double-crested cormorant.
- 3 pigeon guillemots

now n end Trump Island and following shoreline of Sicator. Up to this point have observed 7 single harbor seals generally distributed. Have also been trolling for salmon but no strikes so far.

- 2 Bonaparte gulls
- 4 glaucous-winged gulls
- 2 marbled murrelets
- 1 Bonaparte gull
- 4 western grebes
- 4 Bonaparte gulls
- 2 single Bonaparte gulls
- 2 western grebes
- 1 Bonaparte gull.

- 8 surf scoters
- 6 western grebes
- 4 Bonaparte gulls
- 2 rhinoceros auklets
- 1 marbled murrelet
- 6 glaucous-wing gulls
- 4 double-crested cormorant

Passing entrance Sylvan Cove and headed for Frost Island.

| | |
|------------------------|-----------------------------|
| 5 Bonaparte gulls | 1 common murre |
| 1 Bonaparte gull | 1 common murre |
| 1 mew gull | 4 double-crested cormorants |
| 1 pigeon guillemot | 3 common murres |
| 1 cormorant | 4 double-crested cormorant |
| 1 harbor seal | 1 cormorant |
| 1 glaucous-winged gull | 2 Bonaparte gulls |
| 1 common murre | 1 double-crested cormorant |
| 1 common murre | |

Frost Island. (NE end) now to S end Flower Island.

2 Bonaparte gulls
1 glaucous-winged gull
1 Bonaparte gull

Flower Island (S end)

4 common crows
8 glaucous-winged gulls on top Flower Island.
4 harbor seals in water

This is end of complete census as return from here same as original route earlier on trip.

At NW end Humphrey Head, 81 pelagic cormorants on cliff in white-wash area. 12 of them flew out to participate in fishing group of gulls & cormorants.

Back to starting point at S end Shoal Bay anchorage at 5:50 P.M. at haul meter 2628. Trip 3 hrs 20 min.

Oct 14, 1988

8:35 A.M. smallest mule deer in area of Bee Estate 25 1/2" high at shoulders

The male mule deer with recurved antlers approached feeder at Bee House with 5 ♀'s (2 ad + 3 young) and fed amicably for 2 minutes then gradually displaced all females out to beyond 20' one at a time, by probing with head and forceful strike with front feet. One young of the year returned to the feeder but in each case was forced away by striking feet of ♂. One of the tactics is to place nose on ♀ body and give the head an upthrust. One spike buck and an adult female were observed to chase an eastern gray squirrel for 20'; the female in this case. The ♂ on two occasions chased 2 common crows, again for about 20'.

12:08 P.M. An adult ♀ mule deer and her 2 fawn of the season groomed each other for 12 minutes. The head, neck and

even the inside of ears were cleaned by mother on young and young on mother and each other.

Trip to Chris' for 2-3 days. Left Lopez ferry terminal at 10:02 A.M. Will keep list of birds:

1 mew gull

2 pelagic cormorant

2 common murre

no bald eagle on nest at N end Humphrey Head.

1 cormorant

1 western grebe

2 common murre

1 glaucous-winged gull

1 common murre.

at Leo Reef

5 harbor seal on Leo Reef Rock no 5 and 11 pelagic cormorants

7 glaucous-winged gull.

1 mew gull

1 cormorant

1 common murre.

1 glaucous-winged gull

1 common murre

1 glaucous-winged gull.

1 Bonaparte gull

1 common murre

Willow Island area.

2 common murre

1 Bonaparte gull

2 mew gulls

1 common murre

2 mew gulls

3 mew gulls

w end Thatcher Pass

1 common murre

1 mew gull.

Lawson Rock

3 mew gulls

1 glaucous-winged gull

2 single common murre

Light beam SW Cypress Island

1 common murre.

Out from Anacortes ferry terminal.

In one fishing group:

- 6 common murrelets
- 19 glaucous-winged gulls
- 4 mew gulls
- 6 cormorant.

Arrived Anacortes ferry terminal 10:42 A.M. From here to Chris' on Lost Lake. Returned Lopez Island Oct 17, 1988.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington.
~~sum~~ ~~reaper~~ ~~reaper~~ ~~reaper~~
 Oct 18, 1988

Today foggy and rain.

9:00 A.M. 3♂ + 2♀ hooded mergansers entered Spring Cove by swimming from NE past Bee House. They fished until 10:05 A.M., mainly in shallow water. 70% of the time they fished from an organized front line. On four occasions they rushed onto the beach preceded with a wall of water in which small fish became stranded, and eaten. They kept together and never separated over 15'. A harbor entered the cove and to within 6' of the mergansers. The mergansers stopped feeding but did not leave their position in the cove. Eleven times, ^{one of the} mergansers would run across the water as if evading danger below. A glaucous-winged gull remained within 3' of the seal as it swam by (seal approx 3 1/2 feet long). A common merganser joined the 5 hooded mergansers but left after 2 minutes of feeding. When capturing a minnow it surfaced and immediately consumed the fish in less than 2 seconds. The harbor seal would rapidly swim around submerged rocks to dislodge fish.

10:45 A.M. a common merganser and a double-crested cormorant surfaced with each holding on to the same fish. The cormorant held on to it and finally consumed it.

2:30 P.M. An adult bald eagle alighted on top of supporting structure of Leo Reef. It remained for 1 hr + 20 min.

6:40 P.M. a small bat (Myotis?) was active and first observed this evening. It captured an insect which was fluttering on the glass window of the third story (40' high) of the Bee House.

Oct 19, 1988

9:20 A.M. a sharp-shinned hawk dove at a belted kingfisher who was perched on rock along the rocky shoreline below the Bee House. As it flew out over water the hawk returned to tree above bank.

SR. only
881019-1 Peromyscus m. hallisteri. 185-85-22-18-22 gms, ♂, testis 5 mm.

This A.M. 3 northern woodpeckers and 1 American robin fed on the red berries of the madrona tree in front of Bee House. The madrona receive the direct ^{marine} environment of Lopez Sound. This season has produced numerous berries and of a brilliant red color.

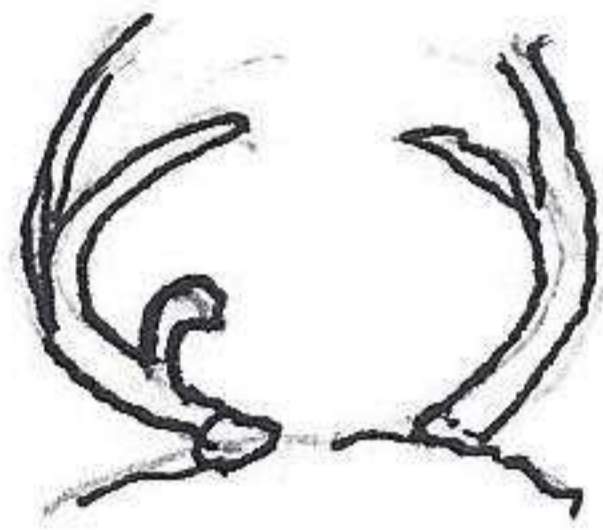
The house finch has increased in the last 2 weeks at the Bee House feeder and now are regular daily visitors averaging 11 at the feeder (2-15).

Oct 20, 1988

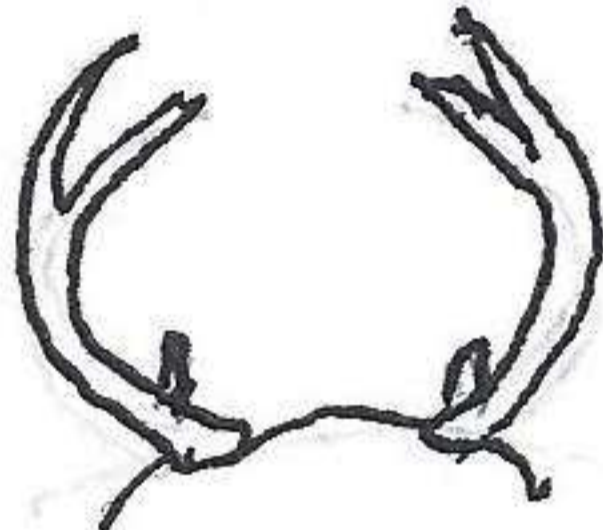
9:30 A.M. Harbor seal remained under water for 2 min and 10 seconds.

Oct. 21, 1988

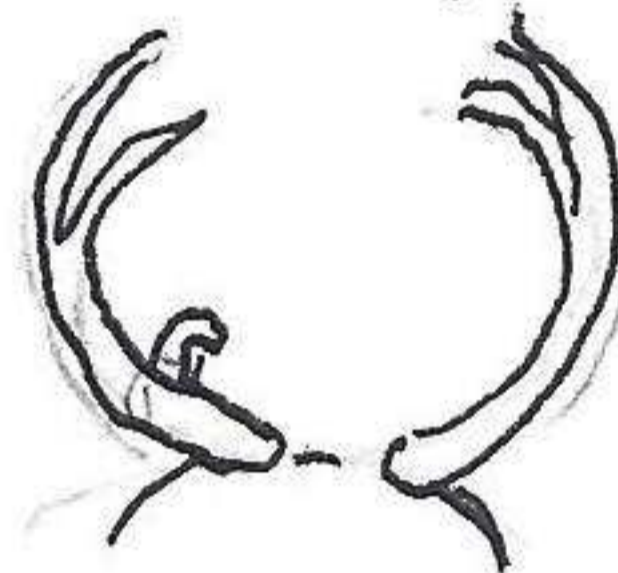
7:45 A.M. 3 male mule deer at feeder but never more than 2 at the feeder at the same time. They are:



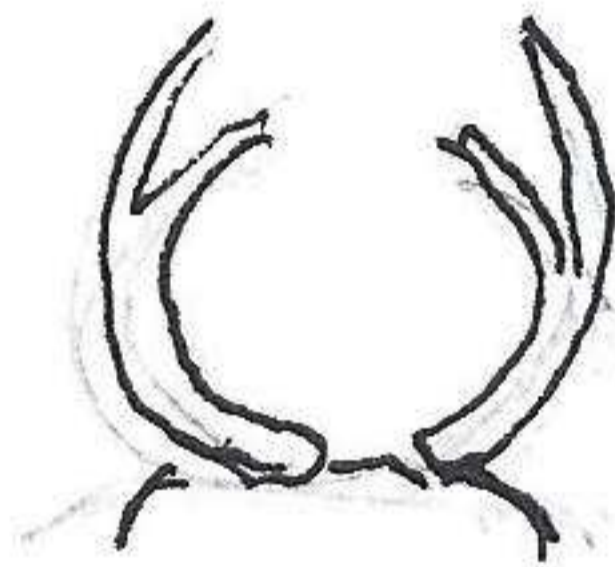
36 1/2" high
at shoulders



34" high
at shoulders



34" high
at shoulders



34" high
at shoulders

All these bucks tested all sizes of female deer.

2:30 PM 8 Bonaparte and 6 glaucous-winged gulls fed together in close association in center of Spring Cove, capturing mmmaws. Two minutes later a single double-crested cormorant arrived but gulls had already partially abandoned close group formation. The cormorant fed one minute then moved 200' along shoreline and started another fishing spot. A pelagic cormorant joined it and then all gulls of the preliminary fishing spot in Spring Cove joined the 2 cormorants. A rhinoceros auklet arrived but fed on the peripheral area of main fishing spot. The gulls and cormorants fished this new area for approx. 3 minutes.

Trip to Anacortes by ferry. Left Lopez and will keep only kinds of birds observed or exceptional noteworthy observations: 1 ad bald eagle top dead tree at west end Thatcher Pass on Blakely Island along shore. Glaucous-winged gull, Bonaparte gull, mew gull, double-crested cormorant, common murre. In the middle of Rosario Straits

observed one group of the following birds congregating in an area of 6' x 6' and wings and bodies touching or nearly so: as they hovered above and dove into the water:

- 13 Heermann's gulls
- 8 mew gulls
- 4 glaucous-winged gulls
- 9 double-crested cormorants
- 2 common loon
- 18 common murre.
- 1 horned grebe.

On return trip at 5:29 P.M. on same route observed:
 1 Heermann's gull, 1 mew gull, 2 glaucous-winged gulls, 1 western grebe, 4 double-crested cormorant, 1 cormorant, 1 cormorant, 1 common murre, 1 mew gull, now at green light SW of Cypress Island. (These listings throughout journal are consecutive observations along the route and are not specifically identified to exact location except as major land marks are reported). 2 double-crested cormorants now N of James Island. Bonaparte gull, 4 glaucous-winged gull. In Thatcher Pass one raft of approx. 2000 Bonaparte gulls (raft about 400' long), 5 double-crested cormorant. W. Thatcher Pass, pigeon guillemot, 3 Bonaparte gulls, 1 double-crested cormorant, 2 mew gulls, (now 10 min. before sundown), 15 double-crested cormorants ^{roosting} on wall SW Wellaw Island. 10 pelagic cormorants, glaucous-winged gulls, 1 double-crested cormorant. Bald eagle on nest N end Humphrey Head, 3 mew gulls. Arrived Lopez ferry terminal.

Oct. 22, 1988

Sun. up 8:04 A.M. top South Thatcher Peak.

8:45 5 river otter passed Bee House and moving S. Gained land at Lichen Point for 1 min. then in water to continued S around Lichen Point. Today is the first brilliant sunrise we have had this season.

Oct 23, 1988

9:35 A.M. 2 adult and 1 imm. bald eagles circled 3 times in front of Bee House at approx. 10' above water and coming to 4-5 feet of rock cliff along water. 3 Bonaparte gulls ^{and 4 glaucous-winged gulls} were feeding in a local spot. On the 3rd circle an adult eagle captured a Bonaparte gull in

flight and in doing so hit a limb of a Douglas fir tree overhanging the water which dislodged one of the secondary wing feathers which fell to the water. The eagle flew to half way branch on shoreline above Dissected Point but was immediately displaced by the immature eagle. The adult and captured Bonaparte gull flew to Leo Reef and alighted on supporting structure of the beacon. Few seconds later the second adult bald eagle arrived and sat approx 4' from the first eagle & gull. The eagle with the gull remained motionless for 4 minutes and the other eagle made no attempt to vie for possession of the gull. In 45 minutes the eagle consumed the gull. Pluck my feathers preceded the eating of the bird. As this eagle arrived on Leo Reef 8 glaucous-winged gulls and 12 cormorant left as eagle was approx 450' of reef. 10 harbor seal remained on the island and showed no visible concern of the eagles presence.

4:50 P.M. 5 river otter past Bee House and were moving S.

Oct. 24, 1988

Trip to Anacortes by ferry. A.M. Birds observed:

- 1 common loon
- 1 " murre
- 4 pelagic cormorant
- 3 double-crested cormorants
- 1 Bonaparte gull
- 1 mew gull, 1 mew gull
- 1 glaucous-winged gull

Approx. 250 birds, gulls, cormorants, murre in 300' of fishing area. Willow Island.

- 5 common murre
 - 1 pelagic cormorant
 - 1 Bonaparte gull
- W. Thatcher Pass.
- 5 pelagic cormorants
 - 2 pigeon guillemots
 - 2 glaucous-winged gulls
- N of James Island.
- 1 cormorant
 - 1 Bonaparte gull
 - 3 Heermann's gull
 - 1 mew gull
 - 1 common murre.

3 common murres, 1 mew gull, 1 double-crested cormorant, 5
Common murres, mew gull, 2 common murres,

5 of green light SW Cypress Island. 2 glaucous-winged gulls,
1 Heermann's gull. Arrive Anacortes ferry terminal.

Return to Lopez Island. Left 5:21 P.M. from terminal:

2 cormorant, 1 glaucous-winged gull, 1 glaucous-winged gull,
1 glaucous-winged gull, 2 single Bonaparte gulls, 1 mew gull,
13 common murres, 1 mew gull, 1 common murre, 3 gulls (3, 7, 2)


Common murres, 1 mew gull, 1 common murre, 1 common
loon, 1 mew gull, 2 glaucous-winged gulls, 4 common murres,

n end James Island: 2 glaucous-winged gull, 1 glaucous-winged
gull, 2 single pelagic cormorant, 4 double-crested cormorants,

W Thatcher Pass: 1 glaucous-winged gull, 1 mew gull, 4 glaucous-
winged gull, 4 double-crested cormorants, 1 pelagic cormorant 7

1 Bonaparte gull, 7 pelagic cormorants, 8 pelagic cormorant.

Willow Island: 2 double-crested cormorant. Leo Reef (high
tide). 2 harbor seal, 2 double-crested cormorant, 1 glaucous-
winged gull, 1 Bonaparte gull. Lopez Island terminal.

From terminal to Odlin Park along Center Road, at divide,
1^{ad.} mule deer male chased a female mule deer across
the road. The male was a 3-4 year animal with 2 point
antlers  [↑]18" approx.

881024-1 Peromyscus m. hallisteri 156-73-22-17-17gms ♂
From Bee House.

Oct. 25, 1988

881025-1 Peromyscus m. hallisteri 151-10-22-18-16gms ♀
From Bee House. (specimen line)

4:35 18 Pacific loon, 1 common murre, and another
group of 5 common murre feeding 50' SE Bee House and all
in single line.

Oct 26, 1988

Left Lopez Island for Anacortes by ferry. at 7:45 A.M. Cloudy
to E and less so to W. High tide. Birds observed:

11 pelagic cormorants

5 glaucous-winged gulls

no bald eagle on nest n end Humphrey Head.

8 Bonaparte gulls

6 double-crested cormorants

1 double-crested cormorant

Willow Island

1 pelagic cormorant

1 Bonaparte gull

more bull kelp floating free in water than usual.

W. Thatcher Pass

5 Bonaparte gulls

2 pelagic cormorant

18 Bonaparte gulls

1 Bonaparte gull

E Thatcher Pass

4 double-crested cormorants

2 pelagic cormorants

no birds in Rosario Straits (1/10 mi. either side of ferry and in this case observations from port side).

2 double-crested cormorants.

Arrive Anacortes, 2 mew gulls.

Oct. 27, 1988

Observed osprey flying overhead at junction highway 20 and highway spur 20. This is in the area of the S end of Fidalgo Bay SE Anacortes. It was flying toward the Bay.

Continued to Anacortes ferry terminal & left 11:07 A.M. Birds observed:

2 Pacific loon

4 pelagic loon

2 glaucous-winged gulls

1 pigeon guillemot

1 common merganser

1 mew gull

1 glaucous-winged gull

4 double-crested cormorants

Birds lacking center Rosario Straits. Choppy sea, W N.

no gulls on Pointer Island.

glaucous-winged gull

1 common

2 separate mew gulls

W Thatcher Pass

glaucous-winged gull

1 Bonaparte gull

marked murrelet

1 " "

2 cormorants (sp.?)

1 common murre

4 common murre

3 common murre

2 cormorants (sp.?) ↑

8 Bonaparte gulls

2 common murre
 1 rhinoceros auklet
 1 glaucous-winged gull
 1 double-crested cormorant
 1 glaucous-winged gull
 3 common murre
 2 Bonaparte gulls
 3 common murre
 4 Bonaparte gulls
 2 " "
 2 single Bonaparte gulls
 2 Bonaparte gulls

2 glaucous-winged gulls
 1 common murre
 1 Bonaparte gulls
 2 single glaucous-winged gulls
 1 common murre
 1 glaucous-winged gull
 6 Bonaparte gulls
 1 pelagic cormorants
 3 glaucous-winged gulls
 1 common murre
 1 Bonaparte gull
 1 common murre

Arrived Lopez Island.

no mule deer at Bee House ^{on our arrival} at least up to 2:20 P.M.

Birds observed from Bee House between Flower Island and due E. Distance from Bee House at Leo Reef position. All approx numbers unless otherwise indicated.

400 Bonaparte gulls
 18 glaucous-winged gulls (counted)
 8 double-crested cormorants
 6 pelagic cormorants
 5 cormorants (sp.)
 90 common murre
 33 Pacific loons (counted)
 6 common loons (counted)
 2 W. grebes (")
 2 marbled murrelets (")
 28 mew gulls.
 2 harbor seals (counted)

Pacific loons above in 2 groups of equal size and single file formation.

Bonaparte and glaucous winged gulls generally distributed, as were the mew gulls, but congregated at fishing spots.
 Chipmunks active today.

Oct 28, 1988

7:00 A.M. ♂ mule deer with recurved antlers (32" high at shoulder) fed at feeder. Another ♂ mule deer with small recurved eye tine (C) displaced the above mule deer at feeder. At the latter R & L is 34" high at shoulders.

Another mule deer (36" high at shoulders) and a large single right eye tine, recurved (C) displaced above 2 ♂'s.

Leaves on upper branches of ocean spray have fallen and dark brown seeds (bunches) remain:

1:05 P.M. 5 river otter past Bee House to continued SW to Lechem Point and beyond.



1:20 P.M. Spencer Spit. No ducks in Spencer Spit Lagoon except 23 mew gulls resting on shore of lagoon. 45 mallards arrived from N. and alighted in outlet stream of the lagoon.

at Swift's Bay observed:

2 groups huffleheads, one group of which had 24 birds and the other had 32 birds. all females except 9 males

1 group 60 surf scoters

2 common loon

22 Bonaparte gulls. These gulls fed on animals associated with sea lettuce that completely covered the upper part of the beach. They turned the lettuce over, ^{or pulled it aside} to expose the organisms that hid beneath the debris.

Returned to Bee House. Mrs. Addie Simmons reported a great horned owl on her property on Humphrey Head.

Oct 29, 1988

7:10 A.M. Ad. hood eagle flew SW past Bee House out approx. 18' from bedroom at 50' above water.

2 ♂ mule deer at feeder (both 34" high at shoulders and one 36" high at shoulders). The larger deer had a yellowish white lump on right shoulder ^(2 days ago) that is now reduced in size and hair above lump is eroded. The bucks space themselves about 15' apart but when one (the dominant one) approaches the other moves away. The males are interested in ♀'s but are not actively pursuing them.

Oct. 30, 1988

881030-1 *Peromyscus m. hallisteri*. 166-75-19-22-17 gms ♂ above specimen from Bee House.

881030-2 *Peromyscus m. hallisteri* 179-85-22-19-20 gms ♂ above specimen from Bee House.

Nov. 1, 1988

Yesterday and today. Cat. scan at Skagit Valley Hosp. Mt. Vernon. Trip to Bellingham to visit Virginia Kelly. Along Interstate 5 yellow fall colors but no reds.

Nov. 2, 1988

Rain all night and waves 22 per minute on shore below Bee House.

Checked birds at Spencer Spit Lagoon this A.M.

35 mallards
28 pintails
31 American widgeon
2 bufflehead
11 shovellers
1 great blue heron
3 glaucous-winged gulls
1 Bonaparte gull
19 mew gulls
2 gadwall

While observing these birds an adult bald eagle flew 5 across lagoon at approx. 60' high; all birds left lagoon. Another bald eagle passed along shore-line approx 30' above trees and the birds in lagoon that had returned, remained in the lagoon. Flight pattern and speed of eagles determine birds reaction to their approach.

On Swift's Lagoon were;

10 shovellers

In Swift's Bay were 22 buffleheads and other unidentified birds

Rain and high wind all day and for first time this fall no mule deer came to feeder.

Nov. 3, 1988

881103-1 Peromyscus m. hollisteri 158-70-22-17-16 gms ♂
above specimen from Bee House.

High wind continued today.

11:55 A.M. ♂ mule deer 34" high at shoulders and antlers without eye lines (See June 22, 1988 for this buck in velvet).

After dark 3 different male mule deer, 2 ♀ adults and 2 fawns (of one of the females) arrived at feeder.

Nov. 4, 1988

881104-1 Peromyscus m. hollisteri [95]-[3]-23-18-17 gms ♂
above specimen from Bee House.

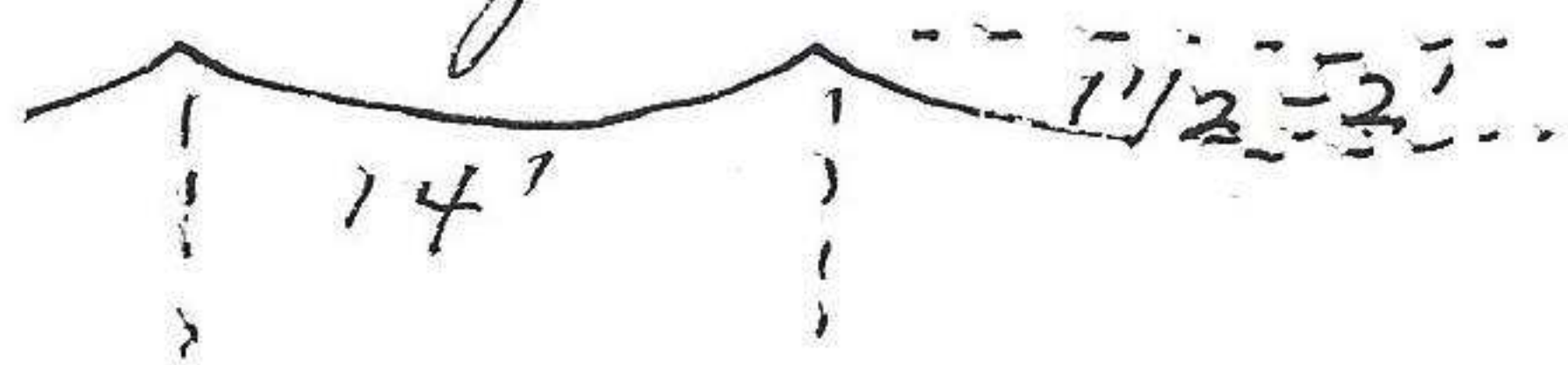
881104-2 Peromyscus m. hollisteri 161-82-22-19-15 gms ♀
From Bee House

80% of madrona berries from tree in front of Bee House (25' high) consumed by 3 northern flickers, and 2 robins. These

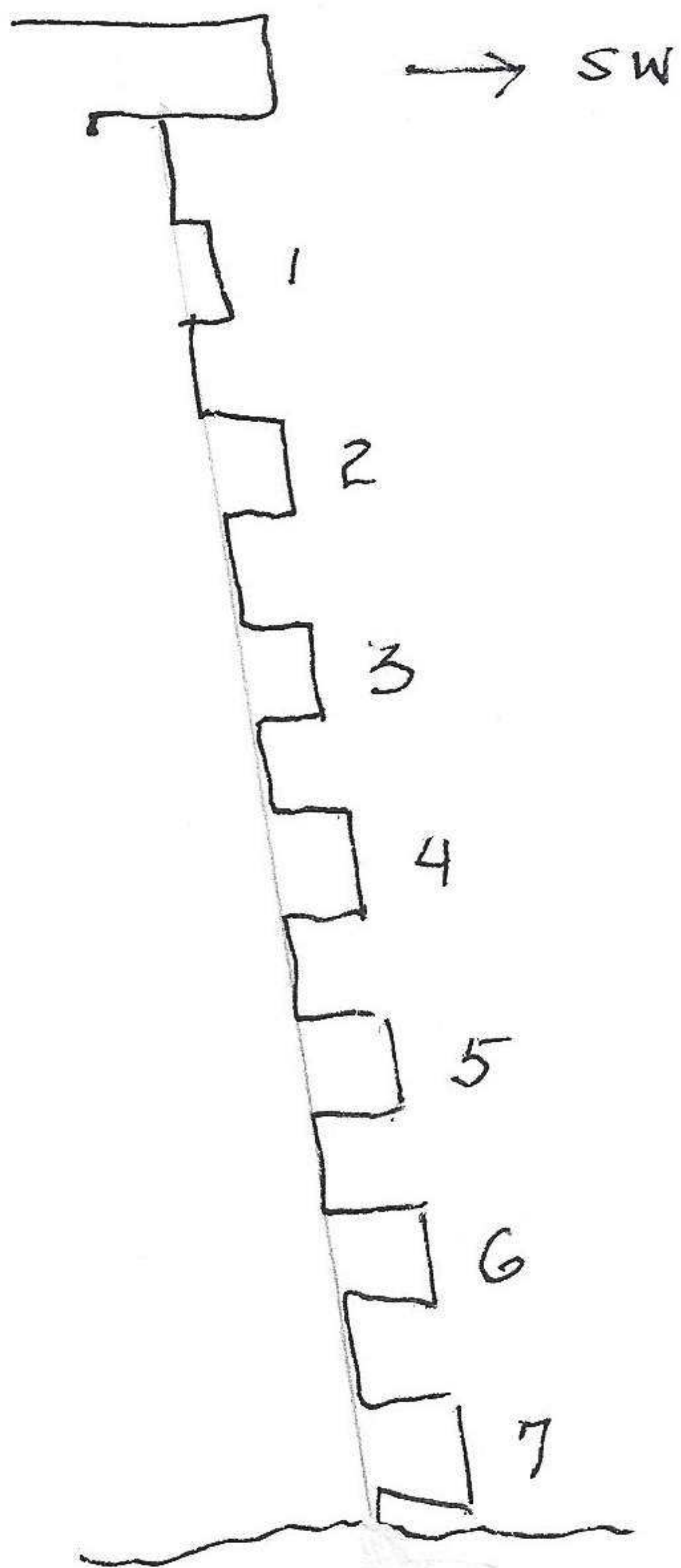
Trees have been exceptionally productive this year. all birds not necessarily at tree at one time. The flickers however fed on a daily basis.

Nov. 5, 1988

High wind today. at noon waves 21 per minute, some 14' x 1 1/2 - 2'

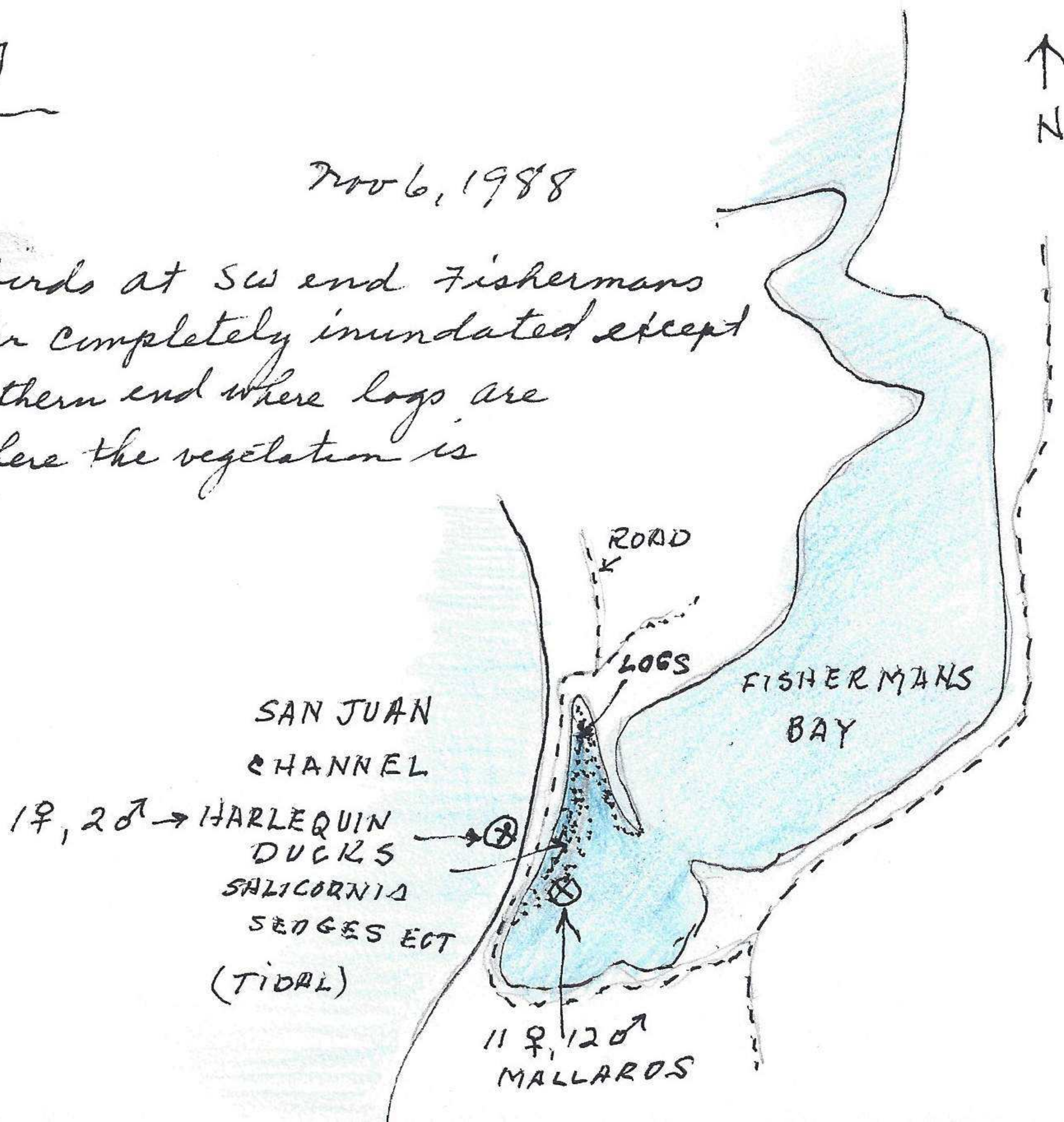


Leo Reef light support as follows:



Nov 6, 1988

Checked birds at SW end Fishermans Bay. Salt water completely inundated except channel at northern end where logs are deposited, and here the vegetation is saturated.



At Spencer Spit Lagoon:

14 mew gulls
17 Am. widgeons
6 shovellers

Swifts Lagoon:

23 shovellers.

Cooper hawk flew E to W over lagoon.

Nov. 7, 1988

Annette, James R and I to Frost Island in the Bee Boat. circled Frost Island twice then returned to Shoal Bay moorage. Three adult bald eagles soared above Frost Island utilizing southerly winds and updrafts. One adult bald eagle also circling above N end Humphry Head.

Also observed 3 groups of river otter:

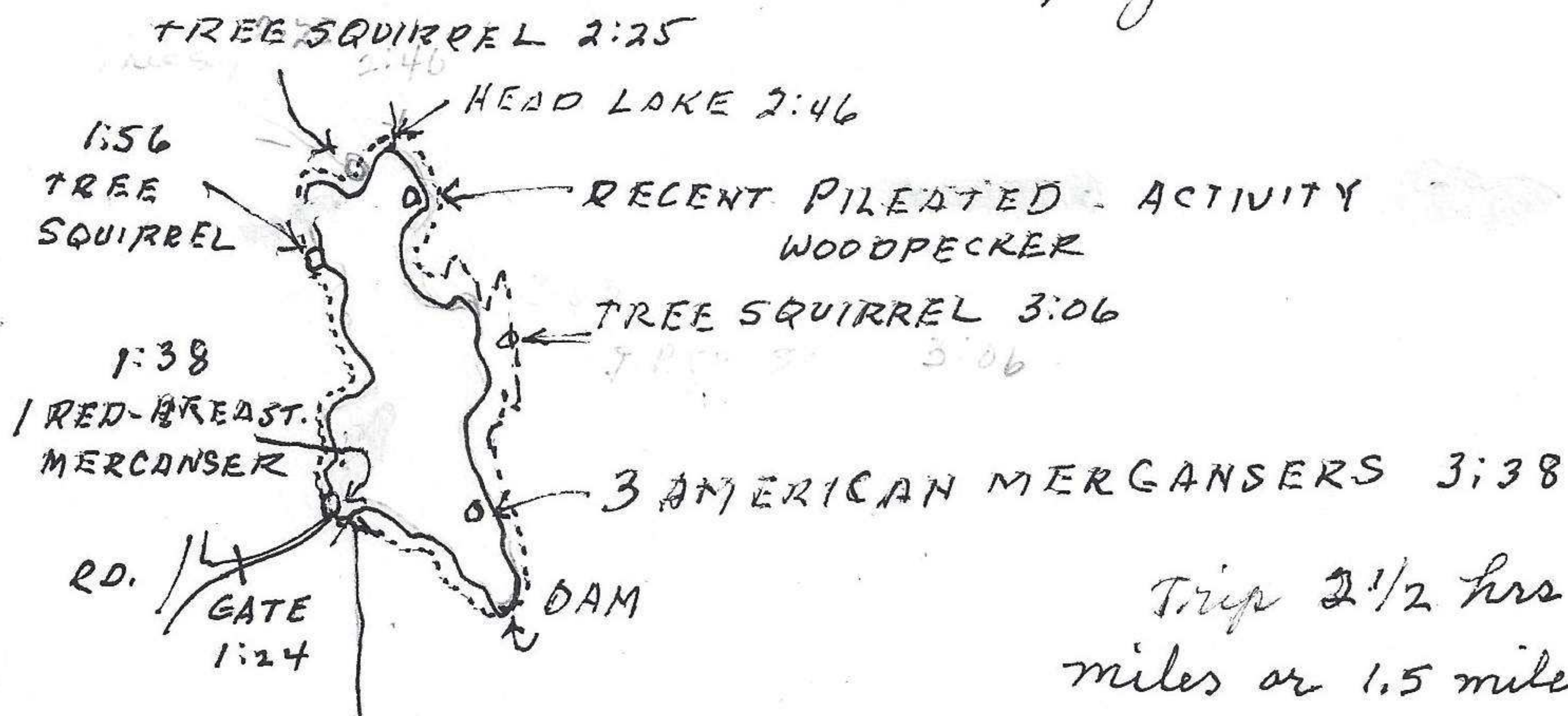
One group of 7 otters, 6 of them $\frac{3}{5}$ size adults and 1 adult. They were below John Saub's residence on E side Humphry Head at water edge but on land where they remained. Observed from boat out 80' from shore.

One group of 5 otters (3 ad. and 2 juv.) on NE side Frost Island in water 10' from shore.

One group of 4 otter (one adult in water, 3 juv on land. Those on land were in grassy spots where they utilized the grass for fur grooming.

Observed usual pelagic birds. 57 pelagic cormorant on whitewashed cliffs NW end Humphry Head

James R and I left Lopez Island via car and ferry for Mt. Constitution on Orcas Island. Drove to Mountain Lake (parked at close gate into area) and walked to Lake, then clockwise around Lake. Left gate 1:24 P.M.



END TRIP
3:54 P.M.

Trip $2\frac{1}{2}$ hrs around lake at 3.9 miles or 1.5 miles per hour

Nov. 8, 1988

Eutamias t. townsendi still active.
To Chris' at Last Lake for tonight and then Univ Wash med. Hosp. tomorrow.

Left on ferry for Anacortes 9:53 A.M. Wind SE. Will keep list of bird enroute to Anacortes:

1 glaucous-winged gull
1 double-crested cormorant

1 Bonaparte gull

2 pelagic cormorants

Willow Island

1 Bonaparte gull

1 glaucous-winged gull

at Thatcher Pass

1 ad bald eagle on ^{top} dead tree 300' E of SW corner Blakely Is.

1 Bonaparte gull

1 glaucous-winged gull

Arrived Anacortes, thence to Chris' home.

Nov. 9, 1988

To U.W med Center. Contact Sr. Carolyn Collins. met Virginia Heily's daughter Katy Jensenius.

Nov. 10, 1988

Return to Lopez from Chris' via Widbey Island. Dropped Matthew at at Shukitio play center. Cross to Widbey and continued N to Coupeville at which point observed in sound, 71 western gulls in a close-net group. also 17 white-winged scoters, 1 glaucous-winged gull, 2 raven, 2 common loon, 1 kingfisher, 19 common crows. 5 miles N Fort Casey 3 red-tails. Travelling S along edge sound by sailing only.

Continued N to Anacortes ferry terminal. In bay to SW are: 7 ♀, 8 ♂ huffleheads, 1 W. grebe, 3 white-winged scoters, 6 red-breasted mergansers, 63 glaucous-winged gulls on piling, 33 double-crested cormorants on piling (outermost ones). On piling at ferry terminal 8 pelagic cormorants. Left Anacortes ferry terminal at 8:59 P.M. white caps. 1 pelagic cormorant, 2 common murre, 9 cormorants (sp.) SW of Cypress Island, mew gull, 1 glaucous-winged gull, Lawson Rachs, 5 double-crested cormorants, 16 mew gulls on kelp, 1 double-crested cormorant, mew gull, common murre, W Thatcher Pass (W end inlet) 1 glaucous-winged gull, 4 double-

crested cormorants, 53 pelagic cormorants on white-washed NW corner Willow Island, 50 Bonaparte gulls in one raft on water. Arrived Lopez Island ferry terminal,

Nov 11, 1988

881111-1 *Peromyscus m. hallisteri*. 178-85-23-19-26gms ♂
above specimen from Bee House.

881111-2 *Peromyscus m. hallisteri* 151-68-22-18-16gms ♀, vagina
closed. From Bee House.

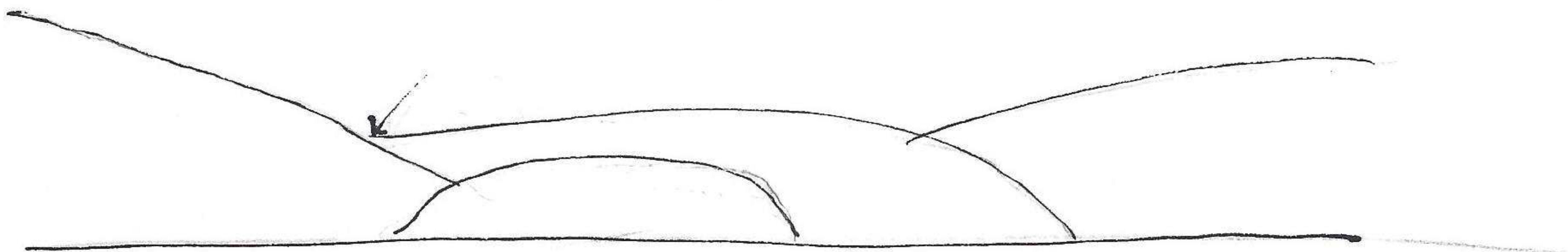
Nov. 12, 1988

Swifts' lagoon: 24 gadwall, 14 shovellers, 4 mallards, 2 Am.
widgeons

Agate Beach: 2 common loon, 8 bufflehead, 22 surf scoters,
1 great blue heron, 4 glaucous-winged gulls, 18 red-breasted
mergamers.

Nov. 13, 1988

Wind NNE. Sunrise 7:24 A.M. at junction base South
Blakely Peak and lower mt to S.



9:25 ad. bald eagle Leo Reef. Remained at least 1 hr.

Nov. 14, 1988

8:40 A.M. An adult ♀ mule deer, 30" high at shoulders and her
2 twins, 25 1/2" high at shoulders at feeder

Left for Chris' at Last Lake. Left Lopez ferry terminal 9:54 A.M.
20% sky blue, high and low clouds. Birds observed: 1 pelagic cormorant,
1 glaucous-winged gull, 1 group 18 Bonaparte gulls, 2 glaucous-winged gulls,
3 common loons, 6 pelagic cormorants, Willow Island. no cormorants on
SW face in area of white-wash, 2 pelagic cormorants, W. end Thatcher
Pass, mew gull, 2 Bonaparte gulls, 3 glaucous-winged gulls, Lawson

Rock. 80 Bonaparte gulls on kelp at base Lawson Rock. Another group approx. 250 beyond. 3 glaucous-winged gulls. No gulls on Pointer Island. SW Cypress Island. 4 common murre, pelagic cormorant, common murre, 8 common murre, 3 pelagic cormorants, mew gull, Arrived. Anacortes ferry terminal,

Nov. 19, 1988

at Chris' at Last Lake, 80 bush-tite in lower shrubs and trees. 1 goldfinch captured by house cat and it consumed it. Steve observed 2 ♀ mule deer at first U turn to N and also at bend below his home. Returned Lopez. Duck hunters in fields enroute, especially 5 end Padella Bay. Continued to Anacortes ferry. While waiting for ferry noted crows from singles, 2's, 3's and 4's arrive from N along shoreline and moved S to bay SW of ferry terminal and after approx 1 1/2 hrs. 100 or so birds ^{in one group} passed overhead and flew N. On piling in bay to SW of ferry terminal are: 180 gulls (glaucous-winged gulls and mew gulls), 14 cormorants sp., 1 red-necked grebe. Left 3:54 P.M. sky clear. Birds observed enroute: (ferry adjusting to 8' x 1' swells, Lawson Rocks. Bonaparte gull, 2 single glaucous-winged gulls. Wind Thatcher Pass. 2 single glaucous-winged gulls, 2 double-crested cormorants, 4 double-crested cormorants, 8 double-crested cormorants. Willow Island. double-crested cormorant, double-crested cormorant, glaucous-winged gulls, 2 single double-crested cormorants, 2 pelagic cormorants. Arrived Lopez Island

Nov. 20, 1988

11:05 From Bee House observed the following birds in one feeding group approx 1/10 mi SE.

13 glaucous-winged gulls

2 common loons

18 pelagic cormorant

3 common murre

2 horned grebes

8 mew gulls

3 Pacific loons

11 double-crested cormorants

1 western grebe

6 Bonaparte gulls

3:55 P.M. and adult bald eagle soared directly SE over Bee House in ^{straight} a low angle descent to a common murre at an almost contact, the murre dove and the eagle immediately whirled upward and returned to a tree above Lichen Point.

4:10 P.M. 8 Bonaparte gulls, 3 mew gulls and 9 double-crested cormorants in fishing group approx 210' feet SE of Bee House.

4:14 P.M. Observed the daily flight ^(evening) of surf scoters from Swift's Bay.

they fly N this side of Leo Reef. This evening 38 past N in groups of 1-4.

Nov. 25, 1988

2 adult bald eagles passed N past Bee House at 8:50 A.M.
Closed mouse trap in septic tank section of room down stairs.

Nov. 26, 1988

Polly, Chris, Steve, Annette, James R., Mary & Don on The Bee Boat S around Flower Island, N to Peavine Pass, E around Abstraction Island thence to the submerged reef at point S of Olga. At approx. 11 RPM rode up onto reef where we remained for about 3/4 hrs before being pulled off by large cruising boat. Although boat glided heavily onto reef and propeller contacted rock 3 times, could see no damage to boat. Things to consider for this kind of emergency.

1. Tow a life raft of at least 12' long with capacity for 6 people. Provide outboard motor of appropriate size to handle high waves and strong wind. Equip with weather protection when on land. and also act as an emergency motor to propel the boat if boat loses power.
2. Have water pumps (manual) in place and ready to go.
3. Install VHF and understand how to use it. also sound & flogs.
4. Install depth-sounder with alarm capabilities such as a graduated sound with depth (20' to 0')
5. Devices for wrenching boat off from rear
6. Get passengers into raft and stand by.
7. Be sure towing line is available.

while passing thru Peavine Pass noted 3 individual bald eagles resting in Douglas fir trees above shoreline.

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington

Nov. 28, 1988

SK. ONLY
881128-1 *Peromyscus m. hollisteri* 171-80-215-17-19 gms ♂ testis 4 mm
From Bee House.

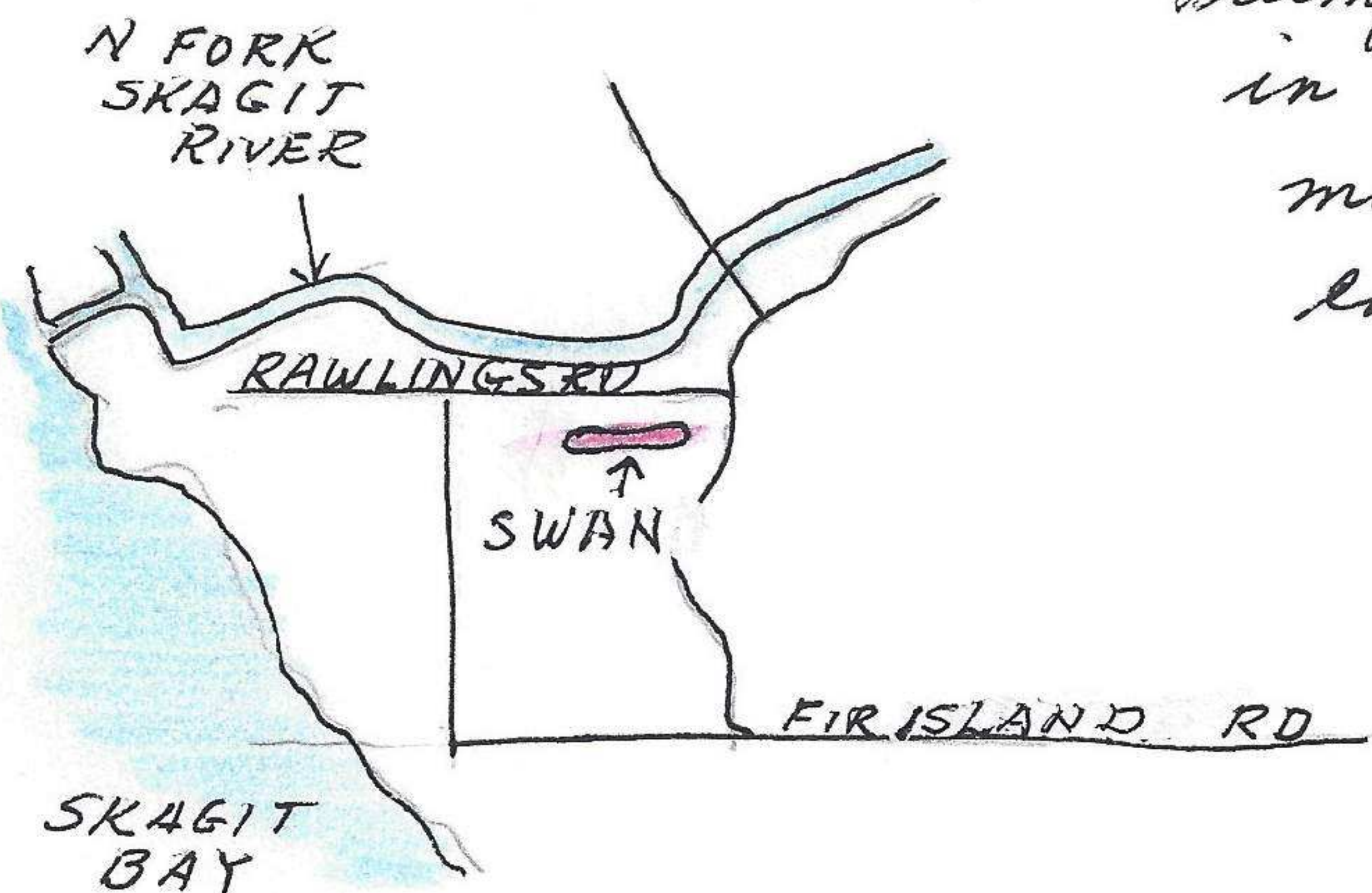
Today high tide floated 3/4 of logs from Spring Cove. Those moved to sound, stretching from Tichen Point to Boundary Point are 22 in number and average 10' x 1'. 45 smaller pieces of wood associated. Observed both *Eutamias t. townsendi* and Eastern gray squirrel run across logs on beach at upper end of Cove.

Dec. 1, 1988

On return from Chris' at Lost Lake, noted a pied-billed grebe in roadside drainage ditch,

at 3 mi. W and 2/10 mi. S on Rawlings Rd, noted 788

Trumpeters swan feeding and resting in a corn field (stubble). They remained while we observed and counted them.



Dec. 2, 1988

SK. only
881202-1 *Peromyscus m. hollisteri* 165-72-21-18-15gms ♀ wt. normal.
above specimen from Bee House.

881202-2 *Peromyscus m. hollisteri* 175-86-22-19-24gms ♂
From Bee House.

3:30 P.M. At Hummel Lake

83 common mergansers 60% males.

18 american chat

4:00 P.M. At Swifts Lagoon

19 shauellers

5 gadwall

4:30 P.M. At Bee House 6 glaucous-winged gulls done out 10' from shore in front of house and these birds only at first participated. Approx 2 minutes later 11 double-crested cormorants arrived as well as 2 red-breasted mergansers and immediately started to fish in a localized 10x10' area.

Dec. 3, 1988

881203-1 *Peromyscus m. hollisteri* 178-78-22-18-21gms ♂
From Bee House.

3:30 P.M. 2 ad. bald eagles on Flower Island, one on rounded knoll near top and one in tree at N end.

On Leo Reef were 61 cormorants (both pelagic and double-crested, and 6 harbor seal.

Approx 150' S of Leo Reef. 32 common merganser formed variable formations from single line 2-2 1/2' apart to convergence into 2 sq.

yards, then back to linear formation.

I have noticed that some nights the ferrys produce a rich yellow-golden light and at other times at night the light is white.

Dec. 4, 1988

7:30 A.M. no clouds in sky. 2 immature bald eagles flew SW past Bee House at approx. 60' elevation.

4:25 P.M. Ad. bald eagle flew N. past Bee House.

Dec. 5, 1988

7:35 A.M. Adult bald eagle flew S past Bee House.

Blaucous-winged gulls call when food is provided on front porch feeder

10:30 A.M. ad. bald eagle on Leo Reef Beacon.

3:35 A.M. ad. bald eagle flew N along shoreline approx. 50' above water to Spring Cove, then abruptly reversed direction and alighted in Douglas tree above Dissection Point.

Townsend chipmunk still active.

Eastern gray squirrel with cut ears at feeder.

Ed Siefert of Lopez Island reports a \$300.00 a day profit from harvesting sea urchins. He claims that the urchins have been reduced to a non-profit level and that he can now return to cutting wood for my winter supply.

Dec. 6, 1988

7:18 A.M. Adult bald eagle flew S past Bee House. Light condition at this time is weak.

8:38 A.M. ad. bald eagle flew N past Bee House at same level as upper bedroom floor.

3:20 P.M. ad. bald eagle on Leo Reef Beacon.

Dec. 7, 1988

7:24 A.M. ad. bald eagle flew to S past Bee House

10:20 A.M. 6 common mergansers fed vigorously in Spring Cove for 1 minute, then all left abruptly by flight.

Dec 8, 1988

Townsend Chipmunks are active. Today, I can not recall that I have not seen them active every day of the summer and fall.

Bald eagle flew S past Bee House at a time when light was barely intense enough to recognize the eagle (at dawn).

7:50 A.M. Ad. bald eagle flew S past Bee House.

11:58 A.M. Ad. bald eagle on Leo Reef beacon.

Dec. 8, 1988 (cont.)

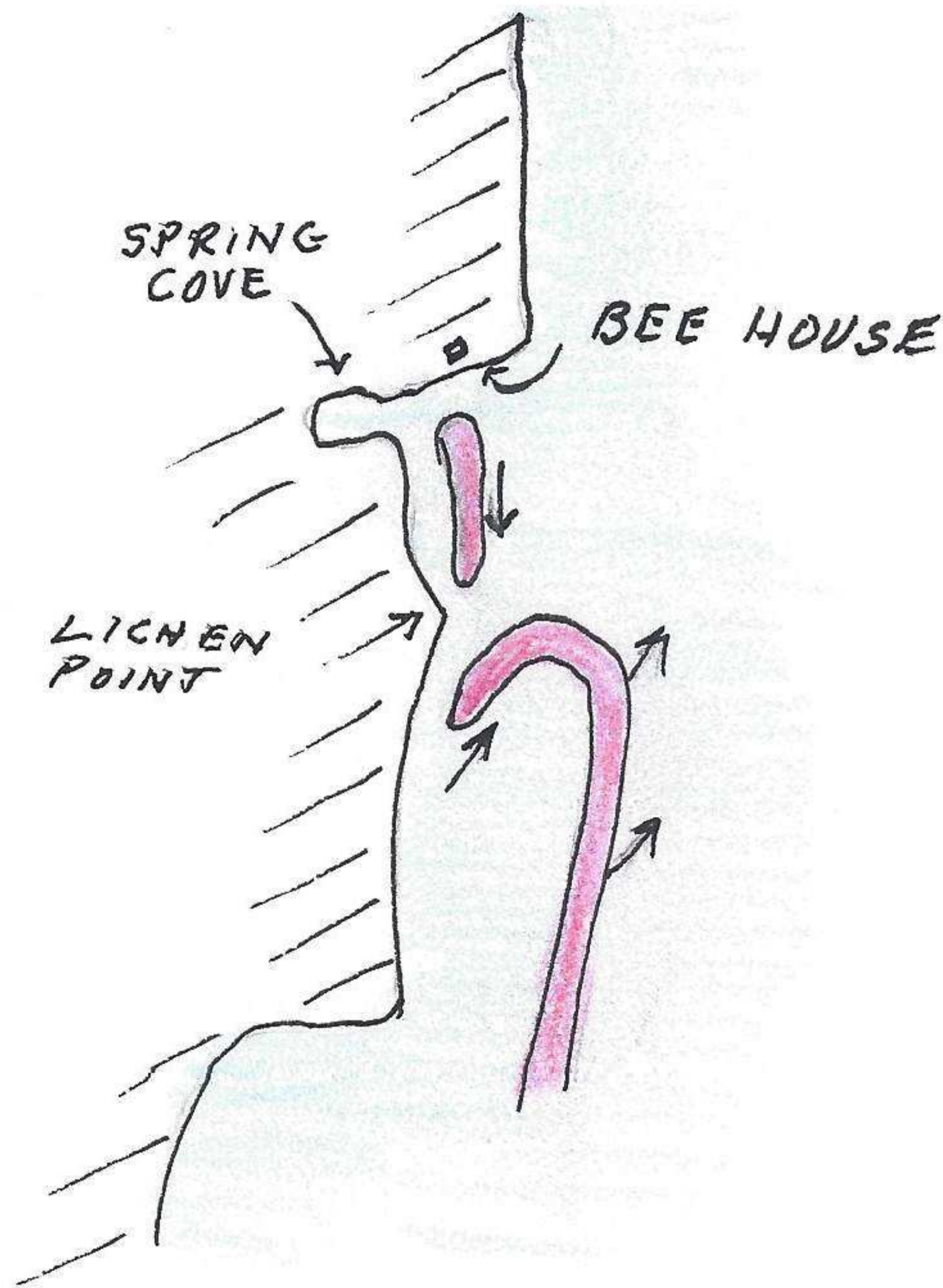
5 ad. bald eagle sightings today

Dec. 9, 1988

881209-1 *Peromyscus m. hollisteri* 192-87-23-18-25 gms. ♂
From Bee House.

From 8:00 A.M. to noon, logs left Spring Cove and moved S around Lichen Point, then in addition to other logs from Surf Bay, moved N again to Lichen Point and then out into sound and aligned like a hook.

Two adult bald eagle sighting this afternoon.



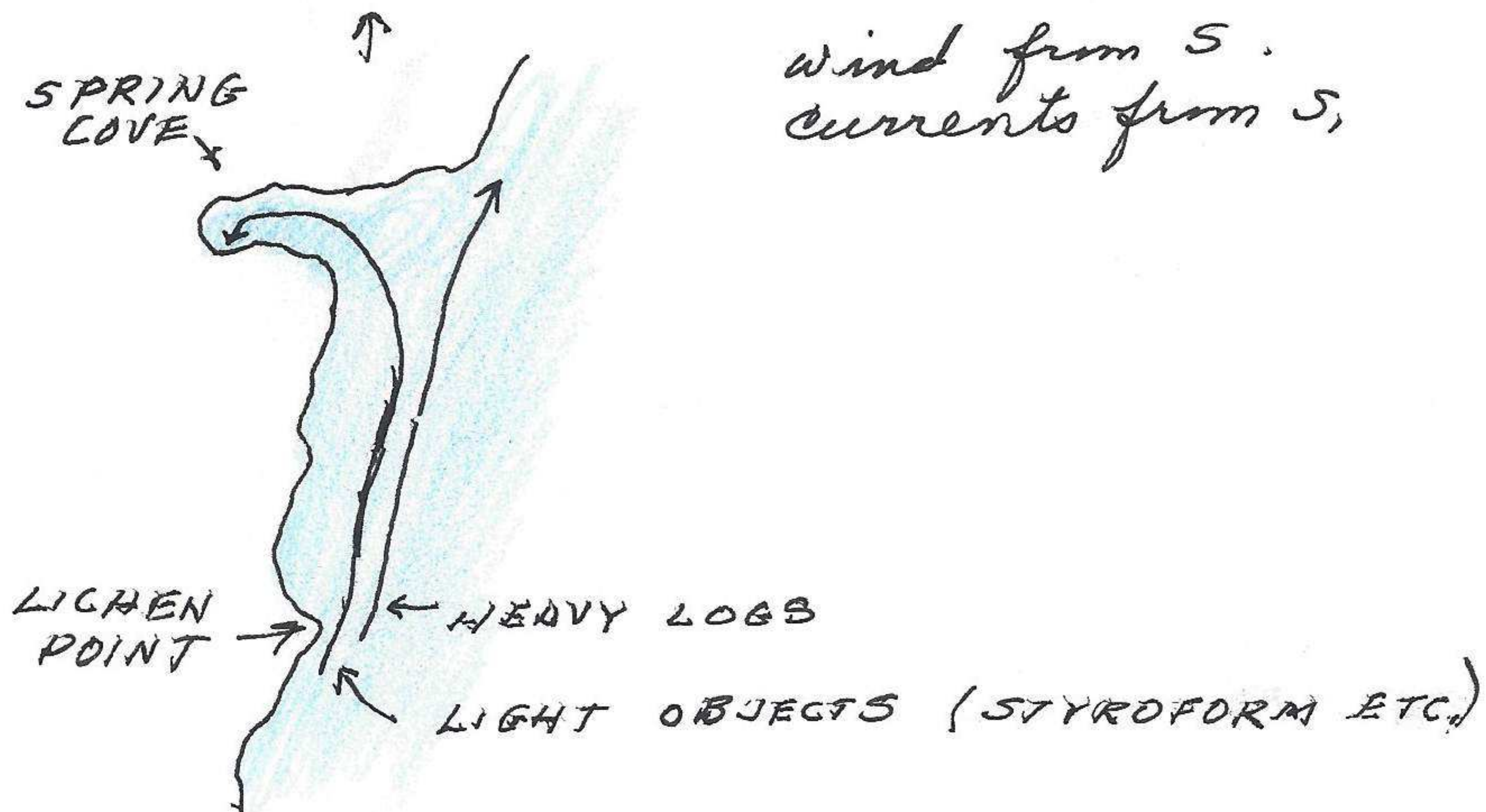
Dec. 10, 1988

3:45 P.M. Approx 1/2 distance between Leo Reef and Bee House is a feeding group of birds organized within an area of 30' x 30', and consist of:

- 19 double-crested cormorants
- 8 pelagic cormorants
- 6 glaucous-winged gulls
- 3 western grebes
- 2 red-necked grebes
- 2 common murrelets
- 1 marbled murrelet
- 4 hooded mergansers
- 24 common mergansers
- 2 red-breasted mergansers

Dec. 11, 1988

at least 3 Townsend chipmunks active today.



9:30 AM Townsend chipmunk active

Dec. 13, 1988

at Spencer Spit Lagoon: 16 mallards, 284 american widgeon, 4 buffleheads, 6 glaucous-winged gulls, 13 northern pintails, 5 gadwall.

at Bee House: male mule deer (♂) with damp streak 4" long below closed right eye.

no chipmunks today.

From Bee House (basement) captured:

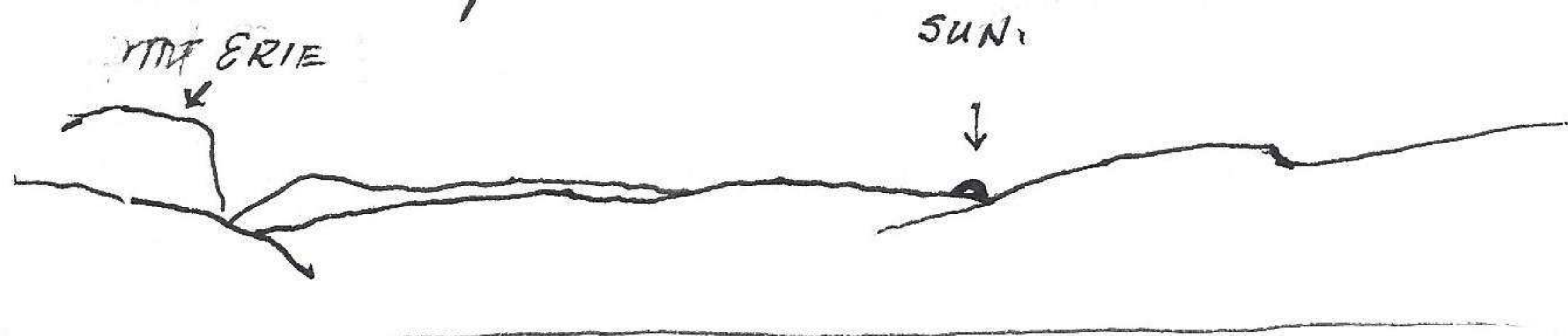
881213-1 *Peromyscus m. hollesteri* 159-72-21-18-22 gms ♂

at Hummel Lake, 14 ruddy ducks and 6 American coot.

Dec. 15, 1988


881215-1 *Peromyscus m. hollesteri* 168-70-21-18-18 gms ♂ From basement of Bee House

8:03:00 AM sunup.



Swifts Lagoon frozen.
took The Bee (Grand Banks '32) to Fishermans Bay. Deck 8, no. 14.

for winter moorage during NE blow of winds down Fraser Valley
 \$112.00 per month, electricity \$50.00 meter installation and min. \$10.00
 per month. From buoy at Humphrey Head marina to entrance
 Fishermans Bay is 5 mi. Covered in 45 minutes or 6.6 knots
 per hour.

at Bee House ♂ mule deer (3 prongs left side 2 right with
 right eye lids 1/2 open, damp streak below eye gone. three
 scars on right eye lid 
 no chipmunks today.

Dec. 16, 1988

Sunup 8:03 A.M. Seen advanced to touching knotch in
 ridge (see previous day) 


881216-1 *Peromyscus m. hollisteri* 170-77-22-18-18gms ♀
 From Bee House basement.

Dec. 17, 1988

Beautiful day.


881217-1 *Peromyscus m. hollisteri* 170-77-22.5-18-17gms ♀
 From Bee House basement.

881217-2 *Peromyscus m. hollisteri* 170-79-22-19-20gms ♀

A ♂ mule deer,  straight prong had 6' x 3' wound (no
 epithelium) from inner left hind leg (tibia-fibula).

a ♂ + ♀ hooded merganser in area in front Bee House
 for 4 hrs. always within 1 to 3 feet of each other, at least on
 surface

Dec. 18, 1988

Sunup 8:04:30 A.M. and exactly at knotch (see Dec 15,
 1988 for exact position) 

Left for Anacortes 10:10 A.M. from Lopez ferry terminal.
 Record complete census of birds: 2 mew gulls, 4 glaucous-winged
 gulls, 1 common murre, 1 common murre, 1 glaucous-winged gull,
 no cormorants (double-crested or pelagic) on Willow Island SW wall.
 double crested cormorant, pelagic cormorant. w Thatcher Pass,
 2 common murre, Lawson Rocks. 10 glaucous-winged gulls
 on Pointer Island, pelagic cormorant, 1 glaucous-winged gull,

1 glaucous-winged gull, Light beacon SW Cypress Island, 3 common murre, 2 common murre, 1 common murre, 2 double-crested cormorants, 1 glaucous-winged gull. Arrived Anacortes ferry terminal, thence to Annette C Kenagy at Last Lake.

Dec. 20, 1988

Left Chris' for Lopez. At 1/10 mi S on Reservation Road off highway 20 a 2 point ♂ mule deer stood in middle road for 5 seconds as my car approached to within 40' then deer walked to edge of road and beyond.

Arrived Anacortes and left on ferry to Lopez Island at 8:52 P.M.

Dec. 22, 1988

Trip to Anacortes from Lopez Island at 2:45 P.M. Only birds observed on ferry ^{trip} were 1 double-crested cormorant and 1 glaucous-winged gull.

Dec. 22, 1988 (Cont.)

Electron and photon radiation at 12:30 P.M. then returned to Lopez. (Univ. Wash. med. center). 3:00 P.M. first nausea. 6:15 P.M. erythema of irradiated area

Dec. ^{23,} 1988

nausea to 4:00 P.M. Bed 7:00 P.M. slight erythema

Dec 24, 1988

Day normal, skin normal, no pain associated with irradiation, no nerve damage,

Dec. 25, 1988

Sun up 8:08 A.M. (see Dec. 15, 1988 for diagram of ridges). Sun centered in dip of ridges.

881225-1 *Peromyscus maniculatus holisteri* 181-81-21.5-18-25 gms ♂
From Bee House

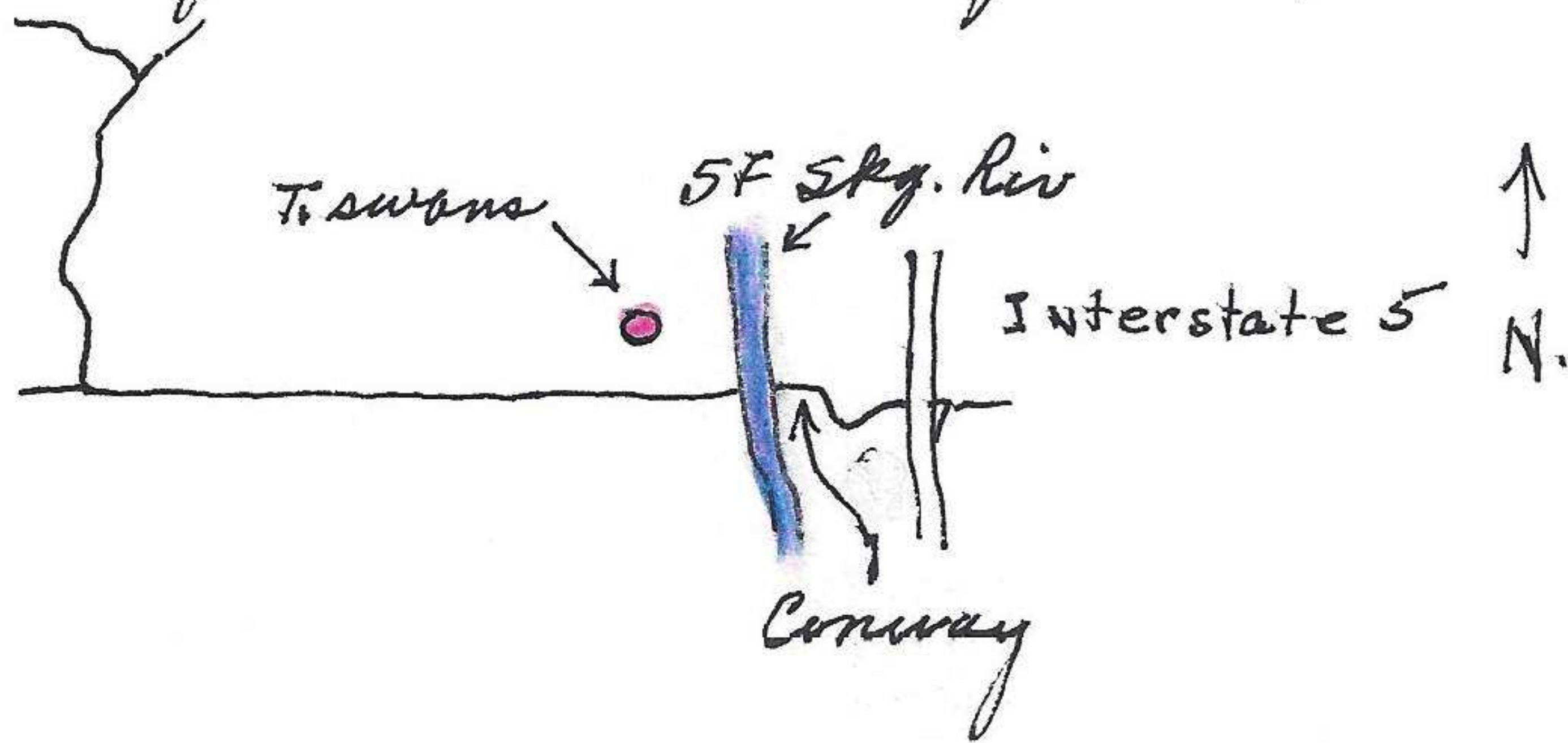
881225-2 *Peromyscus maniculatus holisteri* 175-78-22-19-23 gms ♂
From Bee House.

3:20 P.M. wind N and whitecaps, 138 mew gulls in linear raft of approx 200' and feeding on surface material. 80% floating on water, 20% walking on water with wings outstretched. Only mew gulls present. SE Bee House halfway to Leo B. reef.

3:25 P.M. 20 mew gulls resting on sands at end of Spencer Spit (E end),

Bee Estate, Humphrey Head, Lopez Island, San Juan Co., Washington.
Dec. 31, 1988

Trip to Annette C Kenagy at Lost Lake, Snohomish Co. Skagit Co.,
at 1 mi. W of South Fork Skagit River on Fir Island Rd W of Conway,
at a point $1/10$ mi. N of road, observed 13 trumpeters swan.



Fields partially flooded from recent rains.

Across Skagit River delta observed 3 red-tailed hawks.

In last 2 trips to Seattle (in Dec.) observed 4 redtails (Dec 23 and 4, Dec 27).

These hawks are generally distributed. Across the Skagit Valley redtailed hawks average 2 (1-4).

Opassem roadkill at Conway.

In fields of Snohomish River valley along Elliot Rd, in Snohomish Co., observed 3 groups of glaucous-winged gulls of approx. 240, 3,000, 1500 birds.

One great blue heron glided into field near Lake Beecher along Elliot Rd with neck outstretched (like a crane). I have observed this profile in great blue herons many times when alighting on ground.